

Parent-child Interactions of Depressed and Nondepressed Mothers and Fathers

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Abstract

This study examined depressed ($N=20$) and non-depressed ($N=20$) mothers and fathers interacting with their children ages 7-17 (Mean = 12.03; $SD = 2.21$). The sample consisted of 13 mother-daughter pairs, 7 mother-son pairs, 11 father-daughter pairs, and 9 father-son pairs. All depressed parents met criteria for a current Major Depressive Episode. The parent-child interactions were conducted in the laboratory when depressed parents were just beginning their treatment. The nondepressed comparison group was recruited from public schools. Parents and children were video-taped for 10 minutes discussing an issue that sometimes caused conflict between them. The Iowa Family Interaction Rating System was used to code the interaction behaviors of parents and children. Depressed parents showed significantly less nurturance and positive affect, and significantly more hostility and negative affect compared to nondepressed parents; offspring of depressed parents displayed significantly more hostility and negative affect than did children of nondepressed parents. With regard to gender, both depressed and nondepressed mothers displayed more nurturance toward their sons than daughters, whereas both depressed and nondepressed fathers displayed more nurturance toward their daughters than sons. Among nondepressed parents, mothers communicated better with sons than with daughters, and fathers communicated better with daughters than sons. Among depressed parents, both mothers and fathers communicated better with sons than with daughters. These results highlight the need for interventions that help depressed parents interact more positively with their children.

Offspring of depressed parents are at increased risk for psychopathology, especially depression (e.g. Beardslee, Versage, & Gladstone, 1998; Downey & Coyne, 1990; Hammen, Brennan, & Shih, 2004; Jacob & Johnson, 1997). “Approximately 61% of the offspring of parents with MDD will develop a psychiatric disorder during childhood or adolescence and are four times more likely to develop an affective disorder than children with non-ill parents” (Beardslee et al., 1998; p. 1335). In addition, children of depressed parents exhibit greater problems with self-esteem, attachment style, interpersonal relationships, social competence, academics performance, and physical health, as well as increased conduct problems, delinquent behaviors, and aggression (Beardslee et al., 1998; Downey & Coyne, 1990; Ge, Best, Conger, & Simons, 1996; Goodman & Gotlib, 1999).

Mechanisms of this increased risk likely include both genetic and environmental factors (Goodman & Gotlib, 1999). Although heredity may serve as a diathesis, the environment provides the context in which this vulnerability may result in psychopathology. Children of depressed parents often are exposed to marital conflict, impaired parenting, and greater levels of stressful life events (Beardslee et al., 1998; Goodman & Gotlib, 1999; Hammen, Brennan, & Shih, 2004). Moreover, lower levels of social support, often experienced by children of depressed parents, are associated with higher levels of depression and other forms of psychopathology (Landman-Peeters et al., 2005).

Although parent-child interactions generally tend to be positive in nature (Weis & Lovejoy, 2002), interactions between depressed parents and their children have been shown to be impaired (Lovejoy, Graczyk, O’Hare, & Neuman, 2000). Parenting is a complex and challenging enterprise even for the most emotionally stable individuals. Depressed parents tend to have increased difficulty communicating with and disciplining their children (Weis & Lovejoy, 2002).

Such disturbed parent-child interactions may increase the level of stress faced by children of depressed parents.

Children of depressed parents encounter high levels of parental negativity characterized by rejection, hostility, criticism, irritability, and dissatisfaction (Beardslee et al., 1998; Downey & Coyne, 1990; Frye & Garber, 2005; Gordon, Burge, Hammen, & Adrian, 1989; Landman-Peeters et al., 2005; Lovejoy et al., 2000). In addition, depressed parents tend to be emotionally uninvolved, withdrawn, indifferent, inattentive, and less responsive to their children (Gordon et al., 1984). Depressed parents also have shown a lack of affection, support, nurturance, and decreased sensitivity (Downey & Coyne, 1990; Landman-Peeters et al., 2005). In conflict situations, depressed parents may be over controlling, use poorer problem solving strategies, and show fewer indications of task productiveness (Downey & Coyne, 1990; Gordon et al., 1984).

In any parent-child relationship, some conflict is common, if not inevitable. Conflict heightens during adolescence and parental depression is associated with higher levels of parent-child conflict (Kane & Garber, 2002; Kim, Conger, Lorenz, & Elder, 2001). Depressed parents tend to display more negativity and have fewer problem-solving skills (Gordon et al., 1989), and offspring of depressed parents tend to lack positive and effective social skills as well (Beardslee et al., 1998; Downey & Coyne, 1990). Depressed parents also may place greater demands and burdens on their offspring as the children get older (Gordon et al., 1989). Moreover, even when not currently in an episode, depressed mothers still have more conflict with their children than do non-depressed mothers (Hammen et al., 2004).

Whereas a great deal has been learned about maternal depression and its effect on children (e.g., Goodman & Gotlib, 1999; Hammen, 1991; Radke-Yarrow, 1998), considerably less is known about the effects of paternal depression on child outcomes. Father-child conflict and lack of father-child closeness are associated with higher levels of the behavior problems and

delinquency in children (Connell & Goodman, 2002; Kane & Garber, 2004). Interestingly, depressed fathers tend to have higher quality interactions with their infant children than do depressed mothers. This may be partially because depressed men tend to have a more active coping style and more playful style of interacting with their children than do depressed women (Connell & Goodman, 2002). Contrary to this belief, however, is the finding that depressed men are more likely than depressed women to change in their social behaviors including greater distracting behaviors, indecisiveness, irritability, and general withdrawal (Spector, 2006).

Some researchers have suggested that the quality of a father's involvement with his children is more important for a child's development than the quantity of these interactions (Connell & Goodman, 2002). Although fathers typically are not children's primary caregiver, they still can have an important influence on children's development. Whereas some studies have shown that depressed fathers have a less harmful effect on children compared to depressed mothers (e.g., Hops, 1992; Keller, Beardslee, Dorer, Lavori, & Samuelson 1986; Klein, Depue, Slater 1985; Luther, Cushing, McMahon 1997), others have shown equally negative effects for both depressed mothers and fathers (e.g., Billings, Moos 1983; Dierker, Merikangas, & Szatmari 1999; Klein, Clark, Dansky, Margolis 1988; Weissman, Gammon, John, Merikangas, Warner, Prusoff, Sholomskas 1987).

Jacob and Johnson (1997) conducted one of the few studies to directly compare depressed fathers' and depressed mothers' behaviors during interactions with their children, and found that families with a depressed mother displayed less positivity than families with a depressed father. Additionally, parent-child interactions of depressed mothers were more negative than those of depressed fathers. Thus, there may be important gender differences in the parent-child interaction patterns of depressed mothers versus depressed fathers.

Children's gender also may be related to differences in parent-child interactions. Four distinct dyads are possible and may be related differentially to child outcomes: mother-son, mother-daughter, father-son, and father-daughter. Drawing from Bandura's (1977) principles of observational learning, it is reasonable to expect that gender of parent and child may play a role in their relationship. Children may be influenced more by the parent of the same gender because they learn observationally and tend to model themselves after the parent most similar to them. Also, parents may identify with children of the same gender and may invest more of their parenting into these children (Connell & Goodman, 2001).

Although this hypothesis makes sense theoretically, the empirical literature has provided only mixed support for it. Jacobs and Johnson (1997) reported that children's symptoms were associated with both maternal and paternal depression, whereas others (Compas et al., 1989; Forehand et al., 1986) have suggested that maternal depression would be more important to child outcomes than paternal depression and would have a stronger impact on daughters than sons. Longitudinal studies (e.g., Ge, Conger, Lorenz, Shanahan, & Elder, 1995) have shown that maternal depression is more predictive of daughters' than sons' depression, but paternal depression does not differentially predict depression in sons versus daughters. In a review of this literature, Russell and Saebel (1997) concluded that although small gender differences exist, such differences do not significantly affect parent-child relationships.

In summary, previous research has found that depressed parents interact with their children differently than non-depressed parents. Past research is less clear, however, with regard to whether or not depressed mothers and depressed fathers behave differently from each other and from their nondepressed counterparts toward their sons and daughters. The purpose of the present study was to address the following questions (a) Do depressed and nondepressed parents differ in their interactions with their children? (b) Do depressed mothers and depressed fathers differ in their

behaviors when interacting with their children? (c) Do depressed mothers and depressed fathers differ from nondepressed mothers and fathers in how they interact with their sons versus daughters?

Method

Participants

Participants were involved in a larger study of parents receiving treatment for depression. The sample for the present study included 20 depressed parents and 20 nondepressed parents and their children. The sample included 10 depressed mothers, 10 depressed fathers, 10 nondepressed mothers, and 10 nondepressed fathers. There were 13 mother-daughter dyads (6 depressed, 7 nondepressed), 7 mother-son dyads (4 depressed, 3 nondepressed), 11 father-daughter dyads (6 depressed, 5 nondepressed), and 9 father-son dyads (4 depressed, 5 nondepressed). Children ranged in age from 7.07 to 16.08 (Mean = 12.03 years; $SD = 2.21$). Thirty-six (90%) of the children were Caucasian, three (7.5%) were African-American, and one (2.5%) was multi-racial. Thirty-two (80%) of the parents were married, six (15%) were divorced, and two (5%) were widowed. The families' socioeconomic status was assessed using the Hollinghead (1975) index and ranged from 24.50 to 66.00 (Mean = 49.43 $SD = 12.50$), indicating working to middle class. Depressed and nondepressed groups did not differ significantly with regard to any of the demographic variables.

Procedure

Depressed parents were recruited from an outpatient psychiatric clinic where they were seeking treatment. These parents were diagnosed in the clinic with a current Major Depressive Episode. Parents with children between 7 to 17 years old were invited to participate in a study about parents and children. Interested parents were contacted to schedule an appointment for them

to come to the lab with their child. If a parent had more than one child in this age range, the child closest to age 12 was selected.

The comparison sample was recruited through letters to parents of children in the public schools. Interested parents returned a form with their telephone number, age, and gender of their children. Families that had a child similar in age, gender, and race to a high-risk child were screened for parental psychopathology. Parents were interviewed with the Structured Clinical Interview for *DSM* diagnoses (SCID; Spitzer, Williams, Gibbon, & First, 1990); those who were free of current and past psychopathology were invited to participate.

All participating parents and children came in to the lab, signed the parent consent or child assent forms, completed an interview and battery of questionnaires, and were video-taped during a 10-minute interaction. Only those measures relevant to the current study are described here.

This study is focusing on the ‘issues’ interaction from the parent and child’s first time point. In ‘issues,’ the parent and child together come up with an issue they have recently disagreed upon. This is then used as a focus for the conversation in the interaction. For the interaction task, the parent and child are in a room with minimal distractions. The facilitator explains the interaction task to the pair and answers any questions. The facilitator then sets up the video equipment and leaves the room. The interaction lasts around ten to twelve minutes. Each of the interaction tasks is video-taped.

Measures

Parent-child Interaction Task. The Modified Revealed Differences Task was used to assess conflict in the parent-child relationship. The parent and child completed an issues checklist (adapted from Prinz et al., 1979; and Robins & Weiss, 1980), from which the topics for the interaction were identified. The topic selected for discussion was one that was rated by parents and children as frequently giving rise to at least moderate levels of conflict in their relationship. The parent-child

dyads were given 10 minutes to discuss the issue and to resolve the problem. These interactions were video-taped and then later coded by individuals who were unaware of the parents' psychiatric status.

Coding System

The *Iowa Family Interaction Rating Scales (IFIRS)* was used to code the parent-child interaction. These scales are designed to measure behavioral characteristics of individuals and the quality of their behavior exchanges. The scales are intended to tap both verbal and nonverbal behaviors, and affective and contextual dimensions of the interactions. The IFIRS is a global coding system containing sixty scales rated on a nine point scale. In general, a score of one represents the lack of a behavior occurring and a score of nine represents a behavior very frequently occurring and/or intense displays of the behavior. The current study used the following 13 codes for parents: sadness, anxiety, externalized negative, positive mood, hostility, angry coercion, antisocial, warmth/support, parental influence, sensitive/child-centered, child monitoring, listener responsiveness, and communication. For the child, the following 8 scales were coded: sadness, anxiety, positive mood, hostility, warmth/support, angry coercion, listener responsiveness, and communication.

To reduce the data, composite scores were created using individual items from the coding system (see Table 1). For the parent, five composite scores were created: Negative Affect, Positive Affect, Hostile Parenting, Nurturing Parenting, and Communication Skills. For the child, four composite scores were used: Negative Affect, Positive Affect, Hostile Interaction, and Communication Skills. Composite scores were analyzed using 2 (parent depressed vs. nondepressed) X 2 (mothers vs. fathers) X 2 (daughters vs. sons) ANOVAs. All main effects, 2-way, and 3-way interactions were tested.

Results

Correlations, Means, and Standard Deviations among Study Variables

Table 2 presents the correlations among all study variables. Parental depression was associated with greater hostility and negative affect and less nurturing, communication, and positive affect in parents, and greater hostility and negative affect in children. Parents' gender and children's gender and age were not significantly correlated with any of the interaction behaviors. Parental nurturing, communication, and positive affect were positively correlated with each other and negatively correlated with hostility and negative affect. Similarly, children's communication and positive affect were positively correlated, as were children's hostility and negative affect, and these positive and negative behaviors, respectively, were negatively correlated with each other. Positive parental behaviors (e.g., nurturing, communication, positive affect) were positively correlated with children's communication and positive affect and negatively with children's hostility and negative affect. Parents' and children's hostility and negative affect were positively correlated; parental hostility correlated negatively with children's positive affect. Tables 2 and 3 present the means and standard deviation for the interaction behaviors for depressed and nondepressed mothers and fathers (Table 3), and depressed and nondepressed parents as a function of gender of their child (Table 4).

Parent-child Interaction Behaviors as a Function of Parental Depression, Gender, and Child Gender

Results of the 2 (Parent Depressed vs. Nondepressed) X 2 (Parent Gender) X 2 (Child Gender) Analyses of Variance (ANOVAs) consistently indicated a main effect for parental depression (see Tables 5, 6, 7, and 8). During the interactions with their children, depressed parents showed significantly less nurturance and less positive affect, and significantly more hostility and negative affect compared to nondepressed parents (see Tables 5 and 6). Similarly,

offspring of depressed parents displayed significantly more hostility and negative affect and a nonsignificant trend toward less communication skills and less positive affect (see Table 7).

With regard to gender, the parental gender by children's gender interaction was significant with regard to parental nurturing, $F(1,32) = 5.24$; $p < .029$, (see Table 5). Mothers displayed more nurturing parenting with their sons than daughters, whereas fathers displayed more nurturing with their daughters than sons (see Figure 1). The parental gender by child gender interaction also showed a nonsignificant trend for parental hostility, $F(1,32) = 3.60$, $p < .067$. Mothers tended to display more hostility to their daughters than sons, whereas fathers tended to display more hostility toward their sons than daughters (see Figure 2).

Finally, there was a significant 3-way interaction for parental depression by parental gender by child gender with regard to parental communication, $F(1,32) = 4.74$, $p < .037$ (see Table 8). In parent-child pairs with no history of depression, mothers communicated better with sons than with daughters, and fathers communicated better with daughters than sons. In parent-child pairs with a depressed parent, both mothers and fathers communicated better with sons than with daughters (see Figure 3).

Discussion

Consistent with prior literature (e.g., Lovejoy et al., 2000), the current study showed that depressed and nondepressed parents behaved differently when interacting with their children. In particular, depressed parents were less nurturant and more hostile, and showed less positive and more negative affect than did nondepressed parents. Although other studies have shown lower quality parenting in mothers with depressive diagnoses when using other coding systems (e.g., Gordon et al., 1989; Hops et al., 1987), or in parents with depressive symptoms using the IFIRS codes (e.g., Simons, Whitbeck, Conger, & Melby, 1990), this is the first study to use the IFIRS codes to examine the behaviors of clinically diagnosed depressed mothers as well as fathers during

interactions with their school-aged or adolescent children. These findings provide further evidence that depressed parents behave in ways that are less than desirable than do nondepressed parents.

In contrast to Simons et al. (1990), however, who found that parental depression was related to the use of more harsh-negative parenting practices but not to constructive, supportive-positive parenting, the present study showed that depressed parents were both more negative and less positive while interacting with their children. Indeed, the parenting behaviors were all moderately correlated. Although the same coding system was used in both studies, it is possible that the coders in the present study were more affected by halo effects. It also is possible, however, that depressed parents in this study were likely more severe and impaired than those in the study by Simons et al., indeed showed both more negative and less positive behaviors and affect. Low positive affectivity in addition to high negative affectivity characterizes clinically depressed samples (Clark & Watson, 1991). The relation between severity of parental depression and the direction of their parenting behavior should be examined further.

Interestingly, no significant differences were found between the behaviors of depressed mothers and depressed fathers. This is in contrast to the one other study (Jacob & Johnson, 1997) that has directly compared depressed mothers and depressed fathers interacting with their children, and found more disturbed interactions associated with maternal versus paternal depression. One reason for these different findings may be that whereas the current study included parents who were seeking treatment for depression, participants in the Jacob and Johnson study were recruited through advertisements. Thus, the current sample likely was more severe and impaired, and therefore both depressed mothers and fathers likely were characterized by less adequate parenting behaviors.

Although Jacob and Johnson (1997) found differences in the parenting behaviors of depressed mothers and fathers, both paternal and maternal depression were similarly associated

with child adjustment problems. Nevertheless, father-child interactions were more influential than mother-child interactions in predicting child outcomes after controlling for levels of parents' depression. The extent to which the lower quality parenting of depressed mothers and fathers was related to children's psychopathology was not examined in the current study, but clearly is an important direction for future study with this sample.

The present study also found that offspring of depressed parents displayed significantly more hostility and negative affect and a tendency toward less adequate communication skills and less positive affect. The children's behaviors during the interaction task may have been the result of a long standing pattern of transactions with their depressed parent and/or their responding to the negativity of their parents' behaviors during the interaction itself. One limitation of the global coding system used here was that it did not allow us to examine sequential patterns of behaviors by parents and children. Many interpersonal interactions are transactional such that one person responds to another's prior behavior. Thus, it is possible that the level of negativity seen by depressed parents and their children was somehow provoked by the negativity expressed by the other person. A more micro-coding system that allows for testing the actual sequence of behaviors is needed to address this.

A related issue is that children's symptoms also might have influenced their behavior as well as their parents' behavior toward them. Future studies should examine the relations between children's psychopathology and their and their parents' interaction behaviors. If a significant relation is found, then children's symptoms should be controlled in the analyses in order to examine the incremental contribution of the parents' depression to the observed behaviors over and above the children's symptoms.

With regard to gender, consistent with past literature (Connell & Goodman, 2002), we found that mothers and fathers interacted differently with their sons versus daughters. Parents

were less caring and more hostile with children of the same gender than children of the opposite gender. In particular, whereas mothers displayed more nurturing towards their sons, fathers were more nurturing towards their daughters. There also was a tendency for mothers to act more hostile toward their daughters and for fathers to act more hostile toward their sons. We can only speculate about the reasons for this pattern of behavior in same sex versus cross-sex dyads.

Parents of the same gender as their children may set higher standards and have greater expectations for the same sex child with whom they might identify. On the other hand, parents might be kinder to their opposite sex children because they are more used to doing this in other cross-sex relationships. Nevertheless, the likely impact of this differential treatment of children could have adverse consequences for the developing child. Mothers in this study were more hostile and less nurturing to daughters than to sons; given that women are more likely to become depressed than are men, such negative mother-daughter interactions might contribute to the greater number of females than males who will develop depression. The extent to which parents are even aware of their behaviors toward their children should be explored, particularly because it may have implications for interventions.

The three-way interaction regarding parental communication skills as a function of parent gender, child gender, and parental depression status indicated that parents with no depression history communicated better with children of the opposite sex, which is consistent with the overall pattern of gender effects. In contrast, depressed mothers and depressed fathers both communicated better with sons than with daughters. Thus, depressed parents' interactions with their daughters may contribute to the higher risk for depression in these girls. Depressed parents may expect more from their daughters and place a greater burden on girls to play a caretaking role. Recently, using the same IFIRS coding system, Champion et al. (2007) found that female offspring of depressed

mothers were rated as engaging in significantly more caretaking during a laboratory interaction task than did males. This construct should be explored further in the current sample.

Limitations and Future Directions

Limitations of this study should be noted because they provide directions for future research. Although the inclusion of both mothers and fathers was a strength of the design, the small sample size limited our power to detect effects, particularly statistical interactions. Therefore, the absence gender differences or gender interactions should be interpreted with caution.

The use of the Iowa Family Interaction Rating Scales also has advantages and disadvantages. In contrast to micro-systems that focus on the frequency of specific behaviors within a designated time frame and the sequencing of these behaviors, macro-systems such as the IFIRS are designed to capture the quality and context of behaviors. For example, coding the number of times a person laughs in one minute does not account for whether the person's laughter is expressing anxiety, derisive mocking, or positive mood. A global coding system such as the IFIRS may allow for coding the broader, more trait-like aspects of behavior, and general interaction style (Melby & Conger, 2001).

Although the IFIRS is a good system for identifying general characteristics of an interaction, however, using this system to assess gender differences introduces challenges. Some potential gender differences are built into the rating scales. For example, many different forms of interaction both verbal and non-verbal can be counted under the warmth/support scale. Mothers and fathers both may exhibit warmth/support toward their child, but this may be expressed very differently by mothers and fathers. Because the IFIRS is a broad, global coding system, these differences are lost and the two parents may be given the same score for having quite different behavior patterns.

Another important question for future research is the possible role of the other parent in the family system. The current study examined only parent-child dyads. Others (e.g., Hops et al., 1987), however, have shown that the other parent, particularly if he or she is not themselves depressed, can play an important buffering role between the adverse effects of a parent's depression on children's functioning.

In summary, the current study further replicated the finding that depressed parents are more negative and less positive in their interactions with their children. Moreover, offspring of depressed parents themselves showed more hostility and negative affect. A unique feature of the current study was the inclusion of fathers. Mothers showed more nurturing to sons, whereas fathers were more nurturing toward daughters. Finally, nondepressed mothers communicated better with their sons and fathers communicated better with their daughters, whereas both depressed mothers and depressed fathers communicated better with their sons than with their daughters. This research highlights the importance of studying the parenting behaviors fathers as well as mothers.

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Table 1. Internal Consistency and Inter-rater Reliability of Codes

Composite Codes	Individual Codes	Cronbach's Alpha	Inter-Rater Reliability
Parent			
Negative Affect	Sadness, Anxiety, Externalized Negative	0.62	79%
Positive Affect	Positive Mood, Warmth/Support	0.91	98%
Hostile Parenting	Hostility, Angry Coercion, Antisocial	0.74	97%
Nurturing Parenting	Warmth/Support, Parental Influence, Sensitive/Child Centered, Child Monitoring	0.73	96%
Communication Skills	Listener Responsiveness, Communication	0.93	100%
Child			
Negative Affect	Sadness, Anxiety	0.76	68%
Positive Affect	Positive Mood, Warmth/Support	0.82	96%
Hostile Interaction	Hostility, Angry Coercion	0.86	96%
Communication Skills	Listener Responsiveness, Communication	0.95	92%

Table 2. Correlations among Study Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Group (0=ND, 1=Dep)	1.0												
2. Parent Gender	.00	1.0											
3. Child Gender	.00	-.10	1.0										
4. Child Age	-.08	.12	.24	1.0									
Parent Interaction Behaviors													
5. Nurturing	-.46**	.00	-.16	.06	1.0								
6. Hostility	.41**	-.18	-.03	-.09	-.58**	1.0							
7. Communication	-.32*	-.09	-.02	-.06	.81**	-.50**	1.0						
8. Negative Affect	.54**	-.12	-.08	.05	-.58**	.67**	-.44**	1.0					
9. Positive Affect	-.39*	-.16	.00	.04	.80**	-.50**	.63**	-.37*	1.0				
Child Interaction Behaviors													
10. Hostility	.43**	.13	.11	.26	-.44**	.35*	-.36*	.50**	-.31	1.0			
11. Communication	-.28	-.06	-.01	.07	.48**	-.31	.55**	-.10	.51**	-.52**	1.0		
12. Negative Affect	.51**	-.07	-.14	-.24	-.46**	.63**	-.40*	.64**	-.34*	.35*	-.35*	1.0	
13. Positive Affect	-.31	-.16	.13	.08	.59**	-.46**	.55**	-.23	.62**	-.44**	.67**	-.46**	1.0

~ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$; ND = Nondepressed; Dep = Depressed;

Table 3. Means and Standard Deviations for Interaction Behaviors for Depressed and Nondepressed Mothers and Fathers

	Depressed Parents N=20		Nondepressed Parent N=20		Full Sample N=40
	Mothers N=10	Fathers N=10	Mothers N=10	Fathers N=10	
Daughters (N)	6	6	7	5	24
Sons (N)	4	4	3	5	16
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Child Age	11.27 (2.00)	12.43 (2.65)	12.25 (1.88)	12.17 (2.39)	12.03 (2.21)
Parent Age	41.10 (5.70)	43.50 (6.75)	43.20 (4.18)	46.30 (4.42)	43.53 (5.49)
Parent Interaction Behaviors					
Nurturing	5.43 (1.16)	5.65 (0.61)	6.53 (0.92)	6.30 (0.75)	5.63 (1.17)
Hostility	3.07 (1.22)	2.63 (1.00)	2.20 (0.57)	1.97 (0.60)	2.47 (0.95)
Communication	6.00 (1.27)	6.05 (1.12)	7.10 (1.07)	6.60 (1.61)	6.44 (1.32)
Negative Affect	3.63 (1.72)	3.13 (0.76)	2.13 (0.50)	2.03 (0.87)	2.73 (1.23)
Positive Affect	4.00 (1.58)	3.85 (1.03)	5.40 (1.33)	4.65 (1.33)	4.48 (1.42)
Child Interaction Behaviors					
Hostility	2.75 (2.32)	3.60 (1.93)	1.70 (0.59)	1.75 (0.82)	2.45 (1.72)
Communication	4.45 (1.67)	4.35 (1.92)	5.45 (1.36)	5.15 (1.36)	4.85 (1.60)
Negative Affect	4.90 (2.08)	4.50 (1.87)	2.95 (1.09)	2.85 (1.03)	3.80 (1.78)
Positive Affect	3.15 (1.00)	3.35 (1.03)	4.30 (0.71)	3.45 (1.07)	3.56 (1.03)

Table 4. Means and Standard Deviations of Interaction Behaviors of Depressed and Nondepressed Parents for their Daughters and Sons

	Depressed Parents N=20		Nondepressed Parent N=20	
	Daughters N=12	Sons N=8	Daughters N=12	Sons N=8
	M (SD)	M (SD)	M (SD)	M (SD)
Child Age	12.46 (2.22)	10.93 (2.42)	12.47 (1.63)	11.83 (2.72)
Parent Age	42.66 (6.58)	41.75 (5.99)	43.33 (4.19)	46.88 (4.29)
Parent Interaction Behaviors				
Nurturing	5.35 (0.88)	5.81 (0.94)	6.35 (0.75)	6.50 (0.97)
Hostility	2.78 (1.10)	2.96 (1.17)	2.11 (0.69)	2.04 (0.42)
Communication	5.79 (1.08)	6.38 (1.27)	7.04 (0.92)	6.56 (1.88)
Negative Affect	3.28 (1.25)	3.54 (1.48)	2.03 (0.61)	2.17 (0.84)
Positive Affect	3.75 (1.31)	4.19 (1.33)	5.21 (1.30)	4.75 (1.46)
Child Interaction Behaviors				
Hostility	3.33 (2.07)	2.94 (2.32)	1.88 (0.77)	1.50 (0.53)
Communication	4.25 (1.29)	4.63 (2.37)	5.42 (1.04)	5.13 (1.75)
Negative Affect	4.42 (1.93)	5.13 (2.00)	2.79 (1.05)	3.06 (1.05)
Positive Affect	3.17 (0.86)	3.38 (1.22)	4.17 (0.62)	3.44 (1.29)

Table 5. Parents' Nurturing and Hostility during the Interaction Task

Predictors	df	F	
		Nurturing	Hostility
Group (ND vs. Depressed)	1, 32	11.34**	8.42**
Parent Gender	1, 32	0.31	0.55
Child Gender	1, 32	1.72	0.04
Parent Gender X Child Gender	1, 32	5.24*	3.60~
Group X Parent Gender	1, 32	1.01	0.13
Group X Child Gender	1, 32	0.12	0.18

~ $p < .10$; * $p < .05$; ** $p < .01$; ND=Nondepressed

Table 6. Parents' Negative and Positive Affect during the Interaction Task

Predictors	df	F	
		Negative Affect	Positive Affect
Group (ND vs. Dep)	1, 32	14.19***	6.52*
Parent Gender	1, 32	0.39	1.71
Child Gender	1, 32	0.35	0.06

* $p < .05$; *** $p < .001$; ND = Nondepressed; Dep = Depressed

Table 7. Children's Behaviors during the Interaction Task

Predictors	df	F			
		Hostility	Communication	Negative Affect	Positive Affect
Group (ND vs. Dep)	1, 32	7.16*	3.90~	12.82***	3.06~
Parent Gender	1, 32	0.78	0.50	0.11	0.99
Child Gender	1, 32	0.55	0.07	0.80	0.31

~ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$; ND = Nondepressed; Dep = Depressed

Table 8. Parents' Communication during the Interaction Task

Predictors	df	F
Group (ND vs. Depressed)	1, 32	5.20*
Parent Gender	1, 32	0.74
Child Gender	1, 32	0.17
Parent Gender X Child Gender	1, 32	3.07~
Group X Parent Gender	1, 32	1.15
Group X Child Gender	1, 32	1.15
Parent Gender X Child Gender X Group	1, 32	4.74*

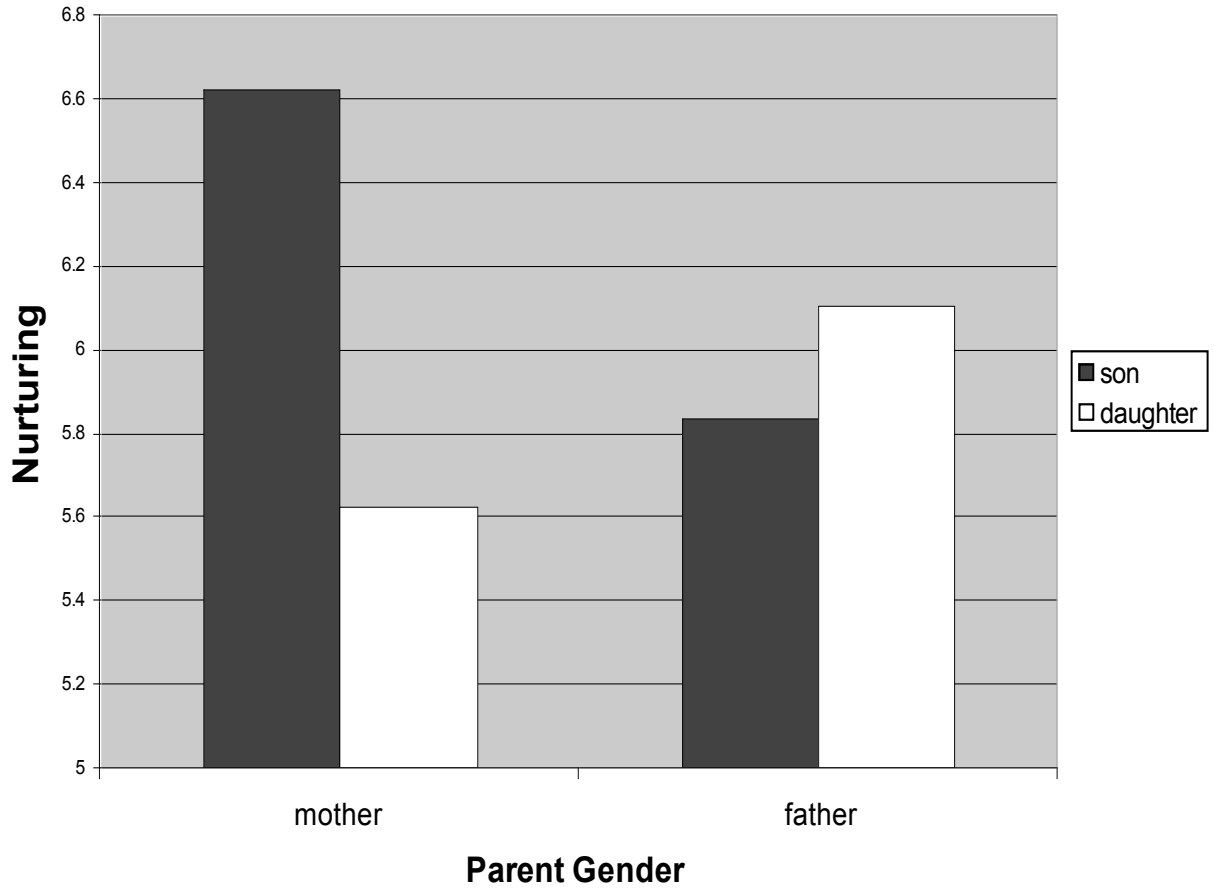
~ $p < .10$; * $p < .05$; ND = Nondepressed

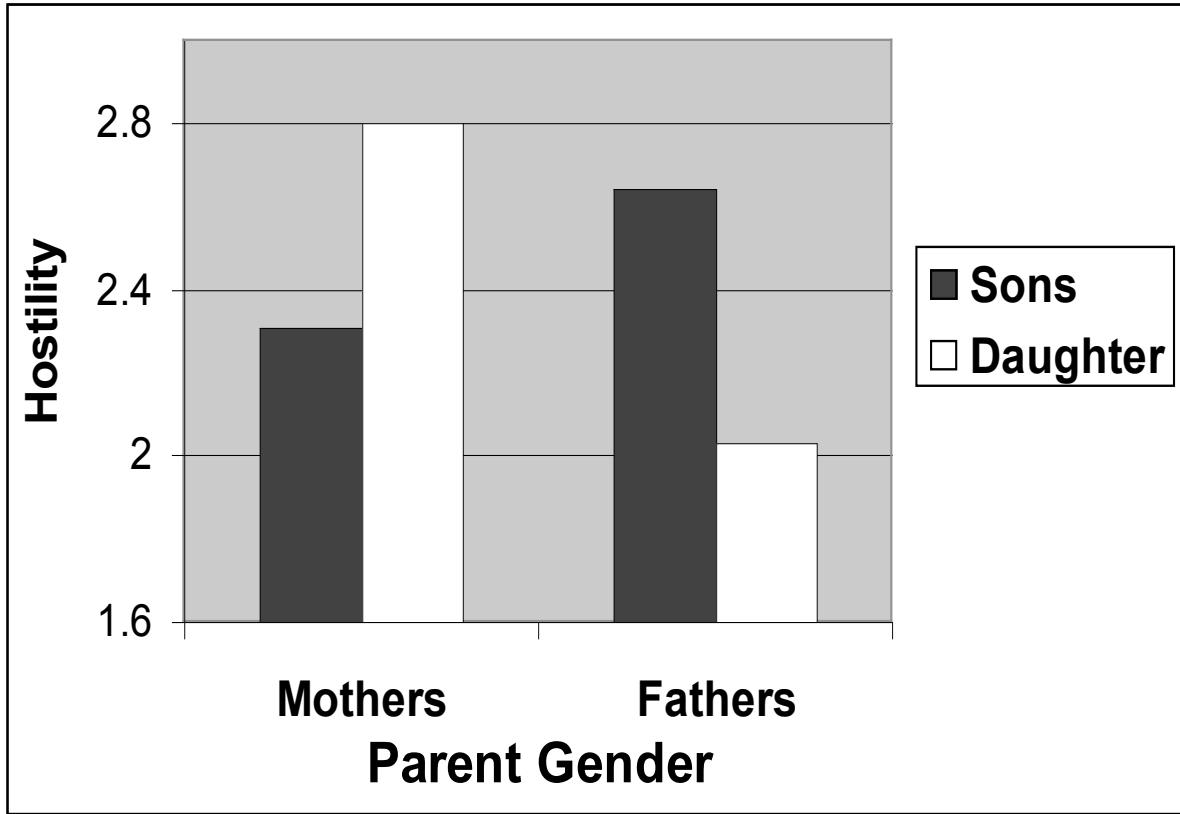
Figure Captions

Figure 1. Estimated Marginal Means of Nurturing Parenting Composite as a Function of Parental and Child Gender

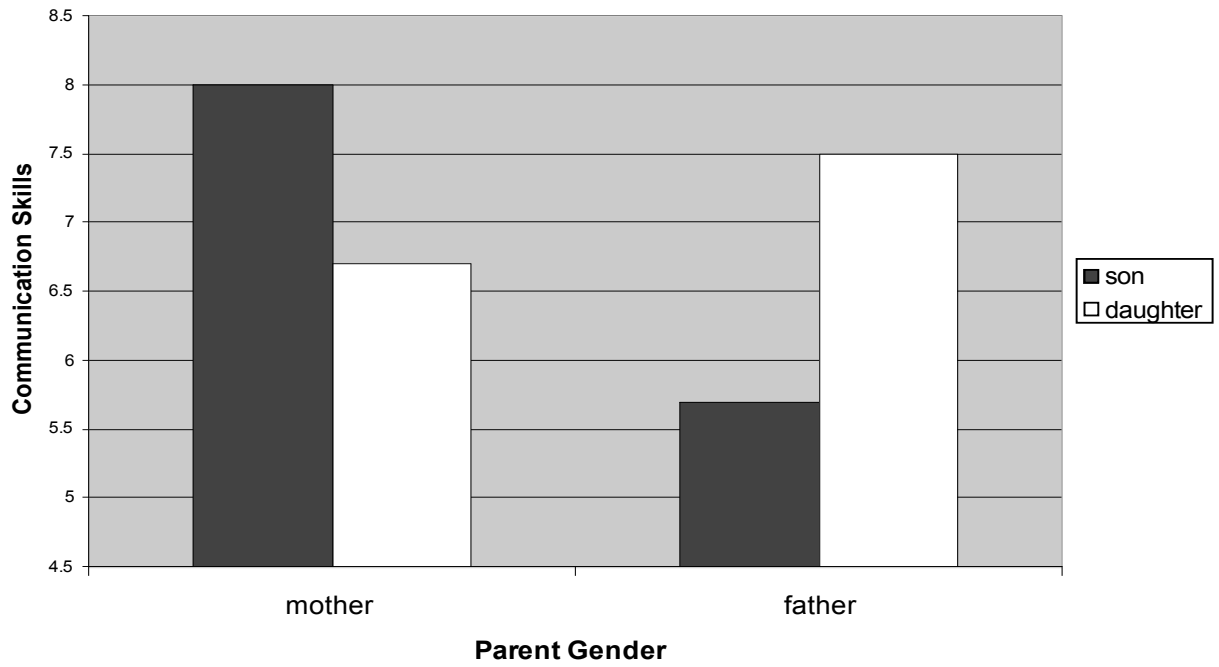
Figure 2. Estimated Marginal Means of Hostile Parenting Composite as a Function of Parental and Child Gender

Figure 3. Estimated Marginal Means of Communication Skills for Depressed and Nondepressed Parents as a Function of Parental and Child Gender





Nondepressed Parents



Depressed Parents

