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## SIX-MONTH FOLLOW-UP OF TWO MOTHER–INFANT PSYCHOTHERAPIES: CONVERGENCE OF THERAPEUTIC OUTCOMES

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**ABSTRACT:** Fifty-eight mothers and infants participating in two infant–mother psychotherapeutic interventions in a comparative infant–mother clinical intervention study were followed six months after treatment ended. One treatment was an infant-led psychotherapy, Watch, Wait, and Wonder (WWW). The other was a more traditional mother–infant psychodynamic psychotherapy (PPT). Infants ranged in age from 10 to 30 months at the outset of treatment, which took place in weekly sessions over approximately five months. Results indicated that positive effects observed from the beginning to the end of treatment in both treatment groups in infant symptoms, parenting stress, and mother–infant interaction were maintained or improved further at six-month follow-up. Additionally, decreased maternal depression, gains in infant cognitive development and emotion regulation, and improved infant–mother attachment security or organization had been observed posttreatment only in the WWW group. Interestingly, between the posttreatment to follow-up period the PPT group also showed such gains. Thus, for these variables it would be more accurate to say that the outcomes were similar for the two treatment groups but change emerged at a different pace. Nevertheless, an advantage persisted in the WWW group in

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relation to mothers' comfort dealing with infant behaviors and their ratings of parenting stress which improved more in this group from the end of treatment to follow-up. The direct inclusion of the infant as an initiator in WWW was set forth as an explanation of differentially timed treatment effects.

**RESUMEN:** A 58 madres y sus infantes que participaron en dos intervenciones sicoterapéuticas dentro de un estudio de intervención clínico comparativo, se les dio seguimiento durante los seis meses posteriores al tratamiento. Uno de los tratamientos fue la sicoterapia guiada por el infante, de Observar, Esperar y Preguntarse (WWW). La otra fue una sicodinámica sicoterapia materno-infantil más tradicional (PPT). Los infantes tenían entre 10 y 30 meses al principio del tratamiento, el cual se llevó a cabo en sesiones semanales durante un período aproximado de 5 meses. Los resultados indicaron que los positivos efectos observados desde el comienzo hasta el final del tratamiento en ambos grupos en cuanto a los síntomas de los infantes, la tensión de la crianza, así como la interacción entre la madre y su infante, fueron mantenidos o mejorados durante el tiempo de seguimiento. Es más, los siguientes efectos habían sido observados con posterioridad al tratamiento solamente en el grupo WWW: reducción de la depresión maternal, incrementos en el desarrollo cognitivo del infante y la regulación emocional, y la mejorada unión afectiva de seguridad o de organización entre la madre y su infante. De manera que, de acuerdo con estas variables, sería más preciso decir que los resultados fueron similares en el caso de ambos grupos de tratamiento, pero que el cambio se dio a un diferente ritmo. No obstante, una ventaja persistió en el grupo WWW en relación con la comodidad maternal en cuanto a la conducta de los infantes y sus evaluaciones de la tensión causada por la crianza. Dicha comodidad mejoró más en este grupo a partir del final del tratamiento hasta el período de seguimiento. La inclusión directa del infante como iniciador en el grupo WWW fue enunciada como una explicación de diferenciales de los efectos producidos por tratamientos con tiempos específicos.

**RÉSUMÉ:** 58 mères et nourrissons participant à deux interventions psychothérapeutiques nourrisson-mère dans une étude clinique comparative d'intervention nourrisson-mère ont été suivis six mois après la fin du traitement. L'un des traitements était une psychothérapie menée par le nourrisson, Regarder, Attendre et s'Etonner (abrégé en français RAE). L'autre traitement consistait en une psychothérapie psychodynamique mère-nourrisson plus traditionnelle (PPT). L'âge des nourrissons variait de 10 à 30 mois au début du traitement, celui-ci ayant lieu en séances hebdomadaires pendant à peu près 5 mois. Les résultats ont indiqué que les effets positifs observés du début à la fin du traitement dans les deux groupes de traitement dans les symptômes infantiles, le stress parental et l'interaction mère-nourrisson étaient maintenus ou s'étaient même encore améliorés au suivi de six mois. De plus, une dépression maternelle moindre, une augmentation dans le développement cognitif infantile et la régulation des émotions, et une amélioration dans la sécurité d'attachement nourrisson-mère ont été observés après le traitement, uniquement dans le groupe RAE. Non sans intérêt, entre l'après-traitement et la période de suivi le groupe PPT a aussi fait preuve des mêmes améliorations. Ainsi, pour ces variantes, il serait plus précis de dire que les résultats sont similaires pour les deux groupes de traitement, le changement s'effectuant à un rythme différent. Cependant, un avantage a persisté dans le groupe RAE par rapport à l'aisance des mères à faire face aux comportements infantiles et leur évaluation du stress parental qui s'est plus amélioré dans ce groupe de la fin du traitement au suivi. L'inclusion directe du nourrisson en tant qu'initiateur de RAE est présentée comme une explication d'effets différentiels (pour ce qui concerne la période choisie) de traitement.

**ZUSAMMENFASSUNG:** 58 Mütter und Kleinkinder nahmen an einer vergleichenden klinischen Interventionsstudie zu zwei psychotherapeutischen Interventionen teil und wurden sechs Monate nach Therapieende begleitet. Eine Behandlung war eine durch das Kleinkind bestimmte Psychotherapie: Schau, Wart' und Wundere Dich (WWW). Die andere war eine traditionellere Mutter – Kleinkind psychodynamische Psychotherapie (PPT). Die Kleinkinder waren am Beginn der Behandlung, die in wöchentlichen Sitzungen ungefähr 5 Monate dauerte, zwischen 10 und 30 Monate alt. Die Ergebnisse zeigen, dass positive Resultate zwischen dem Beginn und dem Ende der Psychotherapie bei beiden Behandlungsgruppen im Bezug auf die Symptome des Kleinkinds, den elterlichen Stress und die Mutter – Kind Interaktion erreicht wurden, oder diese besserten sich weiter bis zur Kontrolle nach 6 Monaten. Eine zusätzlich Verringerung der mütterlichen Depression, ein Zuwachs an kindlichem kognitiver Entwicklung und emotionaler Regulation

und eine Verbesserung der Mutter – Kind Beziehungssicherheit oder-organisation wurde bei der Behandlung nur bei der WWW Gruppe gesehen. Es ist interessant, dass die PPT Gruppe dieselben Erfolge zwischen der Therapie und der Nachuntersuchung zeigte. Für diese Variablen wäre es angemessen zu sagen, dass die Ergebnisse für beide Gruppen ähnlich sind, aber dass sich die Veränderungen in einem anderen zeitlichen Muster ergaben. Nichtsdestotrotz, die Verbesserungen blieben in der WWW Gruppe erhalten im Bezug auf die Einfachheit in der die Mutter mit dem Verhalten des Kindes umging und in der Beantwortung des elterlichen Stress, der sich in dieser Gruppe mehr vom Ende der Therapie bis zur Nachuntersuchung verbesserte. Die direkte Einbeziehung des Kleinkinds als Initiator bei WWW wurde als eine Erklärung für die zeitlich unterschiedlichen Therapieeffekte vorgeschlagen.

抄録：乳児-母親臨床介入比較研究において、2つの乳児-母親精神療法的介入に参加している58組の母親と乳児が、治療終了後6ヶ月間追跡された。一つの治療は乳児主導型精神療法、「見て待って考える **Watch, Wait, and Wonder**」(WWW)であった。もう一つはより伝統的な母親-乳児精神力動的療法(PPT)であった。乳児の治療開始時の年齢は、10ヶ月から30ヶ月の範囲で、その治療は約5ヶ月にわたる毎週のセッションであった。結果から、どちらの治療群も、乳児の症状、養育ストレス、および母親-乳児相互作用について、治療の開始から終了まで観察されたプラスの効果は、6ヶ月の追跡時に、維持されていたか、さらに改善したことが示された。そのうえ、母親の抑うつ低下、乳児の認知発達と情動調節の増大、および乳児と母親の愛着の安定性あるいは組織化の改善が、WWW群において、治療後だけに見られた。興味深いことに、治療後と追跡期間の間に、PPT群もこのような増大を示した。したがって、これらの変数については、2つの治療群で結果は類似していたが、変化が異なるペースで現れた、と言うのがより正確であろう。それにもかかわらず、母親が気持ちよく乳児の行動を扱えることと、治療の終わりから追跡時にかけてこの群の方がより改善した母親のストレスの評定に関して、あくまでもWWW群に優位さが残った。WWWにおいて主導者として乳児を直接含めることが、異なるタイミングで治療の効果がでることを説明するものとして、示された。

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Despite considerable interest in psychotherapeutic approaches to alter the relationship between parents and their infant, there are few empirical studies of such treatments in clinical samples (Cohen et al., 1999; Cramer et al., 1990; DeGangi & Greenspan, 1997). Mostly, high-risk samples, such as infants exposed to maternal depression or social stress, have been studied (Cicchetti, Rogosch, & Toth, 2000; Cicchetti, Toth, & Rogosch, 1999; Heinicke, Fineman, Ruth, Recchia, Guthrie, & Rodning, 1999; Lieberman, Weston, & Pawl, 1991; Murray & Cooper, 1994). The outcomes of these infant-parent therapies have been generally positive, and persist six months or more after treatment ended (Cicchetti et al., 2000; Lieberman et al., 1991; Robert-Tissot et al., 1996). However, only one study has examined the persistence of effects in a clinical infant sample (Robert-Tissot et al., 1996). Follow-up studies are especially important in infant clinical populations because of the possibility that developmental changes could unhinge or reduce relational harmony gained in therapy as the relationship is confronted with new developmental challenges (Robert-Tissot et al., 1996; van den Boom, 1994). Whether the dyad has the resilience to handle these challenges is critical. It is possible that gains made in the context of a containing therapeutic relationship could dissipate once the support provided by therapy is no longer available. Conversely, there may be sleeper effects that emerge only

after treatment has ended and therapeutic gains are consolidated (Achenbach, Phares, Howell, Rauh, & Nurcombe, 1990). The purpose of the present article is to describe findings from a six-month follow-up of mothers and infants participating in two infant–mother psychotherapeutic interventions in a comparative clinical intervention study (Cohen et al., 1999).<sup>1</sup>

In the one follow-up study of a clinic sample reported to date, two forms of brief therapy (i.e., up to 10 sessions) were compared (Robert-Tissot et al., 1996). One was an infant–parent psychotherapy based on a psychodynamic model (Fraiberg, Adelson, & Shaprio, 1987). The other therapy was interactional guidance that works directly on maternal behavior by guiding the mother to select infant cues and characteristics to which she is encouraged to attend and respond (McDonough, 1992). Although the treatments differed in theoretical orientation and technique, in most respects the outcomes were similar. In particular, infant symptoms related to physiological functions (i.e., sleep, feeding) decreased at the end of the treatment and were maintained or improved further at follow-up. As well, there were shifts in mother–infant interaction. An increase in maternal sensitivity and a decrease in maternal intrusive control were observed at the end of treatment with even further gains found at follow-up in both treatment groups. With respect to symptoms of separation and behavior problems, changes emerged only for the younger infants who were less than 12 months of age at the beginning of treatment, and those for whom behavior problems were among the presenting complaints. Changes were also observed in mothers' perceptions of their own parenting competence simultaneous with changes indicating a more positive perception of the infant. Further, mothers showed significant increase in self-esteem, and fewer negative affects at the end of treatment that were maintained at follow-up. Only a few differential treatment effects were observed. There was a greater improvement in maternal sensitivity during play with objects in mothers participating in interactional guidance than in psychodynamic psychotherapy. However, mothers participating in the psychodynamic therapy exhibited a greater improvement in self-esteem that was maintained at follow-up.

Recently, we reported on the comparison of two psychodynamic infant–parent psychotherapies that did yield a number of important differential effects (Cohen et al., 1999). One psychotherapy, delivered through a program called Watch, Wait, and Wonder (WWW), placed the infant in the role of initiating play and activity, thus giving him the opportunity to work out developmental and relational struggles (i.e., develop mastery and self-efficacy) much as older children would in play therapy. Although the infant is present in most parent–infant interventions, he has seldom been seen as either a patient in his own right or as an agent of change (Lojkasek, Cohen, & Muir, 1994). In WWW, what is paramount is the infant's self initiatives that are encouraged over the mother's and therapist's initiations. WWW works both at the behavioral level through instructions to the mother to follow her infant's lead and at the representational level in a subsequent discussion of the mother's observations and experience (Muir, 1992; Muir, Lojkasek, & Cohen, 1999). The other treatment was a more frequently used psychodynamic psychotherapeutic approach (PPT) that worked primarily with the mother or with the family (Fraiberg et al., 1987), and was similar to the type of psychotherapy studied by Robert-Tissot et al. (1996). In PPT, the infant also was involved through play, but was not cast in the role of initiator as in WWW. The discourse between mother and therapist worked at the representational level focusing on affective–interactional patterns including transference.

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<sup>1</sup>Because most infant interventions primarily involve mothers, henceforth the term "mother" rather than the more general term "caregiver" will be used. The pronoun "he" will be used for the infant to easily distinguish the mother from the infant.

In contrast, in WWW both mother and infant were given the opportunity to work out their relational struggles more directly.

After approximately 5 months of treatment, as was the case in the Robert-Tissot et al. (1996) study, there were similar outcomes for the two psychotherapies for infants who had chronic problems. Both resulted in an amelioration of presenting symptoms, and improvement in the mother–infant relationship including greater dyadic reciprocity and less maternal intrusiveness and mother–infant conflict. Although these findings were similar to those of Robert-Tissot et al. (1996), we did find differential treatment effects. Infants and mothers receiving WWW showed further benefits at the end of treatment. Mothers in the WWW group exhibited greater improvements than those in the PPT group in depression and report of a sense of competence in the parenting role. There also were significantly greater improvements in the infants in the WWW group in cognitive development and emotion regulation, and a greater shift in attachment security or organization in the infant–mother dyad (Cohen et al., 1999). In the present article we address the question of whether these differential effects, and the treatment gains made by both groups, were maintained, increased, or decreased over time. Specifically, we predicted the following:

1. In keeping with the one previous follow-up study (Robert-Tissot et al., 1996) improvements in the WWW and PPT groups observed at the end of treatment would persist at six-month follow-up.
2. Because the effects of any treatment may take time to consolidate, it was predicted that further positive gains would be observed in both treatment groups. In line with the findings of Robert-Tissot et al. (1996), these further gains were expected on measures mother–infant interaction and infant symptoms.
3. We have speculated that because the therapeutic work in PPT is done primarily at the representational level that changes in some areas may be delayed because the mother needs to work through her earlier relationships before new insights can influence both her feelings about her infant and about herself (Cohen et al., 1999). Additionally, in line with outcome studies comparing different therapeutic approaches with adults (e.g., Goldfried & Wolfe, 1998; Seligman, 1995), it is possible that the primary focus on the uncovering process in PPT could leave mothers preoccupied or distressed for a longer period of time delaying the impact of treatment. Therefore, it was predicted that significant changes between the end of treatment and six-month follow-up would emerge in the PPT group, particularly maternal ratings of depression and sense of parenting competence.

## METHOD

### *Participants*

The sample comprised 58 of the original 67 10- to 30-month-old infants and their mothers who attended a children’s mental health clinic. Reasons for referral were similar in both groups, and included infant problems with feeding, sleeping, behavioral regulation, and parent report of attachment or relational difficulties. In most cases, problems were longstanding. To be included, mothers and infants had to be physically capable of participating in play. Of the nine dyads lost to follow-up, seven were in the WWW group and two were in the PPT group. These

dyads did not differ from the remainder of the sample on background measures or pretreatment scores on the dependent variables.

### *Procedure*

Assessments involved interviews, parent questionnaires, and direct assessment of attachment security, mother–infant interaction, and infant development at pretreatment, posttreatment, and at six months follow-up. Although both parents completed the questionnaires, only data from mothers will be presented here.

### *Description of Treatments*

*WWW.* Each WWW session was divided into two parts. The first half hour consisted of the infant-led activity in which the mother was asked to get down on the floor with her infant, observe her infant, and follow his lead. She was encouraged to respond to her infant's initiations but was not to take over or guide the infant's activity or play in any way. The therapist's role was to engage in a parallel process of watching, waiting, and wondering about the interactions between mother and infant. The therapist also did not otherwise direct the mother or interpret the infant's activity for the mother. By structuring the session in this way, the space was created for the infant to use his mother for his own therapeutic purposes, specifically, to play out relational and developmental struggles. The second part of the session comprised a 20-minute discussion between the mother and the therapist intended to explore the mother's observations of her infant, what she understood about her infant's experience, and how she experienced the session. It also provided an opportunity for working through difficulties the mothers experienced in following her infants' lead. Although some mothers made links between their experience in therapy and the past, the emphasis was on making it possible for mothers to observe their infants and to follow their lead rather than gaining insight.

*PPT.* The alternative treatment, PPT, was conducted as follows. The mother was told that anything she talked about was okay, and that she and the therapist would try to attend to the infant's activity while they talked. Unlike WWW, the mother was *not* explicitly instructed to follow her infant's lead. Moreover, the sessions were not divided into two parts as was done in the WWW treatment. In PPT, the therapist indicated that he/she would not take a primary role in playing with the child but would try to help the mother to better understand and be with her child. As with other forms of psychodynamic psychotherapy, use was made of the transference and countertransference, and repetition of the past, reexperiencing of affect, and interpretation. Unlike WWW, there was a focus on the therapist making observations of the infant and mother–infant interaction, which were then used to draw the mother's attention to her infant's needs and signals. There also was a focus on interpreting the mother's tendency to repeat the past and to reexperience affect in relation to her infant. In PPT, although the majority of treatment sessions involved only the mother–infant dyad, treatment was not restricted and, if indicated, the father or the whole family might be included for a few sessions or the mother seen alone in addition to the sessions she had with her infant.

The same playroom setup was used for WWW and PPT. Toys that allowed for both representational play and mastery of skills were provided. These toys included anatomically correct baby dolls, molded plastic animals (both wild and domestic), soft vinyl family dolls, plastic mixing bowls and spoons, blocks, stacking toys, a toy baby bed and blanket, telephones, and a bean bag chair.

## DESIGN

Infant–mother dyads were randomly assigned, whenever possible (two-thirds of cases), to the two treatment groups. Otherwise, assignment was dependent on therapist case load and available time for treatment. This was done because of considerations of clinic policy regarding minimizing the wait for infant clients, and staff time and budget constraints imposed by two of the therapists being funded by a research grant. In all cases, group assignment was made before assessment by someone who was not involved in the assessment or treatment process and without consideration of the specific details of the case. Therefore, there is no reason to believe that systematic bias was introduced such that dyads were assigned on some preexisting characteristics; the WWW and PPT groups were similar in infant age, family income, maternal education, and on the dependent variables measured at the beginning of treatment (Cohen et al., 1999).

There were four therapists (one male and one female per treatment) who were infant mental health specialists with more than five years of clinical experience, and who had applied the respective psychotherapies for a minimum of three years. Treatment was provided weekly for one-hour sessions for up to 18 sessions. A review was offered after eight sessions, at which point parents could decide whether to continue. Neither the mean number of sessions nor the mean length of treatment differed significantly between the two treatment groups. The mean number of sessions for WWW was 13.8 and for PPT 14.9,  $t(65) = .92, p < .36$ . The average length of time over which treatment occurred was 4.6 months for the WWW group and 5.4 months for the PPT group,  $t(62) = 1.58, p < .12$ . Six dyads who started treatment dropped out very early in treatment, three because of apparent life events (e.g., a move) and three because of ambivalence about treatment. Four of the dropouts were in the WWW group and two in the PPT group. There were no differences on background variables, such as maternal age, socio-economic class, and presenting complaints in these dropouts and the group that completed treatment. Comparisons between the two treatment groups were not made because of small sample size. During the study, the integrity of each treatment was maintained through regular weekly supervision meetings between therapists.

## MEASURES

With the exception of the ratings of presenting symptoms, measures used to test study hypotheses have been shown to have adequate reliability and validity. The sample sizes differ for some variables because of variability in the completion of measures by families despite repeated encouragement and reminders from project staff.

### *Background Information*

Demographic information such as socio-economic status and marital status were gathered using a standard intake form and an initial interview. To ensure that the two treatment groups were not differentially compromised at birth, pregnancy and delivery information was obtained both from the mother and, with informed consent, from hospital records using criteria outlined by O'Callaghan, Larkin, and Waddington (1990).

### *Presenting Symptoms*

A symptom report form was developed for this study to obtain information from mothers about their infants' problems. Mothers were asked to list the primary and other problems that brought

them for help and to rate these on a 100-point scale on three dimensions: Problem Severity, and Effectiveness and Comfort dealing with the problem. Only ratings of the primary problem were analyzed for this article.

### ***Maternal Perception of Parenting***

*Parenting Stress Index (PSI).* On this well-established measure of stress in the parent–child system (Abidin, 1986), mothers were asked to rate 120 items on a five-point scale from which total, child, and parent domain scores were derived. The total scores for the parent and child domains were analyzed for this article. The PSI is standardized for ages ranging from one month to 19 years.

*Parenting Sense of Competence Scale (PSOC).* On this measure of self-esteem specific to the parenting role (Johnston & Mash, 1991), mothers were asked to use a six-point scale to rate 17 items divided into two scales reflecting their perception of Parenting Satisfaction and Parenting Efficacy.

### ***Maternal Depression***

Clinical experience suggests that mothers are likely to present with feelings of depression. To measure maternal depression, the Beck Depression Inventory was used (BDI; Beck, 1978), which required the mother to rate 21 symptoms on a five-point scale.

### ***Infant Cognitive Development and Behavior***

The Mental Scales of the Bayley Scales of Infant Development-I or II (Bayley, 1969, 1993) were used to derive a Developmental Quotient (DQ). Ratings on a variety of behaviors also were made by the examiner on the Bayley Infant Behavior Rating Scale, which includes three subscales: Emotion Regulation, Orientation-Engagement, and Motor Quality. One subscale, the Emotion Regulation scale (i.e., infant activity, adaptation, affect, cooperation, persistence, frustration tolerance, sensitivity to stimulation, ability to attend, and responsiveness to the examiner), was of interest in the present study.

### ***Mother–Infant Interaction***

The Chatoor Mother/Infant/Toddler Play Scale (Chatoor, 1986; Chatoor, Menville, Getson, & O'Donnell, 1988) was used to code 10 minutes of videotaped free play between mothers and their infants. For this procedure, age appropriate toys were arranged on a plastic mat and mothers were instructed to play with their child as they would at home. Coders were blind to group status and attachment classification. From the Chatoor Scale, four dimensions were derived from 32 items each rated on a four-point scale, and included: Dyadic Reciprocity and Dyadic Conflict, Maternal Intrusiveness, and Maternal Unresponsiveness. All raters were trained by the author of the scale (Irene Chatoor) to a minimum of 80% agreement before formal coding began. There was one primary coder, and coding was always done by this coder and one of two other trained coders. In all cases, following independent coding by the two coders, discrepancies were resolved through discussion. The consensus ratings were used for analyses. One of the secondary coders rated 75% of the tapes ( $n = 44$ ) and the other secondary coder rated the remaining 20% of the tapes ( $n = 14$ ). Interrater reliability of the primary coder



with the secondary coder who coded 75% of the tapes was  $r = .86$  ( $n = 8$ ) and with the other secondary coder was  $r = .80$  ( $n = 4$ ).

### *Attachment Security*

The Strange Situation was used to assess the organization of infant–mother attachment employing the standard procedures (Ainsworth, Blehar, Waters, & Wall, 1978). Separations were terminated if the child became too distressed after a minimum of 20 seconds. This well standardized procedure includes seven increasingly stressful episodes including separations and reunions. Using primarily the child’s responses during the reunion they were classified according to criteria for secure, avoidant, ambivalent (Ainsworth et al., 1978) and disorganized (Main & Solomon, 1986) attachment relationships and were scored by an expert coder.

## RESULTS

Background characteristics on continuous measures were analyzed using  $t$ -tests. Differences between groups on categorical variables were analyzed with  $\chi^2$  or Fisher Exact Test. To examine our specific hypotheses regarding persistence of treatment effects, we examined  $F$ -values for the posttreatment to follow-up period. For continuous variables, a univariate analysis of variance was used with group (WWW, PPT) as the between factor and time (post and follow-up) as the within factor. If a significant  $F$  was found for an interaction, further follow-up  $t$ -tests were conducted to determine where the effects lie. Because we had specific hypotheses about treatment effects, one-tailed tests were used.

### *Sample Description*

Background information and a sample description are found in Table 1. The two treatment groups were similar with regard to child gender and age, birth order, number of siblings, and the hours per week in daycare. With respect to maternal characteristics, the groups were similar in age, education level, family income, and marital status.

Groups also were similar in infant age at the time of follow-up. As well, none of the measures differed significantly between groups at pretreatment, which attests to the effectiveness of the randomization procedure.

### *Persistence of Change and Further Improvements from Posttreatment to Follow-up*

It should be noted that on all of the following variables, one or both groups had shown significant change from the beginning to the end of treatment.

*Presenting symptoms.* There was a significant Group  $\times$  Time interaction observed for maternal perception of comfort managing the infant’s symptomatic behavior of primary concern at the time of referral (Table 2). Mothers in the WWW group reported a further increase in comfort dealing with infant behavior,  $t(1, 22) = 2.9$ ,  $p < .01$  from posttreatment to follow-up while the PPT group did not,  $t(1, 26) = 0.6$ . There was also a significant main effect for Time on mothers’ ratings of their infants’ symptom severity, and the mothers’ effectiveness in dealing with the problem indicating that there were further gains made at follow-up in both groups.

*Maternal perception of parenting.* There was a significant Group  $\times$  Time interaction for

**TABLE 1.** Background Information and Sample Description

	<i>Watch, Wait, Wonder</i>		<i>Psychodynamic Parent–Infant Psychotherapy</i>		$\chi^2$
	n	(%)	n	(%)	
Infant characteristics	<i>n</i> = 26		<i>n</i> = 31		
Sex (% Male)	17	(63.0)	18	(58.1)	0.1
	<i>M</i>	( <i>SD</i> )	<i>M</i>	( <i>SD</i> )	<i>t</i>
Child's age (months)	21.7	(6.7)	19.4	(6.2)	1.4
Birth order	1.4	(0.9)	1.4	(0.6)	–0.2
Number of siblings	0.6	(0.9)	0.6	(0.7)	–0.1
Number of hours in daycare	9.5	(15.3)	12.9	(17.8)	–0.8
Total number presenting symptoms pretreatment	2.5	(0.9)	2.5	(1.1)	0.1
	<i>n</i> = 26		<i>n</i> = 31		
Child's age at follow-up (months)	37.3	(7.1)	35.4	(7.3)	1.0
Length between pre assessment and follow-up assessment (months)	15.2	(3.5)	16.1	(3.3)	–0.9
Maternal characteristics					
Age	32.0	(4.8)	32.4	(3.9)	–0.4
Education level (1–10)	5.7	(1.1)	6.0	(1.3)	–0.9
Family income (1–12)	7.1	(3.7)	5.5	(3.5)	1.6
Marital status					
Married common law (live-in)	22.0	(81.5)	26	(83.9)	–0.06

parenting stress as measured by the PSI (Table 3). Although both groups reported decreased parenting stress, mothers in the WWW group reported a greater decrease in stress from post-treatment to follow-up in the Parent domain of the PSI (WWW:  $t(1, 22) = 2.35, p < .05$ ; PPT:  $t(1, 27) = 1.46$ ). There was also a significant main effect for Time for the Child domain indicating that stress continued to decrease in this domain from posttreatment to follow-up in both groups. This was also the case for the Parenting Efficacy subscale of the PSOC; a significant main effect for Time indicated further increase in feelings of efficacy for both treatment groups from the end of treatment to follow-up. There was no significant change for the Parenting Satisfaction subscale of the PSOC; rather, changes in satisfaction at the end of treatment were maintained for mothers in both groups.

*Maternal depression.* There was a significant main effect for Time on the BDI indicating that mothers in both groups reported a further significant reduction in depression from posttreatment to follow-up (Table 3). These findings indicate that after treatment ended, further gains were made by mothers in the WWW group who had already shown a significant decrease in depression from pre- to posttreatment assessments (Cohen et al., 1999). For PPT, a significant decrease in depression occurred only in the posttreatment to follow-up period.

*Infant cognitive development.* There was a significant Group  $\times$  Time interaction for infant DQ (Table 4). Infants in the PPT group exhibited a significantly greater increase in DQ from

**TABLE 2.** *Change in Maternal Perception of Her Infant's Primary Symptom and of Her Parenting*

	<i>Watch, Wait, Wonder</i> n = 23				<i>Psychodynamic Parent-Infant</i> <i>Psychotherapy</i> n = 25				<i>Post to Follow-up</i>	
	<i>Post</i>		<i>Follow-up</i>		<i>Post</i>		<i>Follow-up</i>		<i>T</i>	<i>G × T</i>
	M	(SD)	M	(SD)	M	(SD)	M	(SD)		
Maternal perception of symptom severity	30.9	(29.3)	22.2	(23.9)	35.1	(26.9)	27.3	(17.9)	5.4*	0.0
Maternal perception of effectiveness dealing with problem <sup>a</sup>	32.6	(25.2)	21.7	(22.4)	34.0	(23.3)	27.3	(18.9)	5.6*	0.3
Maternal Perception of Comfort Dealing with Problem <sup>a</sup>	32.6	(28.4)	17.0	(21.7)	27.2	(23.7)	25.4	(22.5)	5.0*	3.2*

<sup>a</sup> The direction of change is reversed so that for all variables a lower score reflects a feeling more effective or more comfortable dealing with the infant's primary presenting problem.

\*  $p < .05$ .

**TABLE 3.** *Change in Parenting Variables and Maternal Depression*

	<i>Watch, Wait, Wonder</i>				<i>Psychodynamic Parent–Infant Psychotherapy</i>				<i>Post to Follow-up</i>	
	<i>Post</i>		<i>Follow-up</i>		<i>Post</i>		<i>Follow-up</i>			
	M	(SD)	M	(SD)	M	(SD)	M	(SD)	<i>T</i>	<i>G × T</i>
Parenting Stress Index	<i>n</i> = 23				<i>n</i> = 27					
Parent domain total	133.0	(19.3)	128.4	(19.3)	137.0	(30.0)	130.2	(26.3)	8.0**	2.9**
Child domain total	112.5	(19.5)	110.2	(18.2)	111.1	(23.8)	101.7	(20.5)	6.8*	0.2
Parenting Sense of Competence Scale	<i>n</i> = 21				<i>n</i> = 27					
Parenting satisfaction	37.0	(5.8)	38.0	(5.3)	36.4	(6.7)	37.5	(6.4)	2.6	0.1
Parenting efficacy <sup>a</sup>	19.9	(4.4)	18.5	(5.1)	20.1	(4.8)	19.1	(3.7)	5.0*	0.1
Beck depression inventory	<i>n</i> = 24				<i>n</i> = 29					
	7.4	(5.3)	6.3	(5.4)	11.6	(8.6)	8.3	(6.0)	6.2*	1.4

<sup>a</sup> Items on this scale were worded in a negative direction so that a decrease in scores indicates an increase in efficacy.

\* *p* < .05.

\*\* *p* < .01.

\*\*\* *p* < .001.

**TABLE 4.** *Change on Developmental Measures: Bayley Scales*

	<i>Watch, Wait, Wonder</i>				<i>Psychodynamic Parent–Infant Psychotherapy</i>				<i>Post to Follow-up</i>	
	<i>Post</i>		<i>Follow-up</i>		<i>Post</i>		<i>Follow-up</i>			
	M	(SD)	M	(SD)	M	(SD)	M	(SD)	<i>T</i>	<i>G × T</i>
Mental scales <sup>a</sup> (DQ)	98.0	(20.2)	95.4	(18.1)	93.2	(14.1)	97.4	(15.9)	0.2	3.9*
DQ/IQ-low scores removed	102.8	(13.9)	99.2	(13.8)	94.7	(11.7)	99.0	(13.3)	0.04	4.8*
Clinical rating (1–3)										
Emotion regulation	2.8	(0.6)	2.6	(0.8)	2.4	(0.8)	2.8	(0.5)	1.3	4.8*

<sup>a</sup>Some infants were untestable pretreatment resulting in a smaller *n* for pre-post follow-up comparisons. It is noteworthy that some infants who were untestable at the beginning of treatment because they were so distressed were testable at the end of treatment.

\**p* < .05.

the end of treatment to follow-up,  $t(1, 30) = -1.8, p < .05$ ), whereas the DQ of infants in the WWW group remained stable. Although there appears to be a small drop in DQ for the WWW group, this was not significant,  $t(1, 20) = 1.2$ . The results were unchanged when children with the lowest DQs were removed. There also was a significant Group  $\times$  Time interaction for Emotion Regulation (Table 4). Improvements in Emotion Regulation were observed from post-treatment to follow-up in infants in the PPT group,  $t(1, 22) = -2.4, p < .05$  and, again, scores for infants in the WWW group remained stable,  $t(1, 15) = 0.81$ . Because infants in the WWW group had made a significant gain in DQ and Emotion Regulation at the end of treatment (Cohen et al., 1999), these results indicate that initial gains were maintained in the WWW group. For infants in the PPT group, gains were observed only six months after treatment ended.

*Mother–infant interaction.* There were significant main effects for Time on the Dyadic Reciprocity and Maternal Intrusiveness subscales of the Chatoor Play Scale. For both groups, gains from the end of treatment to follow-up were made in the direction of increased Dyadic Reciprocity during mother–infant play and decreased Maternal Intrusiveness (Table 5). Similar gains on these measures had been observed from pre- to posttreatment (Cohen et al., 1999). Therefore, the current results reflect continued gains in these areas. Maternal Unresponsiveness and Mother–Infant Conflict remained stable from posttreatment to follow-up.

*Attachment security.* Before treatment, the distribution of attachment categories in the two treatment groups did not differ significantly (Cohen et al., 1999). Given that this is a clinical sample, in addition to examining shifts from an insecure (A or C) or disorganized (D) category to a secure (B) category, we examined movement from a disorganized attachment category to a more organized albeit insecure (A or C) category. To examine the pattern of findings from posttreatment to follow-up we counted the number of infants in each group who either retained gains made at the end of treatment or who moved toward a secure or organized attachment relationship from the end of treatment to follow-up (Table 6). In the WWW group, eight infants showed this pattern (32%), and in the PPT group nine infants (36%) did so. There was no difference between groups,  $\chi^2(1) = .04$ .

## DISCUSSION

The main goals of *brief* therapeutic interventions, generally, are to reduce maladaptive symptoms and improve functioning; major characterological changes are not expected (Book, 1998). We would also expect that a goal of *infant* interventions would be to decrease risks associated with poor developmental outcomes (e.g., maternal depression). Thus, it is encouraging that in the present study, effects of two brief psychodynamic psychotherapeutic interventions on presenting complaints and maternal and child functioning are not transient. In keeping with the first hypothesis of this study, improvements observed at the end of treatment were maintained. Moreover, in some respects, further improvements were observed six months after treatment ended. Continued improvement in infant symptoms and measures of maternal intrusiveness and dyadic reciprocity in both groups supports the second hypothesis and is also consistent with the findings of Robert-Tissot et al. (1996). The present findings are especially important in light of parents' report at the beginning of treatment that their infants' problems had been chronic, beginning in the earliest months of life and usually persisting for one year or more. In other words, it does not appear that these infants simply "grew out of" their problems. Although this general conclusion applies to both treatment groups, some changes emerged in WWW and PPT at a different pace. Specifically, as we reported earlier (Cohen et al., 1999),

**TABLE 5.** *Change in Quality of Mother–Infant Interaction*

	<i>Watch, Wait, Wonder</i> n = 27				<i>Psychodynamic Parent–Infant Psychotherapy</i> n = 31				<i>Post to Follow-up</i>	
	<i>Post</i>		<i>Follow-up</i>		<i>Post</i>		<i>Follow-up</i>		<i>T</i>	<i>G × T</i>
	M	(SD)	M	(SD)	M	(SD)	M	(SD)		
Reciprocity	24.9	(5.6)	26.6	(5.5)	25.8	(6.8)	29.0	(8.1)	5.1*	0.5
Unresponsiveness	0.6	(0.8)	0.5	(0.6)	0.4	(0.9)	0.4	(0.6)	0.6	0.1
Intrusiveness	3.2	(3.2)	2.2	(2.2)	3.5	(2.8)	3.0	(2.5)	5.2*	0.5
Conflict	1.0	(1.2)	0.6	(0.8)	1.1	(1.5)	1.1	(1.0)	1.2	1.0

\*  $p < .05$ .

**TABLE 6.** *Posttreatment: Change in Attachment Security*

<i>Specific Changes in Attachment Security</i>	<i>Watch, Wait, Wonder</i> n = 25		<i>Psychodynamic Parent-Infant Psychotherapy</i> n = 25	
	n	<i>Post to Follow-up Period</i> (%)	n	(%)
Overall change				
Retained gains or showed movement toward secure or organized attachment	8	(32.0)	9	(36.0)
No change or decrease	17	(68.0)	16	(64.0)

greater gains were made from the beginning to the end of treatment prior to follow-up in the WWW than in the PPT group in terms of decreased maternal depression, increased infant cognition and emotion regulation, and a more secure or organized infant–mother attachment relationship. In keeping with the third study hypothesis, dyads receiving PPT also made these gains but only when examined at follow-up six months after treatment ended. However, in the WWW group an advantage persisted in relation to mothers' comfort in dealing with the infant behaviors that brought them to treatment and in their ratings of parenting stress generally.

As in most other studies of infant intervention, changes in the quality of the mother–infant relationship, and especially attachment security, are of particular interest because of the association of attachment security with other areas of development (see review by Bretherton, 1985). Although significant changes were observed in the infant–mother play interactions, both at the end of treatment and at six-month follow-up, in areas shown to be precursors of attachment security, only approximately one-third of the sample moved to a more secure or organized attachment. Bowlby (1979) emphasized that attachment is resistant to change, and that patterns of relating to get attachment needs met tend to endure. This would be particularly true for mothers, because as adults they have internalized their attachment patterns. Therefore, it is unlikely that short-term therapy would effect widespread change in infant–mother attachment. In light of these points, it is encouraging that in the present study at least some infants moved toward a more organized or secure classification after a relatively brief time limited treatment. Again, it is notable that, as with some of the other variables, the time line for change among dyads in the WWW group was shorter than that for the PPT group. At six-month follow-up there was not a significant group difference. Further analysis of our data will throw light on characteristics of infants and their mothers who show a differential shift in attachment security attributable to other than the treatment modality they received.

We do not know what the result would be if treatment was provided for a longer period of time. Some evidence in support of the impact of longer term treatment comes from a study of a community sample of mothers with depressive symptomatology (Cicchetti et al., 1999). However, even in that study, over 55% were securely attached at the outset and only approximately 20% of infants in a group treated for 16 months showed a shift in attachment security that was greater than in an untreated group. Although there were gains in sensitivity and responsiveness that we noticed in both groups in the present study, we do not know whether these will result in changes in attachment security in the long run.

Also promising is the finding that, by and large, both treatments examined in the present



study are effective in reducing the risks associated with poor outcome for infants. Findings regarding reduction in maternal depression are especially important to highlight because there is considerable research that attests to the impact of continuing maternal depression on infant cognitive and language development (Murray, Hipwell, Hooper, Stein, & Cooper, 1996; NICHD Early Child Care Research Network, 1999) and attachment (Egeland & Sroufe, 1981) into the toddler years. It is possible that changes in these factors may further buffer children from mental health problems and improve their opportunities for developing a more secure attachment by reducing the risks associated with insecurity. Such possibilities can only be explored through further follow-up studies.

Taken together, our finding that both WWW and PPT were effective mother–infant psychotherapies is consistent with other studies confirming that in regard to psychotherapy “all roads lead to Rome” (Stern, 1995). However, our results suggest that following some roads takes less time than others. What might account for the different pace of change in the two treatments? Stern (1995) suggests that there are a number of “ports of entry” into addressing relationship problems, in particular, the infant–parent interaction behavior or parent representations. We recognize that both treatments studied here aim to improve maternal sensitivity and responsiveness but each approached this in a different way. We think that WWW works at two levels. At one level it provides the opportunity for the infant himself to directly work through developmental and relational struggles in the presence of his mother. This is facilitated by putting the infant in the role of initiator and asking the mother to follow her infant’s lead, making herself physically and emotionally accessible and responding to her infant’s cues. Thus, as in play therapy, WWW directly provides an opportunity for the infant to quickly get to underlying difficulties and, through play and interaction, work through core relational struggles, in this case with the parent rather than with the therapist. In other words, the infant has the possibility of developing a sense of efficacy and mastery by impacting on the relationship with his mother. This is particularly important because an infant cannot wait for their mother to resolve her relational struggles before she can be sensitively responsive. This empowering of the infant is the primary difference between WWW and PPT, and therefore, it is notable that greater gains in comfort dealing with infant symptoms and a greater reduction in parenting stress were made in the WWW than in the PPT group after treatment ended.

In addition, at a second level, working with the mothers’ observations allows her to reflect on her infant’s inner experience or, in other words, develop a reflective capacity (Fonagy, Steele, Steele, Moran, & Higgitt, 1991). Integral to the WWW process is the opportunity for the mother to work through the relevant anxieties and conflicts that inevitably emerge as she tries to follow her infant’s lead. These anxieties tend to inhibit or compromise her capacity to be sensitive and responsive to her infant’s emotional cues. In PPT, it appears to us that work is done primarily with the mother, and the focus is on the mother’s representations and her transference relationship with the therapist. This pathway for change appears to have a different time line. From a theoretical perspective, we presume that in PPT the mother needs to work through her own earlier relationships before her new insights can influence the relationship with her infant. Additionally, it is possible that the primary focus on the uncovering process in PPT leaves the mother preoccupied or distressed for longer periods of time, another reason why the time line for impact of treatment on her relationship with her infant may be different (see Goldfried & Wolfe, 1998; Seligman, 1995, for work on the uncovering process in adults). Given the paucity of studies in the infant clinical literature and even greater paucity of follow-up studies, it is important to acknowledge that although we have drawn some parallels between our findings and those of Robert-Tissot et al. (1996), a strict comparison is not possible because there was overlap in only some variables studied. The present findings contribute an appraisal

of cognitive development and direct observation of emotion regulation, and measurement of attachment security that have not been included in most studies of infant–parent psychotherapy to date.

### *Limitations*

Ideally, the research design for this study should have included a waiting list or no treatment control group, and all subjects randomly assigned so that changes in infant behavior and parent perceptions could be clearly attributed to treatment effects and not to statistical artifact, such as regression toward the mean. However, inclusion of such a comparison group was not feasible for ethical reasons (i.e., infants cannot wait). As well, optimally we would have had independent ratings done to ensure treatment integrity. This was not practical and, instead, we accomplished this through weekly supervision meetings between the two therapists within each treatment group. The fact that we observed a number of statistical interactions in predicted directions in examination of changes from the beginning to the end of treatment (Cohen et al., 1999) bolsters the results and strongly supports the conclusion that the findings did not occur by chance and were not a function of a statistical artifact. Also, because most infant problems were chronic, being present for 80% of their life (Cohen et al., 1999), we must ask why such symptoms would otherwise abate after four to six months of treatment and be retained six months later.

## SUMMARY AND CLINICAL IMPLICATIONS

Taken together, results of this study, in conjunction with that of Cohen et al. (1999), indicate that time-limited psychotherapeutic treatments for infants and their mothers can have long-lasting and wide-ranging effects. The fact that in the present study treatment gains in a clinical infant population were sustained into the toddler period and/or increased further in two forms of therapy also suggests a protective effect of treatment. Especially rapid gains are accrued by both mother and infant participating in WWW, a therapy that utilizes the infants's natural striving toward attachment and development to focus on the mother–infant relationship and development. Quickly relieving infant and maternal distress may make both members of the dyad more amenable to engaging in the work of therapy. In this context, it is notable that mothers in the WWW group were rated by their therapists as being more engaged in the therapeutic process and attending more regularly than mothers in the PPT group (Cohen et al., 1999). In a climate of managed care it would be unfortunate if the present findings were misinterpreted as indicating that the therapy yielding the quicker results is always preferred. Rather, the finding that both treatments have very similar effects when maternal and infant functioning are examined six months after treatment ends indicates that patients are not compromised by their own or their therapist's choice of one form of treatment over another. Further work is being done to determine characteristics of mothers and infants who are more likely to make gains in one form of treatment or the other.

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