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Dialogues with Preadolescents and Adolescents: Mother–Child Interaction Patterns in Affectively Ill and Well Dyads

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This study examined affective/communicative patterns in the interactions of unipolar, bipolar, and well mothers with their preadolescent and adolescent children. As part of a large longitudinal project, mother–child interaction was assessed for two siblings ages 8 to 11 and 12 to 16. Interactional difficulties were linked to both maternal affective illness and child problem status. Preadolescent children appeared more comfortable/happy with well mothers than with affectively ill mothers. Mothers and their preadolescents were more critical/irritable with each other when the child had a psychiatric disorder. Gender differences were apparent, particularly in regard to mother's current psychiatric status. Interactions in adolescent-daughter dyads were more critical when mothers met criteria for a major depressive episode within the month. The results illuminate interactive processes through which psychopathology may be perpetuated in families.

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INTRODUCTION

The higher prevalence of psychopathology among children of affectively ill parents is well established (see reviews by Beardslee, Bemporad, Keller, & Klerman, 1983; Downey & Coyne, 1990), but the mechanisms of intergenerational transmission are not well understood. Evidence has suggested that both genetic and experiential factors contribute to child adjustment. The development of psychopathology has been conceived as a transactional process, in which environmental, caregiver, and child characteristics interact in a dynamic fashion (Cicchetti & Schneider-Rosen, 1984; Rutter & Quinton, 1984). Models for describing bidirectional effects and influences in family interaction have been proposed (Goodman & Brumley, 1990; Hammen, Burge, & Adrian, 1991). These models go beyond main effects to consider specific qualities of parental functioning which, in interaction with child characteristics such as gender and age, may lead to different developmental trajectories and outcomes. Moreover, recent research has attempted to delineate developmental periods during which children may be particularly sensitive and those in which child problems begin to be manifested (Radke-Yarrow, Nottelmann, Martinez, Fox, & Belmont, 1992).

This study focuses on mother–child affective/communicative behavior in the transition to adolescence, considering the interactive effects of maternal affective illness with child gender, age, and problem status. The specific nature of maternal illness on dimensions of diagnosis, severity, and recency is also considered.

Patenting behavior of depressed parents has been found to be dysfunctional with children at different developmental periods and in a number of areas. Depressed mothers have reported conflictual interaction, communication difficulties, and lack of involvement with their children (e.g., Weissman & Paykel, 1974). Interaction studies in infancy (e.g., Field, Healy, Goldstein, & Guthertz, 1990; Sameroff, Seifer, & Zax, 1982), and early childhood studies of affect and attachment (e.g., DeMulder & Radke-Yarrow, 1991) have reported evidence of parental impairments that have negative consequences for child functioning. Studies of depressed parents and school-age children have found that depressed mothers were more critical (Conrad & Hammen, 1989; Webster-Stratton & Hammond, 1988) and more dysphoric (Hops et al., 1987) in interaction with their children than nondepressed mothers. Evidence suggests that communication patterns of bipolar mothers may be particularly negative (e.g., Inoff-Germain, Nottelmann, & Radke-Yarrow, 1992) and that bipolar mothers may be tense and disorganized with their children (Davenport, Zahn-Waxler, Adland, & Mayfield, 1984).

Child problems have also been taken into account in some studies. During task performance, depressed children received less reward and praise from their parents than nondepressed children (Cole & Rehm, 1986). Depressed mothers were especially negative in structured interactions with their children who had either depression or externalizing problems, leading to a "downward spiral of reciprocal effects" (Conrad & Hammen, 1989). Children who were more negative and critical in interaction had relatively more dysfunctional mothers (Hammen, Burge, & Stansbury, 1990).

Age or developmental stage has not been well delineated in offspring research. Most studies of the effects of parental depression on school-age children have included preadolescents and adolescents, undifferentiated by age (e.g., Gordon et al., 1989). Impairments in the depressed mother–child relationship during the transition to adolescence have, therefore, been largely overlooked. Research has shown that the preadolescent to adolescent period is marked by an intense focus on identity formation and gender role models, which may be affected by the parent's response to a child's increased desire for autonomy and fledgling efforts at self-assertion (Beardslee, 1986; Beardslee, Schultz, & Selman, 1987; Gelman & Teti, 1990). The child may be particularly sensitive to parental criticism and lack of emotional support during this critical period. A depressed parent, especially one whose self-worth is in question, may burden the child with dependency needs, thus providing an inadequate guide for the child's move toward creating a separate identity in relation to the parent (Emde, Harmon, & Good, 1986). Reciprocally, stress in the parent–child relationship may further undermine the affectively ill parent's sense of efficacy and self-worth, maintaining a negative cycle.

While the parent's history of depressive illness is important in understanding the context in which the parent–child relationship has developed, the parent's current psychiatric status may further illuminate present relational difficulties. The presence of current symptoms of maternal depression has been found to be particularly predictive of parent–child communication patterns with school-age children (Gordon et al., 1989). Especially in the transition to adolescence, the current state of the parent's affective health may influence how well the parent–child dyad negotiates such salient adolescent issues as autonomy, identity, and self-esteem.

Although there is no appreciable gender difference in rates of depression before puberty, after middle adolescence girls are more likely than boys to have diagnoses of depression (Hammen, Burge, Burney, & Adrian, 1990; Nolen-Hoeksema, 1987). Research suggests that daughters of depressed mothers may be more vulnerable than sons to developing psychiatric disorders themselves (Andrews, Brown, & Creasey, 1990; Jensen,

Bloedau, Degroot, Ussery, & Davis, 1990; Stoneman, Brody, & Burke, 1989). Daughters, who tend to identify with their mothers and maintain emotional involvement throughout adolescence (Chodorow, 1978; Gilligan, 1982; Steinberg, 1987), may be more likely than sons to be influenced by the mother's emotional state. Thus, issues concerning gender role identity and vulnerability to depressive illness make adolescence a particularly important period to study the effects of maternal depression on female development (McGrath, Keita, Stickland, & Russo, 1990).

In summary, research suggests that there are potential problems in the affective/communicative patterns between affectively ill mothers and their children, which may be particularly acute in the transition to, as well as during, adolescence. Research findings to date suggest several general hypotheses regarding mother–child interaction: that interactions between affectively ill mothers and their children are more problematic and less invested than those between well mothers and their children; that children with a psychiatric disorder are more difficult and less responsive than children without a disorder; and that mother–daughter dyads are more invested in interacting than mother–son dyads. The objective of this study is to investigate these questions in an integrated way, considering the interactive effects of mother diagnosis (including specific disorder, level of severity, and recency of episodes), child psychiatric problems, developmental period, and gender: (a) Are there particular patterns of interaction more common in dyads with mothers who have affective illnesses? (b) How does the nature, severity, and recency of affective illness relate to these patterns of interaction? (c) Do these mother–child interaction patterns differ for children at different developmental periods and of different gender? (d) Do these patterns differ with children who have or do not have psychiatric problems themselves?

METHOD

Subjects

The subjects were mothers and their two children: one preadolescent and one adolescent. The families were participants in a longitudinal study of normal families and families with affective disorders, all community-based (Radke-Yarrow et al., 1992). The mothers had been recruited when their younger children were of toddler age through community advertisements and clinicians. The study was described as focusing on child development and child rearing in families in which the mother was depressed and in families in which the mother was well. Both depressed and control

mothers were required to be the child's primary caretaker without major disruptions of care. Volunteers were initially screened by telephone interview (see Radke-Yarrow et al., 1992, for details of recruitment and selection).

Maternal Lifetime Diagnosis. Mothers were selected for the study who met Research Diagnostic Criteria (RDC) for either major (unipolar) depression or bipolar illness on the Schedule for Affective Disorders and Schizophrenia, Lifetime Version (SADS-L; Spitzer and Endicott, 1977; Spitzer, Endicott, & Robins, 1978) or who had no past or current psychiatric diagnoses (control group). Reliability of the diagnostic categories between our diagnostician and a staff member of the New York State Psychiatric Institute was 100% for a sample of 10 interviews.

For the analyses reported here, 31 mothers met criteria for unipolar depression, 22 met those for bipolar illness, and 30 had no history of affective illness. These mothers had been studied over a 10-year period with both repeated psychiatric assessments (SADS-L) and successive observational assessments. This information established a history of affective illness; all depressed mothers had major depressive episodes (at least 2 weeks of dysfunction) in their children's lifetimes. Moreover, functioning between episodes evidenced many residual impairments. Thus, despite its episodic nature, depression has been shown to have persistent effects on mother–child interaction for this sample and in related research (Billings & Moos, 1985; Harder, Kokes, Fisher, & Strauss, 1980; Stein, Gath, Butcher, Bond, Day, & Cooper, 1991). Severity of maternal affective illness (severe, not severe) was also determined, based on a combination of measures including age of onset, recurrence of episodes, lowest level of functioning, and family history.[3] Affectively ill mothers were also classified based on their reports of functioning over the past month: (a) those who met RDC criteria for a unipolar or bipolar episode (at least 2 weeks' duration) during the past month and (b) those having no episodes in the past month. The mothers' mean age was 39 years (range 31 to 50); the majority of mothers (89%) had at least some college education, while 30% had graduate or professional degrees. There were no significant differences in mother educational level by mother diagnosis group. Although most of the families were intact at the start of the study, by this time of assessment, 7%, 36%, and 26%, respectively, of control, bipolar, and unipolar families had separated. Differences in family structure over time between affectively ill and normal

[3]Mothers categorized as severely affectively ill were 25 years or younger at onset of affective illness and also met three of the following criteria: three or more episodes prior to initial assessment; at least 26 weeks in episode; worst functioning (Global Assessment Scale [GAS] score) at 50 or below; family history of affective illness; and recurrence of episode(s) since init' ' assessment.

control families were expected, since rates of separation and divorce are often high in depressed families. Eighty-six percent of mothers were white, 11% were black, 2% were Asian, and 1% were Hispanic.

Child Age. There were 82 younger children of these mothers who fit into the preadolescent category, ages 8 to 11 years (M = 9.28, SD = 1.05), and 65 older children of these mothers who fit into the adolescent category, ages 12 to 16 years (M = 13.43, SD = 1.18). There were no significant differences in child age and male–female ratios by maternal diagnosis group.

Child Problem Status. Child psychiatric status within the past year was based on the Diagnostic Interview for Children and Adolescents (DICA-R, Version 5; Herjanic and Reich, 1982), DSM III-R criteria, administered separately to the child and to the mother about each child. DICA interviews were administered and coded by clinicians blind to all diagnostic data on mothers and children. Diagnostic categories were mood disorder, anxiety, disruptive disorder, elimination disorder, and somatoform disorder not otherwise specified (NOS). Children could meet criteria for more than one disorder. Videotaped DICA interviews with 63 younger siblings and 96 older siblings in the larger study were coded for reliability of diagnostic categories; kappas were .82 for the younger and .84 for the older children. A dichotomy was made based on the presence of one or more disorders or no disorder in the past year (referred to as *Problem in Past Year, No Problem*) (see Table I). A breakdown to specific diagnostic categories was not used in primary analyses because this would result in small cell sizes. However, in instances with significant differences related to child diagnosis, the type of diagnosis was examined more closely. Because disruptive disorder was almost always comorbid with another disorder, we compared children with a disruptive disorder (alone or in combination with other disorders), those with only internalizing disorders, and those with other disorders (elimination and somatoform).

Procedures

Behavioral Observation Procedure. Mother–child behavior in interaction was assessed through direct observation. Each mother–child dyad participated in a brief semistuctured procedure designed to elicit discussion of their relationship. Each dyad sat together in a comfortable, familiar research apartment. The procedure came at the end of a day of structured and unstructured family interactions and psychiatric interviews with each family member. The context was designed to foster naturalness and to maximize consciousness of the mother–child relationship.

Table I. Sample by Maternal Diagnostic Group and Child Current Problem Status[a]

		Affectively ill mothers			
	Well mothers	Bipolar	Unipolar	Severe	Recent
Younger children	29	22	31	31	18
Girls	13	14	16	18	6
Problems(s)	4	9	13	13	6
No problem	9	5	3	5	0
Boys	16	8	15	13	12
Problems(s)	9	4	9	8	8
No problem	7	4	6	5	4
Older children	25	13	27	20	11
Girls	13	8	15	12	5
Problem(s)	6	6	10	9	4
No problem	7	2	5	3	1
Boys	12	5	12	8	6
Problems(s)	6	3	10	7	4
No problem	6	2	2	1	2

[a]Severe = bipolar and unipolar mothers whose history of affective illness is determined to be severe; Recent = bipolar and unipolar mothers who were in episode within the previous month; Problem = child meets DSM-III criteria for one or more disorders in past year, by child or mother report. Younger children = 8 to 11 years, $n = 82$; older children = 12 to 16 years, $n = 65$.

Mother and child were told that this was a time for them to talk with each other. The experimenter provided each participant with three questions that had been randomly selected from a set that included: "How do you think you and I are alike and different?" "When you and I are together, what do we usually talk about or do together?" "I like some things about being me (or about being a mother) and some things I don't like. What do you think they are?" "When I am angry or sad, what do you feel like doing?" "How well do you think I know what you like and what you are like?" It was suggested that participants could use the questions as a starting point for conversation, but were free to take the discussion in any direction they wished. The resulting informal discussion, lasting 10 to 15 min, was videotaped through a one-way mirror. All family members had previously consented to having their interactions observed and recorded. (See the appendix for examples of mother–child interactions.)

Coding System. The videotaped sessions were coded for specific mother and child behaviors that related to several domains of interest, including quality of communication skills, level of investment in the interaction, identification with the other, attributions to self and other, empathic

response, and affective tone. Five-point Likert-type scales (1 = *not at all* and 5 = *very much*) were used to assess aspects of the parent's behavior in the interaction and of the child's behavior in the interaction during each complete session. (See Table II for examples of specific variables used in coding.[4])

All observers were blind to the mother's and child's diagnostic status. For each family, the two videotaped sessions (mother with younger child and mother with older child) were coded by different observers. A team of three observers was trained on the coding system until exact agreement with the two developers of the coding system (LT and ED) reached 75%. Subsequent agreement on the entire coding instrument averaged 79% (range 71 to 86%) on exact scores and 96% (range 90 to 100%) on scores within 1 point on the 5-point scale (based on scoring of 30 dyadic sessions representing a cross section of child age and gender). To determine interrater reliability of the individual codes, intraclass correlation coefficients were computed. Codes that were rare or unreliable were dropped from further analyses. Thirty-four mother behavior codes (M = .62) and 30 child behavior codes (M = .67) were retained.

Mother–Child Interaction Measures. Principal-components extraction with varimax rotation was performed separately on mother behavior codes and child behavior codes. The most robust factors were retained: two mother behavior factors, accounting for 42% of the variance, and three child factors, accounting for 52% of the variance. (Table II shows the variables loading at over .50 on each factor.)

The two factors describing mother behavior were labeled (1) *engaged* and (2) *critical/irritable*. Mother engaged included such maternal behaviors as talking about feelings, encouraging dialogue, listening, and expanding the child's contributions. Mother critical/irritable included such maternal behaviors as showing irritability, emphasizing negative aspects of the mother–child relationship, disconfirming the child's opinions, and criticizing the child.

The three factors describing child behavior were (1) *engaged*, (2) *comfortable/happy mood*, and (3) *critical/irritable*. Child engaged included such child behaviors as talking about feelings, encouraging dialogue, listening, and expanding parent's contributions. Child comfortable/happy mood included such child behaviors as showing enjoyment, happy mood, comfort, and warmth, and maintaining eye contact. Child critical/irritable included such child behaviors as disconfirming the parent's views, criticizing the parent, and showing irritability and oppositional behavior.

[4]Complete information on the coding system is available from the authors.

Table II. Variable Loadings on Factors

Factors	Variables	Loading
	Mother	
Engaged	Talks about feelings, psychological issues	.78
	Encourages dialogue, shows interest	.72
	Listens to child; sensitive to signals	.66
	Expands contributions of child	.65
	Open to discussion; cooperative	.62
	Show sensitivity to affective cues	.59
	Show flat affect	−.53
	Confirms child's viewpoint or feelings	.52
Critical/irritable	Shows irritability, anger, impatience	.79
	Dwells on negative aspects of relationship	.78
	Disconfirms child's viewpoint or feelings	.72
	Critical of child	.71
	Focuses on negative aspects of life	.70
	Emphasizes lack of closeness in relationship	.59
	Child	
Engaged	Talks about feelings, psychological issues	.82
	Expands contributions of parent	.66
	Open to discussion; cooperative	.62
	Encourages dialogue; invested in conversation	.62
	Listens to parent; sensitive to signals	.58
	Unresponsive, ignores	−.53
Comfortable/happy mood	Unable to express discontent	−.69
	Maintains eye contact	.67
	Acquiesces, is passive	−.66
	Shows pleasure, enjoyment, happy mood	.64
	Shows contrived cheerfulness	−.61
	Appears comfortable, at ease with parent	.60
	Shows warmth, tenderness, affection	.59
	Open to discussion; cooperative	.56
	Encourages dialogue; invested in conversation	.54
	Shows sensitivity to affective cues	.53
Critical/irritable	Disconfirms parent's viewpoint or feelings	.77
	Critical of parent	.76
	Oppositional, hostile, defiant	.75
	Shows irritability, anger, impatience	.72
	Listens to parent, sensitive to signals	−.53

Interestingly, correlations between mother and child factors showed different patterns relative to child age, gender, and presence of child problem. Across all mother diagnosis groups, mother and child engagement was significantly positively correlated for older children ($r = .67, p < .001$), but not for younger children. Mother and child critical/irritable behavior was

significantly positively correlated for boys (younger: $r = .56, p < .001$; older: $r = .58, p < .001$, respectively), but not for girls. In addition, mother and child critical/irritable behavior was significantly positively correlated for children with a problem (younger: $r = .34, p < .01$; older: $r = .44, p < .01$), but not for children with no problem.[5]

RESULTS

The measures of interaction, two mother factors and three child factors, were examined first in 2 (mother diagnosis: Well or Affectively Ill) × 2 (child problem: Well or Any Problem) × 2 (Child Gender) ANOVAs. In order to examine effects of maternal affective illness more closely, three further sets of analyses were performed: (a) 3 (mother diagnostic category: Well, Bipolar, Unipolar) × 2 (Child Problem) × 2 (Child Gender) ANOVAs; (b) 3 (severity of maternal illness: Well, Not Severe, Severe) × 2 (Child Problem) × 2 (Child Gender) ANOVAs; and (c) 3 (recency of maternal episode: Well, No Episode Within the Month, In Episode Within the Month) × 2 (Child Problem) × 2 (Child Gender) ANOVAs. (Three-way interactions were not considered because of the small numbers in cells.) The overall design utilized ANOVAs (rather than MANOVAs), because maternal and child behaviors form different conceptual groupings and the hypotheses being tested did not involve the interaction of dependent variables. Analyses were computed separately for the younger child and older child groups to assure independence. Results concerning the mothers and their younger children are presented first, followed by results concerning the mothers and their older child. *Post hoc* tests were Duncan's multiple-range tests (alpha level .05), two-tailed. (Means of the factor scores are presented below, with standard deviations in parentheses.)

Mothers and Preadolescents

Mothers' Engagement and Criticism/Irritability. Effects of maternal diagnosis were evidenced in mothers' behavior in interaction with their younger children. Well mothers were significantly more engaged than were bipolar mothers, $F(2, 70) = 3.19, p < .05$, but not significantly more than unipolar mothers [well $M = .24(.62)$; bipolar $M = -.46(1.24)$; unipolar $M = .01(.82)$]. Mothers with their younger children were more engaged with sons than with daughters, $F(1, 74) = 4.89, p < .05$ [boy $M = .21(.58)$; girl $M = -.26(1.20)$]. This main effect was qualified by the interaction of mother

[5]Complete correlations between mother and child factors are available from the authors.

diagnosis and child gender, $F(1, 74) = 4.92, p < .05$: *post hoc* tests revealed that affectively ill mothers with daughters were significantly less engaged than all other mothers [well/boy $M = .16(.54)$; ill/boy $M = .25(.62)$; well/girl $M = .34(.72)$; ill/girl $M = -.52(1.16)$]. This finding suggests that there is a differential effect of maternal diagnosis related to child gender; with preadolescents, this differentiation is expressed in a lack of engagement of affectively ill mothers with their daughters.

Severity and recency of mother's illness were also related to maternal engagement. While there was no main effect of severity, the interaction of severity with child problem status was significant: With children who had no problem in the past year, severely ill mothers were significantly less engaged than well mothers, $F(2, 70) = 3.38, p < .05$ [well/no problem $M = .40(.58)$; severe/no problem $M = -.62(.94)$; not severe/no problem $M = .20(.69)$].

Further, affectively ill mothers who had no episode within the month were significantly less engaged than well mothers and, contrary to expectation, less engaged than affectively ill mothers with an episode within the month, $F(2, 71) = 3.04, p < .05$ [well $M = .24(.62)$; not recent $M = -.37(1.16)$; recent $M = .18(.59)$]. In addition, it was affectively ill mothers with no episode within the month who were the least engaged with their daughters, $F(2, 71) = 3.21, p < .05$ (well/boy $M = .16(.54)$; not recent/boy $M = .32(.58)$; recent/boy $M = .19(.67)$; well/girl $M = .34(.72)$; not recent/girl $M = -.69(1.23)$; recent/girl $M = .16(.45)$].

Mothers' critical/irritable behavior with younger children was not significantly related to maternal diagnosis; the only significant effect was in relation to child problem status. Mothers were significantly more critical/irritable in interaction with younger children who had a problem in the past year than with children who did not, $F(1, 74) = 4.56, p < .05$ [no problem $M = -.40(.52)$; problem $M = -.10(.66)$]. *Post hoc* analyses revealed that this relation was primarily due to mothers' critical/irritable behavior with children who had a disruptive disorder, either alone or in combination with other disorders.

Preadolescents' Engagement, Comfort/Happiness, and Criticism/Irritability. Younger children's behavior also reflected mothers' diagnoses: Effects of maternal diagnosis were apparent in relation to the child's level of comfort in interactions with the mother. Younger children were significantly more comfortable/happy with well mothers than with affectively ill mothers, $F(1, 74) = 7.24, p < .01$ [well $M = .37(.83)$; ill $M = -21(1.05)$]. In addition, the children with well mothers and the children with bipolar mothers were more comfortable/happy than the children with unipolar mothers, $F(2, 70) = 7.47, p < .001$ [well $M = .37(.83)$; bipolar $M = .19(.98)$; unipolar $M = -.49(1.02)$]; children with well mothers were significantly more comfort-

able/happy than children with both severe and less severe mothers, $F(2, 71) = 3.55$, $p < .05$ [severe $M = -.19(1.16)$; not severe $M = -.24(.90)$]; and children with well mothers were significantly more comfortable/happy than those whose affectively ill mothers had no episode within the month, $F(2, 71) = 3.60$, $p < .05$ [not recent $M = -.22(1.14)$; recent $M = -.19(.88)$].

Child engagement and critical/irritable behavior were not related to mothers' diagnostic status but were significantly related to child problem status. Younger children with no problem in the past year were significantly more engaged than children with a problem, $F(1, 74) = 3.92$, $p < .05$ [no problem $M = .15(.77)$; problem $M = -.28(.94)$]. This relation was largely due to lack of engagement by children with disruptive disorders, in contrast to only internalizing or other disorders. Children with no problem were also less critical/irritable than children with a problem in the past year, $F(1, 74) = 10.31$, $p < .01$ [no problem $M = -.51(.40)$; problem $M = .03(.99)$]. This finding was attributable to a difference between critical/irritable behavior of children with no problem and of children who had disruptive disorders, alone or in combination with other disorders. (As noted above, presence of a problem in the child was significantly related to maternal criticism/irritability as well.) In an interaction effect of child problem status and gender, $F(1, 74) = 5.42$, $p < .05$, *post hoc* tests showed that boys with a problem in the past year were the least engaged with their mothers of all the preadolescents [no problem/boy $M = .25(.78)$; problem/boy $M = -.60(.86)$; no problem/girl $M = .04(.76)$; problem/girl $M = -.01(.93)$]. This relation was primarily due to the lack of engagement of boys with disruptive disorders. Again, it is important to note that the most disruptive disorders were comorbid with internalizing and/or other disorders.

Mothers and Adolescents

Mothers' Engagement and Criticism/Irritability. With their adolescent children, there were no main effects of mother diagnosis on engagement or criticism/irritability, but a significant interaction effect of mother diagnosis and child problem status on maternal engagement. Bipolar mothers whose children had no problems were the least engaged (significantly less engaged than unipolar mothers whose children had no problems, unipolar mothers whose children had problems, and well mothers whose children had problems). However, this finding should be interpreted with caution because of the small number of adolescents with bipolar mothers who themselves had no problems. Interestingly, well mothers whose children had problems were significantly more engaged than well mothers whose children had no problems, $F(2, 53) = 3.8$, $p < .05$ [well/no problem $M =$

−44(.88); well/problem M = .45(.50); bipolar/no problem M = −1.28(1.67); bipolar/problem M = .00(1.14); unipolar/no problem M = .56(.47); unipolar/problem M = .22(1.25)].

Recency of maternal episode, in interaction with gender of the child, was significantly related to maternal critical/irritable behavior. With their adolescent daughters, affectively ill mothers who were recently in episode were significantly more critical/irritable than well mothers and significantly more critical/irritable than mothers with no episode in the month, $F(2, 53) = 4.64$, $p < .01$ [well/girl M = −.43(.37); not recent/girl M = .26(1.22); recent/girl M = 1.79(1.26)]; the small number of girls with recently in episode mothers argues for cautious interpretation. While among preadolescents, the differential effect of gender was expressed in relation to maternal engagement, for adolescents it was expressed in relation to maternal criticism/irritability.

Adolescents' Comfort/Happiness. While, in contrast with the preadolescents, there were no main effects of maternal diagnosis or child problem status for the older children, an interaction of maternal diagnosis and child problem status was significant on child comfort/happiness. Adolescents with no problem in the past year were significantly less comfortable/happy in interaction with bipolar mothers than with unipolar mothers or well mothers, $F(2, 53) = 2.85$, $p < .01$ [well/no problem M = .09(.96); bipolar/no problem M = −1.45(1.37); unipolar/no problem M = .87(.71)]; as mentioned above, there is the caveat of a small number in one cell.

DISCUSSION

The results of these analyses underscore the importance of considering maternal depressive illness as a multidimensional factor in interaction with child characteristics. Aspects of maternal illness such as the bipolar/unipolar distinction and recency of depressive episode were linked in significant ways with child gender and developmental stage.

The findings support transactional process models, in which both maternal and child impairments contribute to affective/communicative patterns (e.g., Cicchetti & Schneider-Rosen, 1984; Goodman & Brumley, 1990; Hammen et al., 1991). As predicted, both mother and child behavior in interaction were clearly linked to maternal diagnostic status and to child problem status, especially for preadolescents. With younger children, affectively ill mothers, and particularly bipolar mothers, tended to be less engaged in interaction than well mothers. Preadolescents themselves were more comfortable and happy with well mothers than with affectively ill mothers, showing more enjoyment, ease, warmth, and eye contact if their mothers were well. Difficulties in interaction were also evident when children had problems: Mothers were more

critical/irritable with younger children who had problems; reciprocally, these children were both more critical and less engaged with their mothers than were children without problems. As *post hoc* analyses revealed, differences linked to child problems were primarily attributable to children who had disruptive disorders. In this sample, these disorders usually cooccurred with mood, anxiety, or other problems. Thus, it was not simply that disruptive children were more critical, or were treated more critically, but that children with problems across both externalizing and internalizing dimensions demonstrated more difficulties in interaction with their mothers. As Zahn-Waxler and colleagues have pointed out, children of depressed mothers may alternate between overcontrol and undercontrol in an effort to gain maternal attention (Zahn-Waxler, Iannotti, Cummings, & Denham, 1990). Symptoms that appear outwardly distinct may originate in similar negative internal states, such as low self-esteem and unhappiness (Field et al., 1987). As advocates of transactional process models suggest, negative cycles involving child maladaptive behaviors and maternal criticism can contribute to a picture of familial, not just individual, illness (Hammen et al., 1991).

With older children, well mothers showed greater engagement if adolescents had problems than if they did not, which may have reflected greater emphasis on psychological issues with children who had psychiatric problems. Affectively ill mothers did not vary their level of engagement with regard to child problems. As scores on the individual variables that made up the factor demonstrate, although well mothers tended to participate actively in discussions with well adolescents, they were less focused on talking about feelings than well mothers whose adolescents had problems. Affectively ill mothers, on the other hand, were more likely to focus on psychological issues regardless of their children's psychiatric status.

It was within the group of adolescent offspring that the nature of maternal diagnosis, recency of episode, and child gender interacted most strikingly. First, a developmental contrast arose in the relation of child comfort and maternal bipolar illness. Adolescents with bipolar mothers were less comfortable/happy than those with unipolar mothers, especially the children who had no problems in the past year. However, younger children appeared less comfortable/happy with unipolar mothers than with bipolar mothers.

These findings suggest that children may become less satisfied with their bipolar mothers, and more troubled by a lack of maternal engagement as they enter adolescence. Radke-Yarrow and colleagues (1992) found that children of bipolar mothers developed problems later in childhood than children of unipolar mothers, and suggested that children may be more vulnerable to psychosocial stresses created by bipolar illness as they grow older. Interestingly, the children of bipolar mothers who themselves had no psychiatric problems were less comfortable with their mothers, and their

mothers were less invested in interaction with them. One possibility is that these children have developed adaptive strategies which lessen the intensity of their relationships with bipolar mothers. This last finding should be interpreted cautiously, but it is suggestive of the importance of considering child age and psychiatric status of both mother and child.

Second, difficulties between affectively ill mothers and their daughters, apparent in the preadolescent group, were even more clear between ill mothers with recent episodes and their adolescent daughters. We had hypothesized that mother–daughter dyads would demonstrate high levels of investment, but both maternal diagnosis and child age contributed to this picture. In interaction, younger daughters of affectively ill mothers did not fare well, whether compared with sons of affectively ill mothers or daughters of well mothers. Contrary to prediction, overall, mothers were less engaged with their daughters than with their sons. However, this finding was primarily attributable to affectively ill mothers with their daughters, who were significantly less engaged than mothers in all other dyads, while well mothers with daughters were the most engaged. This last finding suggests that the pattern of intense mother–daughter relationships documented in other research (e.g., Steinberg, 1987) may take on a different meaning when the mother is affectively ill. As they enter the transition to adolescence, daughters of affectively ill mothers may be more vulnerable than their male counterparts, in this case through comparatively less invested relationships.

For mothers and adolescent daughters, critical/irritable behavior was linked to recency of maternal episode. Even more than lifetime diagnosis, the mother's being recently in episode appeared to have a detrimental effect on mother–adolescent daughter interaction. Mothers who were in episode within the month behaved more critically toward their daughters than both well mothers (the least critical of all dyads) and affectively ill mothers not recently in episode. This pattern suggests that mothers who have recently been in episode may have particular problems negotiating the issues of adolescence—identity, self-esteem, autonomy—with their daughters. Affectively ill mothers with recent episodes may, because of close identification and boundary problems with daughters, be unable to foster their development at this crucial period. Replication with a larger sample will further clarify this interesting finding.

While one might expect that the most highly engaged mothers would be those without affective illness, this was not the case. In the preadolescent group, eight out of the 10 highest scores on maternal engagement were those of affectively ill mothers (five unipolar and three bipolar). In the adolescent group, the seven highest scores on maternal engagement were those of affectively ill mothers (six unipolar and one bipolar). A closer ex-

amination revealed that most of these mothers also had high scores on criticism and several also showed additional rare behaviors indicating maternal dependence or overidentification with the child. This pattern suggests that maternal engagement at the highest levels may carry with it more problematic behaviors which together may serve to undermine rather than support the child's self-confidence and autonomy.

Obtaining naturalistic observational data from parents and school-age children remains a challenge to researchers, especially when psychosocial measures are of interest. The procedure used here provided concentrated periods of interaction which offered a revealing glimpse of the mother–child relationship, as discussed and manifested by the dyad. For some dyads, the time together appeared welcome; their interest in each others' responses was apparent. For other pairs, however, the atmosphere was tense; even 10 min seemed too long to focus on the task.

This examination of psychosocial measures of the mother–child relationship in late childhood and early adolescence has demonstrated links between interpersonal behavior and both maternal and child disorders. The influence of maternal affective illness on mother–child interactions varied with the age of the child. It was mother–daughter interaction that appeared to be most adversely affected by maternal affective illness, especially in adolescence. It is clear that child gender, age, and the nature of maternal illness should be carefully considered in designing interventions with affectively ill populations. These findings begin to move toward a broader understanding of the interactive processes through which psychopathology may be perpetuated in families.

APPENDIX: EXCERPTS FROM MOTHER–CHILD DIALOGUES

Discussion in response to mother's question: "I like some things about being a mother and not some other things. What do you think I like and don't like about being a mother?"

Example 1: Mother and Adolescent Daughter

Child: I don't think you like it when I bug you. (laughs)
Mother: Yeah.
Child: I don't think you like it when you tell me to do stuff and I don't do it and I ignore you.
Mother: (nods) What about being a mother? What I like. Hm. What do I like?

Child: You probably like having somebody to be there when you need to talk, and you and I are kind of closer now than we were before. We're kind of more like friends, instead of mother and daughter. Well, not really instead, but in addition to. Um. (Shrugs) I don't know what you like about it.
Mother: I like having children. I like being a mother, having children and going places with them. I think I like having a group, having everyone around and we sit down and have something to eat.
Child: You mean you like having a family that does stuff together.
Mother: Yeah, okay, your turn.

Example 2: Mother and Adolescent Daughter

Child: I don't know. Why don't you tell me and I'll agree with you.
Mother: Because the idea was for you to answer the question. If you want to be rude, fine.
Child: I don't want to be rude, I'm asking you.
Mother: Then you know what—for a bright person—just answer the question.
Child: I don't know. I'm not a mother. I don't know what you like and don't like.
Mother: Then you know nothing about me as a human being?
Child: No, 'cause I don't, I don't know what you like or don't like about being a mother.
Mother: Think. Just think.
Child: I don't know. Um. Well, you like being a mother and you like everything about it.
Mother: I like everything about being a mother
Child: That's why you are a mother.
Mother: That's the silliest thing I ever heard.

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