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The relative efficacy of two interventions in altering maltreated preschool children's representational models: Implications for attachment theory

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Abstract
A narrative story-stem task was used to evaluate the efficacy of two competing, developmentally informed preventive interventions for maltreated preschoolers and their mothers designed to modify children's internal representations of self and of self in relation to other. One hundred and twenty-two mothers and their preschoolers (87 maltreated and 35 nonmaltreated) served as participants. Maltreating families were randomly assigned to either the preschooler–parent psychotherapy (PPP, $n = 23$), psychoeducational home visitation (PHV, $n = 34$), or community standard (CS, $n = 30$) intervention group at baseline. Thirty-five nonmaltreating (NC) families served as comparisons. Narratives were administered to children at baseline and at the postintervention evaluation. Children in the PPP intervention evidenced more of a decline in maladaptive maternal representations over time than PHV and CS children and displayed a greater decrease in negative self-representations than CS, PHV, and NC children. Also, the mother–child relationship expectations of PPP children became more positive over the course of the intervention, as compared to NC and PHV participants. These results suggest that an attachment-theory informed model of intervention (PPP) is more effective at improving representations of self and of caregivers than is a didactic model of intervention directed at parenting skills. Findings are discussed with respect to their implications for developmental theory, with a specific focus on attachment theory and internal working models of relationships.

Prevention and intervention trials have been shown to prevent mental disorder and/or promote well-being. However, the foundations of such endeavors have been viewed as lacking a strong conceptual basis (Hinshaw, 2002; Institute of Medicine, 1994; Koretz, 1991). The failure to utilize existing theory and research to guide the development and implementation of prevention and intervention initiatives results in less informed service delivery that may ultimately be less effective. Although tension has existed among those who advocate for prevention aimed at the reduction of mental disorder, those who target the reduction of more general risk factors, and those who focus on the promotion of mental health, a report issued by the National Institute of Mental Health (1995) concluded that there is little justification for this dispute. Rather, each of these foci has an important role in prevention science, but the intervention ap-

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proaches that accompany each agenda are quite different.

Prevention efforts traditionally have emanated from the areas of public health, epidemiology, and community psychology and, although important from a public health perspective, little developmental influence has been present in the conceptualization, implementation, or evaluation of these initiatives (Cicchetti & Toth, 1992; Kellam & Rebok, 1992; Koretz, 1991). Within the past decade, however, clinical and developmental theorists have begun to frame treatment research not only as needing to be based on sound developmental principles but also as a way of testing and extending extant developmental theory (Cicchetti & Rogosch, 1999; Cicchetti & Toth, 1992; Hinshaw, 2002; Kellam & Rebok, 1992; Noam, 1992; Shirk, 1999; Toth & Cicchetti, 1999). This neglected nexus, whereby the evaluation of prevention and intervention programs can both be informed by and serve to inform developmental theory, holds considerable promise not only for fostering exemplary methods of service delivery but also for assessing and strengthening our knowledge of developmental mechanisms and processes in normative and atypical populations.

Despite the confluence of findings on the adverse effects of child maltreatment on the organization of developmental processes, there continues to be a paucity of theoretically guided approaches to intervention with maltreated children (Toth & Cicchetti, 1993). The majority of studies that have sought to evaluate the effectiveness of prevention and intervention for maltreatment have focused on short-term behavioral strategies. However, the application of a developmental perspective generally has been sorely lacking. In designing developmentally informed preventive interventions for maltreated preschoolers, we draw from two main bodies of work, one that involves the provision of social support and the promotion of positive parenting (cf. Daro, 1990; Gaudin, Wodorski, Arkinson, & Avery, 1990; Olds, Henderson, Chamberlin, & Tatelbaum, 1986) and a second that conceives of the mother–child attachment relationship as central to positive child outcome (Fraiberg, Adelson, & Shapiro, 1975; Lieberman, 1991).

The interventions described in the investigation reported herein were conceived with the goal of grounding two competing, theoretically informed models of intervention in our knowledge of the effects of child maltreatment on child development. By designing and conducting a methodologically rigorous evaluation of two interventions, we also sought to examine our findings with respect to their implications for developmental theory. Specifically, we were interested in examining whether children's mental representations of themselves and of their caregivers could be differentially affected through the provision of two distinct models of intervention. The first model involved an attachment-theory informed intervention that addresses maternal and child representations of relationships. In the second, a psychoeducational model of intervention that focused on didactic parenting skills training and fostering increased social supports was provided. Our overarching question involved whether an intervention specifically targeting representational models of relationships was needed in order to modify child representations or whether these outcome variables could be improved more indirectly via addressing parenting skills. We believe that answers to these questions potentially can affirm, challenge, and expand normative developmental theory on working models of relationships.

To begin, we briefly discuss the historical roots of attachment theory and examine the developmental transition from sensorimotor to representational systems that occurs during the preschool years in order to establish a foundation for how our interventions can inform developmental theory. We then discuss what we know about attachment and representational development in maltreated children. Next, we discuss the effectiveness of story-stem narrative techniques in accessing the representational world of young children, highlighting work that has been done with normative and maltreated populations. We then review investigations of the efficacy of attachment-theory informed interventions for pro-

moting attachment security in various risk groups and provide theoretical background information on the models of intervention utilized in the present study. Finally, after presenting results on the efficacy of the interventions in altering maltreated children's representational models of self and of relationships, we examine our findings within the context of their implications for developmental theory, with a specific focus on attachment and representational development.

Attachment and Representational Development

Historically, the majority of attachment theory and research focused on infancy, and attachment was conceived of as largely sensorimotor in nature (Oppenheim & Salatas Waters, 1995). However, several of John Bowlby's later writings (e.g., Bowlby, 1988) and a considerable body of more recent research (Bretherton & Munholland, 1999; Thompson, 2000) has focused on *mental representations* of attachment. In accord with attachment theory, it is through early experiences with caregivers that children are thought to develop complex mental structures, typically referred to as representational models, schemata, or internal working models (Baldwin, 1992; Bowlby, 1988; Bretherton, 1991, 1992; Cassidy, 1990; Main, Kaplan, & Cassidy, 1985; Sroufe & Fleeson, 1986), of self and of self in relation to other.

Unlike children who develop adaptive representational models based on the receipt of responsive and sensitive care, children who experience abusive or insensitive caregiving are likely to develop negative representations of their caregivers and corresponding negative representations of themselves (Cicchetti, Toth, & Lynch, 1995). Considerable empirical support for this formulation has been obtained. Maltreated infants consistently evidence a higher rate of insecure attachment relations with their primary caregivers than do nonmaltreated infants (Cicchetti et al., 1995; Egeland & Sroufe, 1981). These insecure attachments are typically disorganized/disoriented in nature (Barnett, Ganiban, & Cicchetti, 1999; Carlson, Cicchetti, Barnett, & Braunwald, 1989; Lyons–Ruth, Repacholi, McLeod, & Silva, 1991). In fact, in a recent meta-analytic review, van Ijzendoorn, Schuengel, and Bakermans–Kranenburg (1999) concluded that child maltreatment is one of the strongest predictors of disorganized attachment and that children with disorganized attachments are more likely to develop externalizing behavior problems than children with anxious/ambivalent or avoidant attachments. Moreover, perturbations in the self-systems of maltreated youngsters have been identified in toddlerhood (Beeghly & Cicchetti, 1994; Schneider–Rosen & Cicchetti, 1991). During the preschool years, physically abused children also evidence less moral internalization than do nonmaltreated children (Koenig, Cicchetti, & Rogosch, 2000), a coping strategy that has been linked to detrimental self-development through the creation of compulsive compliant strategies that result in the creation of a "false self" (Crittenden & DiLalla, 1988). Less positive self-concepts have also been found in maltreated children compared to children who have not experienced maltreatment (Bolger, Patterson, & Kupersmidt, 1998; Egeland, Sroufe, & Erickson, 1983; Toth, Manly, & Cicchetti, 1992). These negative perceptions of self continue into the school age years, where it has been reported that maltreated children view themselves differently with respect to domain-specific perceptions of competence as compared to nonmaltreated youngsters (cf. Barnett, Vondra, & Shonk, 1996; Vondra, Barnett, & Cicchetti, 1989, 1990).

The preschool period is an especially important time for symbolic and representational development, because it is during this period that representational models of self and of self in relation to other evolving from the attachment relationship become increasingly structured and organized. Although developing children are likely to maintain specific models of individual relationships, these models become increasingly integrated into more generalized models of relationships over time (Crittenden, 1990), thereby affecting children's future relationship expectations. Because maltreated children internalize relational features

of their caregiving experiences, they are likely to generalize negative representations of self and self in relation to other to novel situations and relationship partners (Lynch & Cicchetti, 1991).

Measurement of Representations: Use of Story-Stem Narrative Techniques

Although the Strange Situation (Ainsworth, Blehar, Waters, & Wall, 1978) has been the traditional means of assessing the quality of attachment during the early years of life, other measurement strategies became necessary to delineate the structure of internal working models during the preschool period as children's verbal skills increase (Bretherton, Ridgeway, & Cassidy, 1990). One alternate method of accessing internal working models that has gained considerable attention in the research literature has used variations on story-stem narrative tasks that allow for the incorporation of children's more sophisticated language abilities into the assessment process (see Oppenheim & Salatas Waters, 1995, and Solomon & George, 1999, for reviews). The utilization of story-stem narrative techniques provides a vehicle for accessing the representational world of young children through the developmentally appropriate domain of play, and these techniques have been used successfully in investigations of representation and attachment in both normative and maltreated samples of children.

Representation in normative populations

To date, a considerable body of literature with normative populations has shown that children's responses to story-telling tasks were predicted by observational assessment of attachment measured in laboratory settings (e.g., Bretherton, Ridgeway, et al., 1990; George & Solomon, 1994; Solomon & George, 1999). Importantly, the representations evidenced during story-telling tasks have also been found to be predictive of social behavior with peers (Eisenberg, Fabes, Minore, Mathy, Hanish, & Brown, 1994; Mize & Ladd, 1988), moral development (Goldwyn, Stanley, Smith, & Green, 2000; Kochanska, Padavich, & Koenig, 1996; Oppenheim, 1997; Woolgar, Steele, Steele, Yabsley, & Fonagy, 2001), and internalizing and externalizing behavior problems (Oppenheim, Emde, & Warren, 1997; Oppenheim, Nir, Warren, & Emde, 1997; von Klitzing, Kelsay, Emde, Robinson, & Schmitz, 2000; Warren, Emde, & Sroufe, 2000; Warren, Oppenheim, & Emde, 1996; Zahn–Waxler, Schmitz, Fulker, Robinson, & Emde, 1996). In a low-income sample of preschool-aged children, maternal behavior and children's representations of mothers were found to be related to child behavior problems, although only partial support was obtained for the mediating role of appropriately disciplining maternal representations in the link between ambivalent maternal behavior and child behavior problems (Solomonica–Levi, Yirmiya, Erel, Samet, & Oppenheim, 2001).

Representation in maltreated populations

Although fewer studies have utilized story narratives with clinical populations, a growing corpus of research with maltreated children has revealed important relations among child maltreatment, representation of self and of caregivers, and behavior problems. For example, in an investigation using the MacArthur Story Stem Battery (MSSB; Bretherton, Oppenheim, Buchsbaum, Emde, & The MacArthur Narrative Group, 1990), Toth and her colleagues (Toth, Cicchetti, Macfie, & Emde, 1997) found that maltreated children evidenced more negative maternal and self- representations than did nonmaltreated children, although the groups did not differ with respect to positive maternal and self-representations. These findings are interesting in that the maltreatment experiences influencing positive representations appeared to function independently of those contributing to negative representations. Further evidence of negative representations of caregivers has been reported by Macfie, Toth, Rogosch, Robinson, Emde, and Cicchetti (1999), where maltreated children were found to enact narratives in which child and parent characters were less responsive to another's distress.

In order to examine the role of development on representation in maltreated preschoolers, Toth and colleagues conducted a 1-year longitudinal investigation utilizing children's narratives. Consistent with prior findings, this study found that maltreated preschoolers' narratives contained more negative representations of both self and the caregiver than did demographically matched comparisons (Toth, Cicchetti, Macfie, Maughan, & VanMeenan, 2000). This investigation also revealed that, as development proceeds, negative representations begin to coalesce, underscoring the importance of providing attachment-informed intervention prior to the consolidation of negative representations of self and of self in relation to other (Toth, Cicchetti, Macfie, Maughan, et al., 2000).

Finally, in efforts to examine whether moral–affiliative and conflictual narrative representations were related to child behavior problems in maltreated preschoolers, Toth, Cicchetti, Macfie, Rogosch, and Maughan (2000) utilized the Attachment Story Completion Task (ASCT; Bretherton, Ridgeway, et al., 1990). The narratives of maltreated children were found to contain more conflictual and fewer moral–affiliative themes than did the narratives of nonmaltreated comparisons. In addition, it was found that children's conflictual representations partially mediated the relation between child maltreatment and externalizing behavior problems (Toth, Cicchetti, Macfie, Rogosch, et al., 2000).

In summary, a considerable body of research has documented the deleterious effects of maltreatment on the representational development of preschool children. The findings reported provide a solid foundation on which to conclude that maltreatment does exert negative effects on representational development, that these effects may become more entrenched as development proceeds, and that the representational themes enacted in children's narratives are related to child behavior problems. The results of these investigations also highlight the importance of providing interventions that may effectively divert maltreated children from these negative developmental trajectories.

Interventions for Disturbances of Attachment

Attachment theory has contributed to significant advances in clinical practice with young children and families via the incorporation of attachment theory principles into interventions (cf. Lieberman & Zeanah, 1999). In view of the significant perturbations evident in the attachment and representational systems of maltreated children, the application of tenets derived from attachment theory into interventions for these vulnerable children possesses considerable empirical backing. A number of investigators have attempted to promote attachment security in samples of low-income mothers and their young children, typically infants (see Lieberman & Zeanah, 1999, for a review). The interventions have differed with respect to the strategies utilized, but they have been unified by a recognition of the importance of fostering maternal sensitivity and developmentally appropriate responsivity to children.

In a recent review of such interventions, Lieberman and Zeanah (1999) describe a number of studies that involved supportive interventions and one that provided insight-oriented psychotherapy to high-risk, low socioeconomic status mothers. All were designed to modify mother–child interaction and to improve attachment security. Considerable variability occurred across studies. Some of the interventions affected maternal sensitivity but failed to improve attachment security, while others did facilitate the development of secure attachments.

In a study utilizing an attachment-informed therapy designed to modify attachment between the 2nd and 3rd years of life, Lieberman, Weston, and Pawl (1991) reported that the intervention helped mothers to process painful and adverse childhood experiences and to link these early experiences to their current interactions with their children. Although the intervention did not affect security of attachment as measured in the Strange Situation, increases in maternal empathy and dyadic problem solving also were reported.

A number of very short-term interventions

(approximately three or four sessions) involved teaching maternal sensitivity. These interventions have also produced mixed findings. Some resulted in improvements in maternal sensitivity and infant attachment (Juffer, 1993; van den Boom, 1991), but one failed to find such gains (Meij, 1991). More recently, two types of short-term interventions were implemented with lower middle class mothers who had insecure representations of attachment at baseline (Bakermans–Kranenburg, Juffer, & van Ijzendoorn, 1998). Both the didactically oriented intervention designed to improve maternal sensitivity and the didactic intervention in combination with discussions of maternal attachment were found to be effective in improving maternal sensitivity. However, differential intervention effects were linked with maternal attachment classification, the insecure dismissing mothers profiting the most from the didactic only intervention and insecure preoccupied mothers gaining more from the incorporation of discussions about childhood attachment (Bakermans–Kranenburg et al., 1998).

In an investigation of the efficacy of a longer term (approximately 45 sessions) attachment-theory informed intervention (Toddler–Parent Psychotherapy) designed to promote attachment security in a nondisadvantaged sample of toddler offspring of depressed mothers, Cicchetti, Toth, and Rogosch (1999) found that at posttreatment, children in the intervention group attained rates of secure attachment that were comparable with those of youngsters with nondepressed mothers. In contrast, the children with depressed mothers who did not receive the intervention demonstrated a greater rate of attachment insecurity than children with nondepressed mothers.

In efforts to disentangle some of the mixed findings related to attachment-oriented interventions, van Ijzendoorn, Juffer, and Duyvesteyn (1995) conducted a meta-analytic review of 16 studies. They concluded that interventions designed to improve attachment security are more effective in changing parental sensitivity than they are in modifying child attachment insecurity. Longer term interventions also were found to be less effective than short-term interventions. Van Ijzendoorn et al. (1995) also proffer that interventions that lead to changes at the behavioral level may not necessarily result in changes in mental representations. Although the findings of this meta-analytic review are interesting, we concur with Lieberman and Zeanah (1999), who argue that issues such as widely varying sample characteristics, variability in interventions provided, differences in the extent to which they were designed to address various outcomes, and incomplete assessments of important components of the mother–child relationship may hinder the ability of the meta-analytic review to truly address theoretically meaningful issues. Moreover, more recent positive outcome results (e.g., Cicchetti et al., 1999) were not included in the meta-analytic review.

In summary, both empirical work with maltreated children and investigations of the efficacy of attachment-theory informed interventions for promoting attachment security in various risk groups highlight the need for the provision of interventions designed to modify maladaptive attachment and representational development in these children.

Competing Models of Intervention

Given inconclusive evidence regarding whether didactic interventions designed to teach positive parenting versus interventions that focus on the processing of maternal attachment history as it affects the parent–child relationship are more effective in fostering positive child outcomes, the current investigation was designed to test competing models of intervention for maltreated preschool children and their mothers.

The first approach to intervention used in the present study and referred to herein as preschool parent psychotherapy (PPP; also as infant–parent psychotherapy or toddler–parent psychotherapy, depending on child developmental level) emanates from the rapidly growing field of infant mental health (Lieberman & Pawl, 1988; Stern, 1995; Zeanah, 2000). The PPP model highlights the importance of parent–child attachment in fostering positive child development, improved parent–child interaction, and decreases in child mal-

treatment. This approach is related to the belief that parent skills training alone is insufficient to alter the complex matrix of influences that lead to maladaptive mother–child attachment relationships and future maladaptation (Lieberman & Pawl, 1988). PPP is an intervention based in attachment theory that has its origins in the work of Selma Fraiberg, who described the deleterious effect that an unresolved parental past can exert on the evolving parent–child relationship (Fraiberg et al., 1975; Lieberman, 1991; Lieberman, Silverman, & Pawl, 2000). Building upon Fraiberg's model of infant– and toddler–parent psychotherapy, researchers have applied this model of intervention to immigrant Latino mother–child dyads (Lieberman, et al., 1991), as well as to depressed mothers and their toddlers (Cicchetti, Rogosch, & Toth, 2000; Cicchetti, et al., 1999).

Unlike models that focus on current maternal behavior, the core of the PPP model resides within the mother's interactional history and its effect on her representation of relationships, most significantly, that of her preschooler. Thus, rather than focusing only on the present, this model of therapy links the maternal past with current maternal perceptions of and responses to her child. Moreover, in contrast with approaches where the therapist and mother meet to address parenting issues and caregiver self-care, the PPP approach relies on the mother–child dyad as the "port of entry" (Stern, 1995) for therapeutic work. As such, the "patient" in PPP is not a person, but the relationship that exists between mother and child.

The second model of intervention, a psychoeducational home visitation (PHV) model, is guided by a developmental psychosocial approach to treatment based on an integration of an ecological–transactional developmental model of child maltreatment (Cicchetti & Lynch, 1993) with psychoeducational and cognitive behavioral techniques for addressing parent skills training, maternal self-care, and the development of adaptive competencies in children. Cicchetti and Lynch's (1993) ecological–transactional developmental model of child maltreatment provides a useful theoretical framework for elucidating both of the risk factors associated with the occurrence of maltreatment in families and for understanding the deleterious processes through which maltreatment impacts development. This model takes into account the multiple factors operating at various levels of the environment (e.g., community, family, and individual) that either pose additional risk to children (i.e., potentiating factors that increase the probability of maltreatment and negative outcomes, e.g., domestic violence, single parenthood, parental substance abuse, and psychopathology) or serve a protective function (i.e., compensatory factors that decrease the probability of maltreatment and negative outcomes, e.g., employment and educational opportunities, stable interpersonal relationships, and a supportive social network), as well as the interactions occurring among these various levels. An ecological–transactional developmental model of child maltreatment, therefore, conceptualizes acts of maltreatment not as isolated events, but as experiences that must be considered within a broader context of environmental risk and protective factors.

Study Hypotheses

The investigation was guided by the following hypotheses:

1. Prior to the initiation of the interventions (i.e., at baseline), children in the PPP, PHV, and community standard (CS) groups will evidence more negative and less positive representations of self, of mother, and of the mother–child relationship than will children in the nonmaltreated comparison (NC) group.
2. Following the provision of the intervention, children in the PPP group will evidence more of a change in representations of self, of self in relation to other, and of expectations of relationships from baseline to post-intervention compared to children in the CS group. Specifically, children in the PPP condition will show increases in positive representations and decreases in negative representations of self and of mother and will evidence more positive expectations of

the mother–child relationship over time. Moreover, the more positive and less negative representations of children in the PPP group at postintervention will approximate the level evidenced by children in the NC group. Although it is hypothesized that children in the PHV group will evidence more change in self- and other representations over time, they are not expected to attain the level of change evidenced by children in the PPP condition.

Method

Participants

Participants were recruited for an ongoing longitudinal study designed to evaluate the efficacy of two theoretically informed preventive interventions for maltreated preschoolers and their caregivers and to examine the effect of maltreatment on child development and parent–child relationships. We are continuing to recruit participants for the investigation, so the current report includes a subsample of participants in the larger investigation. The present sample included 122 mothers and their preschoolers (68 boys and 54 girls). Eighty-seven of the families had a documented history of maltreatment and 35 of the families lacked such a history. All participants completed a baseline evaluation when children were approximately 4 years of age (M = 48.18 months, SD = 6.88) and a follow-up postintervention assessment when children were approximately 5 years old (M = 61.47 months, SD = 7.51). Assessments on various outcome measures continue to be conducted at 1 and 3 years postintervention in order to assess the durability of intervention effectiveness. At the completion of the baseline evaluation, the 87 maltreating families were randomly assigned to either the PPP (n = 23), PHV (n = 34), or CS (n = 30) intervention groups. The 35 mothers and their preschoolers who did not have a documented history of maltreatment comprised the NC group. Because this intervention evaluation is ongoing, not all participants had yet completed postassessments, a fact that contributed to the unequal cell sizes.

Table 1. *Distribution of maltreatment subtypes and co-occurrence*

Type of Maltreatment	*n*	Percentage
Sexual abuse/physical abuse/ neglect/emotional maltreatment	1	1
Sexual abuse/neglect/emotional maltreatment	1	1
Physical abuse/neglect/emotional maltreatment	16	18
Physical abuse/neglect	4	5
Physical abuse/emotional maltreatment	9	10
Neglect/emotional maltreatment	21	24
Sexual abuse/neglect	1	1
Physical abuse	4	5
Neglect	18	21
Emotional maltreatment	12	14

Determination of maltreatment status was based on detailed examination of Child Protective Service (CPS) and preventive records at the Monroe County Department of Social Services (DSS). CPS records contained descriptions of children's maltreatment histories based on information obtained from multiple informants familiar with the family (e.g., CPS workers, mothers, neighbors, teachers, and day care providers). Prior to enrolling in the investigation, mothers of both maltreated and nonmaltreated preschoolers provided written consent to allow project staff to examine all existing records at DSS. Specific maltreatment experiences were coded from CPS records using the Barnett, Manly, and Cicchetti (1993) Maltreatment Classification System. Prior investigations using this system have shown it to be reliable and valid in classifying maltreatment incidents (e.g., Bolger & Patterson, 2001; Bolger et al., 1998; Manly, Cicchetti, & Barnett, 1994; Manly, Kim, Rogosch, & Cicchetti, 2001; Smith & Thornberry, 1995). Coding was done by trained master's level students and clinical psychologists, and very good reliability was obtained (weighted κ = 0.78–1.0). Prior to enrolling in the investigation, all maltreating families had documented reports of emotional maltreatment, physical neglect, physical abuse, and/or sexual abuse and all NC families lacked any such reports. Table 1 outlines the various combinations of maltreatment experienced by

children in this sample. As detailed in the table, 60% of the maltreated children experienced more than one form of maltreatment. This co-occurrence of maltreatment subtypes is common and well documented (Cicchetti & Barnett, 1991; Cicchetti & Rizley, 1981; United States Department of Health and Human Services [USDHHS], 2000). Given the high overlap in subtype experiences in this sample as well as the number of families per intervention group, distinct maltreatment subtype analyses were not considered to be appropriate. As such, all analyses examined intervention effects on maltreating families as a whole.

Participant recruitment. Families of maltreated preschoolers were recruited from DSS. Specifically, families identified as having a preschool-aged child with a documented history of maltreatment were contacted by a DSS liaison, who requested permission from consenting families for project staff to contact them regarding study participation. The liaison made clear that a decision to not participate would not affect services being provided by DSS. Project staff then discussed with family members the duration and voluntary nature of the investigative study and emphasized the benefits of participation through the potential provision of therapeutic services for the identified preschooler and his or her caregiver. Interested families had to be willing to accept random assignment to either the PPP, PHV, or CS intervention group following completion of the baseline evaluation. As a result, 155 maltreating families were accepted for random assignment to the PPP, PHV, or CS intervention condition.

Low-income nonmaltreating families were chosen randomly from lists of recipients of Temporary Assistance to Needy Families (TANF). Children from families receiving TANF were selected as the nonmaltreating comparison group because prior research and epidemiological studies indicate that the majority of maltreating families in the DSS system are of low-income status and receive such assistance (Cicchetti, 1989; Trickett, Aber, Carlson, & Cicchetti, 1991; USDHHS, 2000). Nonmaltreating families were contacted by phone or by mail to inquire about their willingness to participate in the program. Forty-three families were recruited, and mothers were given a detailed explanation of the study. Throughout the course of the investigation, project staff monitored the DSS registry at 6-month intervals to confirm the nonmaltreatment status of comparison families. Nonmaltreated families who were identified as maltreating after completion of the baseline evaluation were excluded from the investigation ($n = 3$).

Participant retention. Maltreating families were randomly assigned to intervention conditions. Specifically, 31 families were assigned to the PPP intervention group, 48 families were assigned to the PHV intervention group, and 33 families were assigned to the CS intervention group at baseline. In addition, 43 nonmaltreating comparison families were recruited at baseline (see Table 2). Two families in the PHV intervention condition were dropped from the sample because they attended fewer than 10 intervention sessions over the course of treatment, thus receiving an insufficient "dose" of treatment that was being significantly less than the mean number of sessions attended by other PHV group participants. Additionally, a number of families in each condition discontinued participation in the study prior to the postintervention assessment because either the child was removed from the home (e.g., placed in foster care; PPP = 1, PHV = 4, CS = 1, NC = 0) or the family moved out of state or refused to continue to participate in the study (PPP = 5, PHV = 6, CS = 2, NC = 5). Further, 2 PPP cases and 2 PHV cases were eliminated from the sample because of incomplete narratives due to child behavioral difficulties during task administration (see Table 2). Potential differences among dropped and retained cases across the four intervention conditions (PPP; PPP dropped; PHV; PHV dropped; CS; CS dropped; NC; NC dropped) were evaluated using analyses of variance (ANOVAs) and chi-square statistics. No significant group differences were found across important demographic characteristics including total family income, F (7, 147) = 1.36, $p = .23$; maternal

Table 2. *Participant retention*

	Intervention Conditions				
	PPP	PVH	CS	NC	Total
Baseline recruited sample	31	48	33	43	155
Cases droped because:					
Discontinued treatment	—	−2	—	—	(−2)
Child removed from home or family moved or refused to participate	−6	−10	−3	−5	(−24)
Changes in maltreatment status	—	—	—	−3	(−3)
Incomplete narratives	−2	−2	—	—	(−4)
Completed baseline and postintervention narratives	23	34	30	35	122

Note: PPP, preschooler–parent psychotherapy; PVH, psychoeducational home visitation; CS, community standard; NC, nonmaltreated comparisons.

education, F (7, 147) = 1.15, p = .34; marital status, $\chi^2(7) = 5.68$, p = .58; child age, F (7, 47) = .39, p = .91; and child gender, $\chi^2(7) = 7.49$, p = .38.

The current study is based on the remaining 122 families who completed both the baseline and follow-up postintervention narratives (PPP = 23, PHV = 34, CS = 30, NC = 35). Mothers and their preschoolers in the four intervention conditions were comparable on a range of demographic variables (see Table 3). PPP, PHV, CS, and NC participants were well matched for child age (at both the baseline and postintervention assessment periods), number of adults in the home, total family income, socioeconomic status (derived from Hollingshead's, 1975, four-factor index of social status), child race, child gender, maternal education, and marital status. Based on children's performance on an abbreviated version of the Wechsler Preschool and Primary Scales of Intelligence—Revised (WPPSI-R; Wechsler, 1989), consisting of the Information, Similarities, Geometric Design, and Block Design subtests, it was found that the full-scale IQs of the preschoolers in the four groups were significantly different at baseline: PPP, M = 84.96, SD = 11.36; PHV, M = 82.53, SD = 11.65; CS, M = 76.10, SD = 11.55; NC, M = 85.77, SD = 14.35; F (3, 118) = 3.76, $p < .05$; however, no significant full-scale IQ differences emerged at the postintervention assessment, F (3, 118) = .65, p = n.s. Children's baseline WPPSI-R full-scale IQ equivalent scores were not significantly correlated with any of the baseline narrative outcome variables; therefore, they were not considered in further analyses.

Procedures and Measures

Because the current investigation is part of an ongoing longitudinal study, only procedures and measures relevant to the current investigation are presented. In order to address study hypotheses regarding the malleability of representations of self and of self in relation to other in maltreated children, all children were administered a set of narrative story-stems at the baseline and postintervention assessment periods. In addition, an abbreviated version of the WPPSI-R was given at each assessment period. Sessions lasted approximately 1.5 hr, and caregivers were not present during task administration. All assessments were conducted by female research assistants who were unaware of family maltreatment status, intervention status, and study hypotheses.

Children's narratives

Eleven narrative story-stems were administered to child participants. Story-stems were selected from the MSSB (Bretherton, Oppenheim, et al., 1990) and the ASCT (Bretherton, Ridgeway, et al., 1990). The narratives utilized in the present investigation depicted moral dilemmas or conflicts and emotionally

Table 3. *Study condition comparisons on demographic variables*

	PPP (n = 23)		PHV (n = 34)		CS (n = 30)		NC (n = 35)		
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*
Child age (months)									
Baseline	48.00	7.71	47.86	6.07	49.16	7.54	47.77	6.66	1.94
Postintervention	64.70	8.79	61.21	5.73	60.94	7.73	60.06	7.64	<1
Child IQ (WPPSI-R)									
Baseline	84.96	11.36	82.53	11.65	76.10	11.55	85.77	14.35	3.76*
Postintervention	83.75	12.20	83.39	12.02	79.93	13.20	83.71	12.85	<1
No. adults in home	1.83	0.90	1.56	1.05	1.85	1.34	1.50	0.70	<1
Maternal education (years)	11.32	1.91	11.22	1.96	11.53	1.11	12.11	2.05	<1
Total Income	19.93	11.10	16.70	8.29	17.11	7.10	17.27	7.10	<1
Family Hollingshead	23.24	10.23	21.93	9.12	21.30	8.68	24.64	9.60	<1
	%		%		%		%		χ^2
Child's race									
Minority	65.2		76.5		90.0		71.4		5.13
Nonminority	34.8		23.5		10.0		28.6		
Child's gender									
Female	43.5		32.4		56.7		45.7		3.86
Male	56.5		67.6		43.3		54.3		
Marital status									
Not married	87.0		82.4		96.7		85.7		3.28
Married	13.0		17.6		3.3		14.3		

Note: See Table 2 for acronyms.
*$p < .05$.

charged events in the context of parent–child and family relationships. Prior research has found the narrative story-stem completion paradigm to be a valid and reliable methodology for evaluating children's perceptions of parent–child relationships and parenting behavior, as well as children's socioemotional development and behavioral adaptation.

Narratives were administered individually to children at baseline and after completion of the intervention. The experimenter introduced the task by explaining to the child that they were going to tell some stories together using a set of family dolls and that the experimenter would start the stories and the child would be asked to finish the stories in any way he or she would like. Each narrative story-stem presented involved a combination of family dolls, including a mother, father, grandmother, and two same-sex children of different ages. Family dolls and child story characters were of the same ethnicity and gender as the child participant, and household toy props were used to facilitate child enactment of stories. After introducing the dolls to the child, a warm-up story describing a family birthday party was administered to facilitate experimenter–child rapport and to ensure the child's understanding of the task. The warm-up story was not subsequently coded for narrative content. Narrative story-stems included vignettes designed to elicit children's perceptions of the parent–child relationship, of self, and of maternal behavior in response to child transgressions, intrafamilial conflicts, and child accidents (see Appendix A for story-stem descriptions). Story-stems were presented in a consistent manner across child participants, using the same story-stem specific dramatizations and voice inflections. Following the presentation of each story-stem, the experimenter asked the child to "Show me and tell me what happens now." All children were asked standard probes with each narrative administration that were designed to explore narrative content in more detail (see Appendix A).

Children's narratives were videotaped through a one-way mirror for subsequent coding.

Narrative coding and composite variables

Narrative variables were selected in order to examine children's maternal and self-representations and expectations of the mother–child relationship. Codes from the MacArthur narrative coding manual—Rochester Revision (MNCM-RR; Robinson, Mantz–Simmons, Macfie, & MacArthur Narrative Working Group, 1996) and Bickham and Fiese's (1999) child narrative codebook were utilized (see Table 4 for examples of coding). Specifically, maternal representations were coded from children's narratives according to the MNCM-RR and included: *positive mother* (the maternal figure is described or portrayed in the narrative as protective, affectionate, providing care, warm, or helpful), *negative mother* (the maternal figure is described or portrayed in the narrative as punitive, harsh, ineffectual, or rejecting), *controlling mother* (the maternal figure is described or portrayed in the narrative as controlling the child's behavior, independent of disciplining actions), *incongruent mother* (the maternal figure is described or portrayed in the narrative as dealing with child-related situations in an opposite or inconsistent manner), and *disciplining mother* (the maternal figure is described or portrayed in the narrative as an authority figure who disciplines the child; inappropriate and harsh forms of punishment are not scored here, but rather are coded as negative mother). A presence or absence method of coding was used to score children's maternal representations. Each maternal representation code was scored only once per narrative, yielding a maximum score of 11 for each maternal representation code. Then, discrete maternal representation codes were combined to create two composite variables reflecting children's representations of adaptive and maladaptive maternal figures. The *adaptive maternal representation* composite was derived by averaging the sum of positive and disciplining maternal representation codes. The zero-order correlations between positive and disciplining maternal representation scores at baseline and postintervention were .54 and .51, respectively. The *maladaptive maternal representation* composite consisted of the mean of the sum of negative, controlling, and incongruent maternal representation codes from the children's 11 narratives. The range of zero-order correlations among negative, controlling, and incongruent maternal representation scores was .15–.44 for children's baseline and post-intervention narratives.

Self-representation scores were also coded according to the MNCM-RR and were derived from coding any behaviors or references that were made in relation to any child character or when the child participant appeared to be experiencing relevant feelings in response to narrative content. Representational codes of self included: *positive self* (a child figure is described or portrayed in the narrative as empathic or helpful, prideful, or feeling good about self in any domain); *negative self* (a child figure is described or portrayed in the narrative as aggressive toward self or other, experiencing feelings of shame or self-blame, or feeling bad about self in any domain); and *false self* (a child figure is described or portrayed in the narrative as overly compliant or reports inappropriate positive feelings, for example, in an anger- or fear-producing situation). Consistent with maternal representation coding procedures, a presence or absence method of scoring was used to assess children's self-representations. Positive, negative, and false self-representations were coded only once per narrative, yielding a maximum score of 11 for each self-representation variable.

In addition to maternal and self-representation codes, a modified version of Bickham and Fiese's (1999) global relationship expectation scale was utilized to capture children's expectations of the mother–child relationship. Bickham and Fiese's original scale was designed to assess children's expectations of family relationships in general. For the current investigation, the scale was modified to assess children's global expectations of the mother–child relationship as portrayed within the children's 11 narratives. In accord with Bickham and Fiese's coding procedures, children's expectations of the mother–child relationship were determined by the overall de-

Table 4. *Examples of coding for narrative outcome variables*

Maternal Codes Comprising the *Adaptive Maternal Representation* Composite Variable	
Positive mother examples	Mother doll says, "Be careful climbing that rock."; mother doll puts a Band-Aid on child character's burnt hand; mother doll cleans up spilled juice; mother doll displays affection (e.g., kisses or hugs) toward child character
Disciplining mother examples	Mother doll spanks child character in response to child transgression; mother doll puts child character in time out or sends child character to his or her room
Maternal Codes Comprising the *Maladaptive Maternal Representation* Composite Variable	
Negative mother examples	Mother dolls says, "I'm going to kill you."; mother doll shames child character (e.g., says, "You are a bad girl/boy. You can't do anything right!"); child character asks mother doll for assistance in dealing with monster but mother doll does not respond; mother doll throws pot of hot gravy on child character's head
Controlling mother examples	Mother doll says, "Get up stairs!" or "Go to bed!" (not in response to child transgression); mother doll tells child character to "Stay in your room and don't touch the toys!"
Incongruent mother examples	Mother doll yells at child character for hitting his or her sister and then punches child character down the stairs; mother doll turns light on in child character's bedroom so he or she won't be afraid, but then mother doll comes back in and turns lights off and laughs
Child Self-Representation Codes	
Positive self-representation examples	Child character climbs up the rock and says, "I'm king of the mountain!"; child character smiles contentedly after slaying the monster; after going to the bathroom in the toilet, child character proudly says, "I did it!"
Negative self-representation examples	Child character hits another family member; family member says, "That stupid kid!"; child character says, "I can't do anything right."
False self-representation examples	Child character says he or she feels good after hurting his or her knee; child character says she or he feels happy when parents are arguing
Mother–Child Relationship Expectations Scale	
Low score (1): Mother–child relationship is almost always portrayed as dissatisfying (e.g., mother doll fails to console child character after falling off rock and does not take care of child character's hurt knee), dangerous (e.g., mother doll kicks, slaps, and hits child character after he or she wet his or her pants), and/or unpredictable (e.g., mother doll screams at child character for stealing a chocolate bar and then takes chocolate bar from child character, punches him or her, and then eats the bar herself); serious and/or willful harm is portrayed (e.g., mother doll pushes child character's face against the hot stove)	High score (5): Mother–child relationship is consistently portrayed as safe (e.g., mother doll comes up to the child character's bedroom and protects him or her from the scary monster), reliable (e.g., mother doll takes care of child character every time he or she gets hurt), rewarding (e.g., mother doll hugs child character because he or she climbed the rock all by him- or herself), and fulfilling (e.g., child character is happy because he or she is going to the zoo with his or her mother); relationship provides opportunities for success and satisfaction (e.g., mother doll consoles child character after he or she wet his or her pants, and then successfully teaches the child character how to use the toilet appropriately)

gree of predictability and trustworthiness portrayed between mother and child characters across all 11 narrative administrations. Specifically, the following five relationship dimensions were used to aid in coding children's overall expectation of the mother–child relationship: predictable versus unpredictable, disappointing versus fulfilling, supportive or protective versus threatening, warm or close versus cold or distant, and genuine or trustworthy versus artificial or deceptive. Global mother–child relationship expectation ratings were based on a 5-point scale, ranging from very low (participant's narratives describe or portray the mother–child relationship as dissatisfying, unpredictable, and/or dangerous) to very high (participant's narratives describe or portray the mother–child relationship as fulfilling, safe, rewarding, and reliable; see Table 4 for examples of coding).

A reliability analysis of maternal and self-representation codes and mother–child relationship expectation ratings was conducted on 20% of the sample (i.e., 24 tapes), and excellent reliability was attained. Coders were doctoral candidates who were unaware of children's maltreatment and intervention group status as well as study hypotheses. All interrater disagreements were resolved by discussion. Kappa coefficients for maternal and self-representation codes were as follows: positive mother ($\kappa = 0.94$), negative mother ($\kappa = 0.92$), disciplining mother ($\kappa = 0.91$), controlling mother ($\kappa = 0.92$), incongruent mother ($\kappa = 0.86$), positive self ($\kappa = 0.94$), negative self ($\kappa = 0.91$), and false self ($\kappa = 1.00$). The intraclass correlation coefficient for the mother–child relationship expectation scale was .86.

Abbreviated version of the WPPSI-R

The WPPSI-R is a widely used, individually administered test of intelligence for children aged 3 to 7. Children in the present investigation were given an abbreviated version of the WPPSI-R at baseline and at the postintervention evaluation. Two performance (Geometric Design and Block Design) subtests and two verbal (Information and Similarities) subtests were administered. WPPSI-R short forms have been recommended for use in research studies to assess intellectual functioning of study participants (Silverstein, 1990), and acceptable reliability and validity coefficients for the WPPSI-R tetrad short form used in the current investigation have been obtained (.93 and .91, respectively; Sattler, 2001). Test–retest stability correlations for the four subtests utilized in the present study were .67–.80; the stability coefficient for the Full Scale IQ is .91 for children between the ages of 3 years, 0 months, and 7 years, 3 months. Split-half reliability coefficients for 3- and 4-year-olds were .83–.88 and .80–.89, respectively, across the four subtests and the split-half coefficient for the Full Scale IQ is .97 for both 3- and 4-year olds (Wechsler, 1989). The WPPSI Full Scale IQ has been shown to be positively and significantly correlated with other measures of children's cognitive functioning, such as the Stanford–Binet Intelligence Scale ($r = .75$; Wechsler, 1967) and the McCarthy Scales of Children's Abilities ($r = .74$; Phillips, Pasewark, & Tindall, 1978).

Preventive Interventions

Common elements across intervention models and training or supervision procedures

Because the DSS becomes active via case assessment, monitoring, management, or referral when reports of child maltreatment are received, DSS involvement with families served as a constant across the PPP, PHV, and CS intervention conditions. In addition, therapists in both treatment models (PPP and PHV) were master's-level therapists who were knowledgeable regarding issues that often emerge in work with maltreating populations (e.g., domestic violence and substance abuse). Both the PPP and the PHV interventions also were manualized. All therapists received training on their respective model of intervention by two doctoral-level clinical psychologists, during which treatment manuals were discussed, audio- and videotapes of training sessions were reviewed, and mock therapy sessions were conducted. Finally, treatment occurred over approximately a 12-month period, and the length of treatment (PPP: $M = 11.63$

months, *SD* = 3.13; PHV: *M* = 13.32 months, *SD* = 6.56) and number of sessions held (PPP: *M* = 32.39 sessions, *SD* = 12.42; PHV: *M* = 31.09 sessions, *SD* = 14.30) were comparable across intervention conditions over the baseline to postintervention time interval. The fidelity of the implementation of the interventions was monitored and evaluated through the therapists' participation in weekly individual and group supervision sessions with their respective intervention model staff members.

PPP Model

Mothers and their preschoolers were seen for weekly 60-min dyadic sessions with a clinical therapist. The majority of sessions occurred in the center, although periodic home visits did take place. Joint observation of mother–child dyad allows therapists to gain insights into the influences of maternal representation on parenting as maternal representations and distortions are enacted within the context of preschooler–parent interactions. In the language of attachment theory, PPP is designed to provide the mother with a corrective emotional experience in the context of the relationship with the therapist. Maltreating mothers, who often have childhood histories of disturbed parent–child relationships and frequent negative experiences with social services systems, often expect rejection, abandonment, criticism, and ridicule. Through empathy, respect, concern, and unfailing positive regard, therapists help maltreating mothers to overcome these negative expectations and provide a holding environment for the mother and preschooler in which new experiences of self in relationship to others and to the preschooler may be internalized. Evolving positive representations of the therapist can be utilized to contrast with maternal representations of self in relation to parents. As the mother is able to reconstruct representations of self in relation to others through the therapeutic relationship, she also is able to reconstruct representations of herself in relation to her child.

Within the therapeutic sessions, the therapist strives to alter the relationship between mother and child. Toward this end, therapists must attend to both the interactional and the representational levels as they are manifested during the therapy sessions. Not only are maternal representations that have evolved from the mother's relationship history viewed as affecting the character of the interactions between her and the child, but interactions and child behaviors also evoke maternal representations that influence the mother's reactions to the child and her experience of self. As such, seemingly ordinary behaviors between mother and preschooler during therapy sessions are regarded as behavioral manifestations of representational themes. It is through the use of observation and empathic comments that the therapist works toward assisting the mother in recognizing how her representations are enacted during her interactions with her preschooler, thereby allowing for the clarification of distorted perceptions and alterations of how she experiences and perceives her child and herself. The therapist also attends to the nature of the interactions that occur between the mother and the preschooler, the mother and the therapist, and the therapist and the preschooler. Interactions in one relationship pair tend to elicit parallel interactions in other relationship pairs. Thus, the attention to parallel process in interactions across relationships and the influence of representations on these interactions provide templates for modifying maternal representations as they are enacted behaviorally in the mother–child relationship. It is important to underscore that, unlike in PHV, PPP therapists do not model appropriate mother–child interactions or seek to modify parenting behavior or verbalizations through didactic instruction. Rather, they strive to respond to maternal statements and interactional patterns, linking current maternal conceptualizations of relationships to mothers' childhood caregiving experiences.

In summary, therapeutic change in PPP is seen as resulting from increasing maternal understanding regarding the effects of prior relationships on current feelings and interactions. By expanding positive representations of the self, and of the self in relation to others, it is expected that maternal sensitivity, responsivity and attunement to the child will improve, and maternal satisfaction with other relationships also will increase. In turn, it is expected

that improved mother–child interaction will facilitate the development of positive representational models in the child.

PHV Model

Mothers in the PHV group participated in weekly 60-min sessions with clinical therapists. One of the initial goals of the PHV intervention was to conduct a comprehensive assessment of the risk and protective factors operating in the families' lives that may assist in understanding the circumstances under which the maltreatment occurred. To achieve this goal, therapists were trained in the provision of an ecologically informed model of influences on mother and child that strove to address how factors at different levels of proximity to the family (e.g., behavioral, psychological, sociological, and/or economic) interact to form a system of influences on functioning (see Olds, 1989, 1997; Olds & Henderson, 1989; Olds, Henderson, Kitzman, Eckenrode, Cole, & Tatelbaum, 1998; Olds & Kitzman, 1990). Once risk and protective factors had been identified, the implementation of change utilized a combination of social support, psychoeducational strategies, and cognitive–behavioral techniques. Although the majority of sessions were home based, modifications to center sessions were available based on client needs. For example, if domestic violence was present, some mothers were more comfortable meeting at the center. Home-based treatment approaches have reemerged in recent years as a potentially effective model for protecting vulnerable children from harm (Behrman, 1999; National Commission to Prevent Infant Mortality, 1989; National Research Council, 1993) and, more specifically, to prevent the occurrence of child maltreatment (United States Advisory Board on Child Abuse and Neglect, 1990). In general, home-based sessions were focused on two primary goals: the provision of parent education regarding child development and developmentally appropriate parenting skills; and the development of adequate maternal self-care skills, including assisting mothers with personal needs and mental health concerns (such as depression, substance abuse, and coping skills), fostering adaptive functioning (including educational and employment goals), and improving social skills related to relationships with partners, family members, and friends. Therapeutic sessions were grounded in the present and were didactic in nature, providing mothers with specific information, facts, procedures, and practices. Therapists strove to educate, improve parenting techniques, decrease maternal stress, increase social supports, and promote life satisfaction among PHV mother participants.

During therapeutic sessions, mothers were taught cognitive–behavioral techniques designed to alter mother–child interactional patterns and teach more adaptive parenting skills (see Azar & Siegel, 1990). For example, child management training (e.g., establishing routines, ensuring the child's safety, identifying problematic behaviors, using redirection and limit setting, and providing choices) included didactic approaches, modeling of appropriate strategies, role play for rehearsal of techniques, and feedback to parents on the use of the strategies. Cognitive restructuring and systematic desensitization also were used to alter maladaptive maternal perceptions and reactions to their children that interfered with effective parenting.

Finally, in addition to parent services, children in the PHV intervention group were enrolled in a 10-month, full-day preschool program at Mt. Hope Family Center. While attending the program, children were taught school readiness and adaptive peer relationship skills.

CS Model

Consistent with other treatment studies (e.g., Arnold, Abikoff, Cantwell, Conners, Elliot, Greenhill, Hectman, Hinshaw, Hoza, Jensen, Kraemer, March, Newcorn, Pelham, Richters, Schiller, Severe, Swanson, Vareen, & Wells, 1997), a CS comparison group was used to determine the effects of standard services and resources available through the DSS on child and family functioning. As anticipated, variability in services received over the treatment interval emerged. Sixty percent of the children in the CS condition were in full- or part-

time day care and 50% were enrolled in a preschool program. In addition, approximately 13% of the CS children participated in individual psychotherapy over the treatment period for a variety of mental health concerns (e.g., aggression, anxiety, attention, and hyperactivity difficulties). Mean length of treatment for child CS participants was 9.33 months. Mental health services received by mothers in the CS condition included individual psychotherapy (23%), family or marital counseling (3%), and support group or day treatment services (10%). Mean length of treatment for CS mothers was 5.82 months. Finally, 17% of CS mothers received some form of parenting services, 23% received concrete assistance (e.g., help obtaining food, clothing, and/or shelter), and 7% received community group services during the baseline to postintervention time interval.

Results

Data analytic strategy

In order to evaluate the unique impact of the PPP and PHV interventions on children's maternal and self-representations and their mother–child relationship expectations, as compared to the CS and NC study conditions, proposed hypotheses were examined in three stages. First, ANOVAs were conducted to determine whether children in the four study conditions differed at baseline on scores of maternal and self-representations and of mother–child relationship expectations. Second, general linear model (GLM) repeated measures procedures were used to determine the overall main effects of study condition and time and the interaction effect between study condition and time on children's story-stem narrative outcome variables. Included in this section are follow-up paired-samples *t* tests that probe for significant changes in narrative representation and relationship outcome variables over time within the four different study conditions. Third, change scores were calculated for each story-stem narrative outcome variable and between group differences were assessed using ANOVA statistics.

Comparison of baseline narrative outcome variables across study conditions

ANOVAs with Tukey post hoc tests at the .05 level were used to examine whether children in the four study conditions differed with respect to maternal and self-representations and mother–child relationship expectations at baseline. As shown in Table 5, no significant differences were found in children's baseline mean scores of adaptive and maladaptive maternal representations, positive and negative self-representations, and mother–child relationship expectations. A marginally significant difference was found for false self-representations; however, post hoc tests revealed that none of the intervention groups significantly differed from one another on this variable.

Change over time for maternal and self-representations and mother–child relationship expectations

To assess changes in maternal and self-representations and mother–child relationship expectations from baseline to postintervention, general linear model (GLM) repeated measures procedures were performed. Specifically, GLM repeated measures tested the overall main effects of study condition and time and the interaction effect between study condition and time on baseline and postintervention narrative outcome variables. As illustrated in Table 6, a significant main effect of time emerged for four out of the six narrative outcome variables. Adaptive maternal representation scores increased significantly over time from baseline to postintervention for children across the four study conditions (baseline: $M = 4.59$, $SD = 3.23$; postintervention: $M = 6.72$, $SD = 3.73$), whereas maladaptive maternal representations significantly decreased over time (baseline: $M = 3.34$, $SD = 2.68$; postintervention: $M = 2.41$, $SD = 2.22$). With respect to temporal changes in children's self-representations from baseline to postintervention, levels of positive self-representations increased significantly over time across the four conditions (baseline: $M = 2.13$, $SD = 1.73$; postintervention: $M = 3.80$, $SD =$

Table 5. *Mean and standard deviation scores of narrative outcome variables at baseline for the four study conditions*

	Study Conditions								
	PPP (n = 23)		PHV (n = 34)		CS (n = 30)		NC (n = 35)		
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F* (3, 118)
Maternal representations									
Adaptive	4.61	2.89	4.85	3.01	3.97	3.06	4.86	3.80	<1
Maladaptive	4.17	3.16	3.18	2.41	3.60	2.62	2.74	2.61	1.47
Self-representations									
Positive	2.39	1.64	2.56	2.03	1.67	1.61	1.94	1.47	1.77
Negative	4.35	2.82	3.21	2.60	3.07	1.97	2.89	1.92	2.05
False	0.13	0.34	0.33	0.59	0.07	0.26	0.14	0.36	2.30†
Mother–Child relationship expectations	2.22	1.17	2.50	1.19	2.33	1.27	2.94	1.73	1.64

†$p < .10$.

Table 6. *Change over time for maternal and self-representations and mother–child relationship expectation ratings*

Variable	*F* (1, 120) for Main Effect of Time	*F* (3, 118) for Study Condition × Time Interaction
Maternal representations		
Adaptive	39.24***	2.00
Maladaptive	17.43***	3.13*
Self-representations		
Positive	55.27***	2.27†
Negative	1.98	4.93**
False	0.13	0.56
Mother–child relationship expectations	46.94***	2.72*

†$p < .10$; *$p < .05$; **$p < .01$; ***$p < .001$.

2.27), whereas negative (baseline: $M = 3.30$, $SD = 2.35$; postintervention: $M = 3.10$, $SD = 2.08$) and false self-representation scores (baseline: $M = .17$, $SD = .42$; postintervention: $M = .19$, $SD = .43$) remained stable. Finally, mother–child relationship expectation scores across the four study conditions increased significantly from baseline to postintervention (baseline: $M = 2.53$, $SD = 1.39$; postintervention: $M = 3.43$, $SD = 1.14$).

In addition, several significant study condition by time interaction effects emerged (see Table 6). Follow-up paired-samples t tests were conducted to examine the simple effects of significant study condition by time interactions, elucidating different patterns of baseline and postintervention story-stem narrative results for each condition separately (see Table 7). A significant interaction between study condition and time for children's maladaptive maternal representations was found (see Figure 1). Simple effect analyses revealed a highly significant decrease in maladaptive maternal representations in the PPP intervention group, paired t (22) = 4.05, $p < .001$. Moreover, a marginally significant decline in maladaptive maternal representations from baseline to postintervention was found in the

Table 7. *Baseline and postintervention narrative mean scores for the four study conditions*

Variable	PPP		PHV		CS		NC	
	Baseline	Postintervention	Baseline	Postintervention	Baseline	Postintervention	Baseline	Postintervention
Maladaptive maternal representations	4.17 (3.16)	1.70 (2.08)	3.18 (2.41)	2.38 (1.42)	3.60 (2.62)	3.00 (2.78)	2.74 (2.61)	2.40 (2.35)
Self-representations								
Negative	4.35 (2.82)	2.35 (1.67)	3.21 (2.60)	3.59 (2.15)	3.07 (1.96)	3.40 (2.24)	2.89 (1.92)	2.86 (2.02)
Positive	2.39 (1.64)	4.83 (2.18)	2.56 (2.03)	3.32 (1.92)	1.67 (1.61)	3.60 (2.25)	1.94 (1.47)	3.74 (2.53)
Mother–child relationship expecatations	2.22 (1.17)	3.91 (0.95)	2.50 (1.19)	3.15 (1.23)	2.33 (1.27)	3.23 (1.04)	2.94 (1.73)	3.57 (1.17)

Note: Numbers in parentheses are standard deviations.

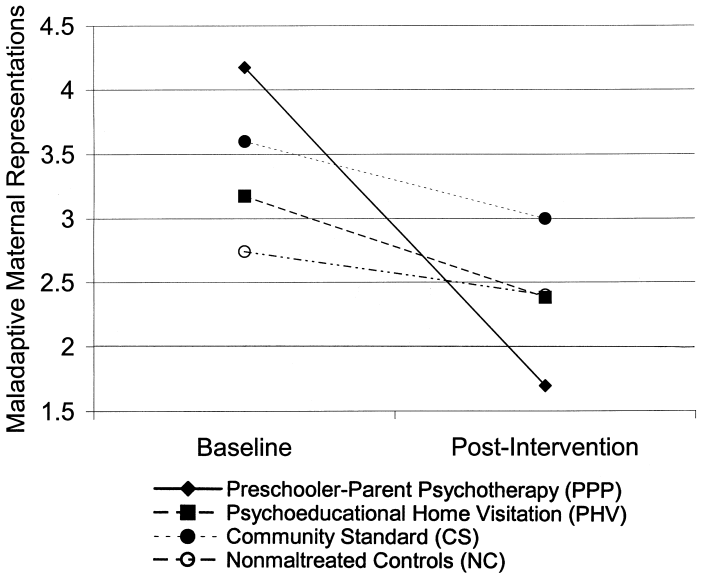

Figure 1. The interaction between the study condition and time for maladaptive maternal representations.

PHV intervention group, paired t (33) = 1.85, $p < .079$. No significant differences emerged between baseline and postintervention in maladaptive maternal representation scores in the CS, paired t (29) = 1.11, $p = .28$, and NC, paired t (34) = .76, $p = .45$, conditions. Examination of baseline and postintervention mean scores across the four study conditions reveals that the most dramatic decrease in maladaptive maternal representations over time occurred in the narratives of children participating in the PPP intervention. No significant study condition by time interaction effects emerged for children's adaptive maternal representations.

Furthermore, a significant interaction between study condition and time for negative self-representation emerged (see Figure 2). Whereas children in the PHV, CS, and NC groups exhibited no significant temporal change in negative self-representations from baseline to postintervention, paired t (33) = .92, $p = .37$; paired t (29) = .69, $p = .50$; paired t (34) = .07, $p = .95$, respectively; a considerable decline in negative self-representations over time was found in the PPP intervention condition, paired t (22) = 3.86, $p < .001$. Consistent with the temporal changes found in maladaptive maternal representations, children in the PPP intervention group exhibited the most dramatic change in the level of negative self-representations from baseline to postintervention compared to children in the other three conditions. With respect to children's positive self-representations, a marginally significant study condition by time interaction effect emerged (see Figure 3). Simple effect analyses via paired t tests revealed a significant increase in positive self-representations in the narratives of children in the PPP, CS, and NC groups from baseline to postintervention, paired t (22) = 4.70, $p < .001$; paired t (29) = 3.88, $p < .001$; paired t (34) = 4.46, $p < .001$, respectively. Only a marginally significant increase in positive self-representations from baseline to postintervention was found in the narratives of children in the PHV intervention group, paired t (33) = 1.74, $p < .10$. No significant study condition by time interaction effects emerged for children's false self-representations.

Finally, a significant study condition by time interaction effect emerged for mother–child relationship expectations (see Figure 4). Simple effect analyses showed that from baseline to postintervention, children in all four conditions displayed a significant increase in mother–child relationship expectations over

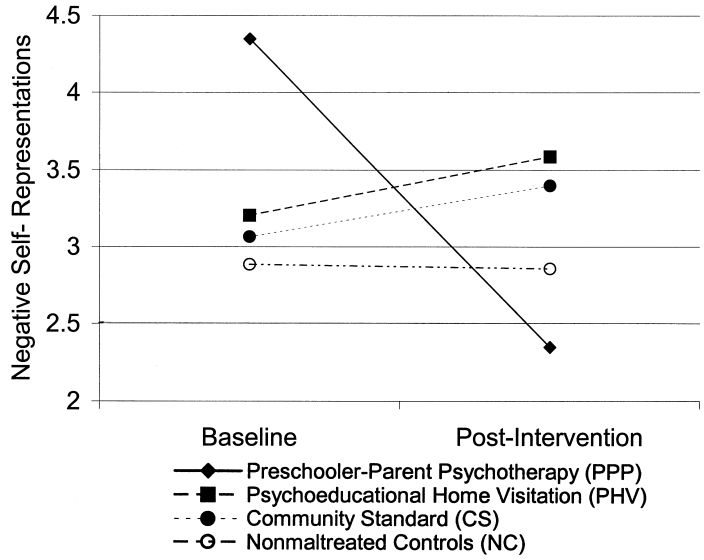

Figure 2. The interaction between the study condition and time for negative self-representations.

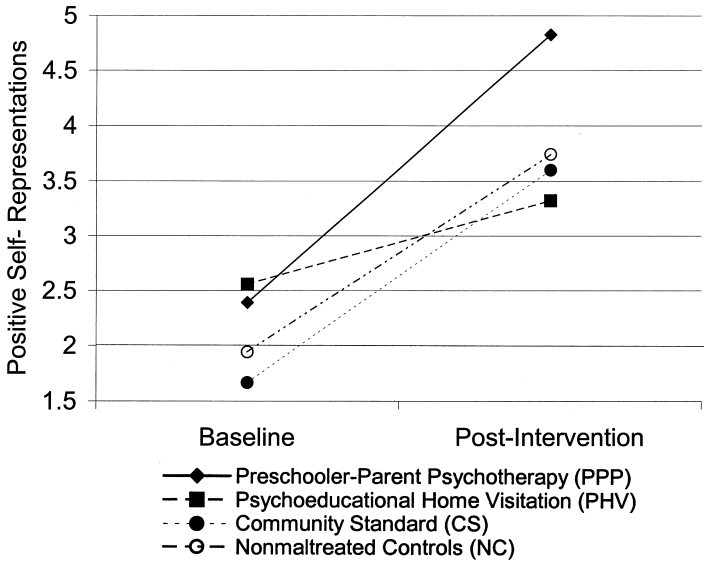

Figure 3. The interactions between the study condition and time for positive self-representations.

time, PPP: paired t (22) = 6.46, $p < .001$; PHV: paired t (33) = 2.96, $p < .01$; CS: paired t (29) = 3.20, $p < .01$; although the difference between baseline and postintervention means for the NC group was only marginally significant, paired t (34) = 1.96, $p = .058$. Whereas children in all four conditions exhibited more positive mother–child relationship expectations over time, the most dramatic increase was found in the narratives of children in the PPP group, who received the lowest mother–child relationship expectation score at baseline and the highest score at the postintervention assessment.

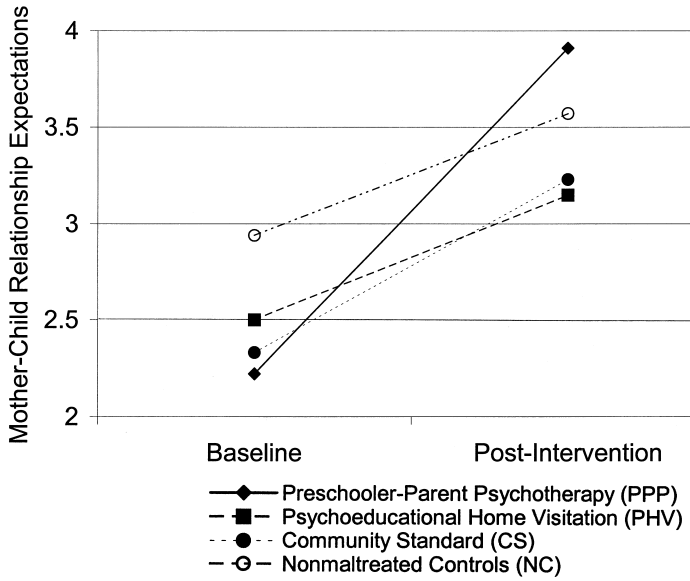

Figure 4. The interaction between the study condition and time for mother–child relationship expectations.

Narrative change scores: Between group differences

To further examine the significant time by group interactions, narrative change scores were calculated by subtracting baseline self- and maternal representation and mother–child relationship expectation scores from postintervention scores. ANOVAs with Tukey post hoc tests at the .05 level were then used to examine whether children in the four study conditions differed with respect to the amount of change in self- and maternal representations and mother–child relationship expectations over time (i.e., from baseline to the postintervention assessment periods). As depicted in Table 8, significant between group differences emerged for maladaptive maternal representation, negative self-representation, and mother–child relationship expectation change scores, and a marginally significant between group difference was found for positive self-representation change scores. No group differences emerged for adaptive maternal representation and false self-representation change scores.

Post hoc tests revealed that children in the PPP intervention condition exhibited more of a decline in maladaptive maternal representations from baseline to postintervention than did children in the nonmaltreated comparison group. Findings also indicated that there was a trend for PPP child participants to exhibit more of a decrease in maladaptive maternal representations over time compared to CS children. In addition, the post hoc analyses showed that children in the PPP intervention condition evidenced more of a change in negative self-representations over time than children in the PHV, CS, and NC study conditions. Interestingly, children in the PPP and NC conditions showed a decrease in negative self-representations from baseline to postintervention, whereas children in the PHV and CS conditions evidenced an increase in negative self-representations over time (see Table 8). With respect to changes in children's positive self-representation scores, there was a trend for PPP child participants to display more of an increase in positive self-representations over time than PHV participants. Finally, post hoc tests revealed that children in the PPP intervention condition evidenced more of an increase (i.e., more of a change)

Table 8. *Between group differences of narrative outcome variable change scores for the four study conditions*

	PPP		PHV		CS		NC			
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	Tukey
Maladaptive maternal representations	–2.48	2.94	–0.79	2.51	–0.60	2.97	–0.34	2.66	3.13*	PPP > NC* PPP > CS†
Self-representations										
Positive	2.44	2.48	0.77	2.56	1.93	2.73	1.80	2.39	2.27†	PPP > PHV†
Negative	–2.00	2.49	0.38	2.44	0.33	2.66	–0.03	2.58	4.93**	PPP > PHV** PPP > CS** PPP > NC*
Mother–child relationship expectations	1.70	1.26	0.65	1.28	0.90	1.54	0.63	1.90	2.72*	PPP > NC* PPP > PHV†

†$p < .10$; *$p < .05$; **$p < .01$.

in mother–child relationship expectations from baseline to postintervention than children in the nonmaltreated comparison group. Findings also indicated that there was a trend for PPP child participants to exhibit more of an increase in mother–child relationship expectations over time compared to children in the PHV intervention condition.

Discussion

The current investigation, an examination of competing models of intervention for maltreated preschool-aged children, is useful in both challenging and expanding conceptualizations of attachment relationships and representational development. Because a considerable body of prevention and intervention research has emerged based on attachment theory (cf. Lieberman & Zeanah, 1999), efforts designed to examine the implications of prevention and intervention for developmental theory are especially timely. Moreover, because utilization of story-stem narrative paradigms to elucidate representation in normative and atypical populations has increased dramatically in recent years, the incorporation of a narrative assessment into a theoretically guided intervention evaluation also serves to broaden our understanding of the strengths and limitations of this methodology.

To begin, it is important to note that differences among study conditions on baseline narrative variables were not attained. Although we expected that differences would not be present among the maltreated groups of children at baseline, we hypothesized that the nonmaltreated comparison group would differ from the maltreated groups with respect to having more positive and less negative self- and mother representations and higher mother–child relationship expectations. Thus, we must begin by addressing this somewhat unexpected finding, which, although unanticipated, may provide a window on the evolution of representational development in low-income populations.

First, although narrative techniques have been used effectively in middle-income populations of children as young as 3 years of age (Buchsbaum & Emde, 1990), our prior work with low-income high-risk groups of preschoolers suggests that the factors associated with low-income status pose significant challenges to children's representational development. Because we sought to match groups on multiple demographically relevant dimensions, including the presence of poverty, the receipt of public assistance, and residence in high-crime neighborhoods, there is no doubt that many of our comparison families shared risks such as maternal psychopathology and substance abuse with their maltreating coun-

terparts. The risks associated with poverty may result in a slower consolidation of representational abilities than seen in middle-income samples. For example, in a prior longitudinal investigation with children who were 3.5 years old at the Time 1 narrative assessment and 4.5 years old at the Time 2 evaluation, Toth, Cicchetti, Macfie, Maughan, et al. (2000) found that the representational variables enacted in Time 1 and Time 2 narratives became more prevalent over the course of development. Throughout the 1-year investigation, significant main effects on representations were found for time and maltreatment status. Specifically, at Time 1, maltreated and nonmaltreated children differed only with respect to positive parent and positive self-representation variables. At Time 2, significant differences were found on negative parent, disciplining parent, negative child, and grandiose child variables. At Time 2, maltreated children also had marginally fewer positive parent representations. Thus, during the preschool period, which is a time noted for developmental transformations in the self, the representational structures of maltreated children became more consolidated and increasingly negative over time (Toth, Cicchetti, Macfie, Maughan, et al., 2000). As such, rather than viewing earlier representational abilities as limited, we hold that they continue to evolve during the early years of life. In fact, whereas all parent representation variables were found to be stable over a 1-year interval, stability was not found to be present in any of the self-representational variables, independent of maltreatment status (Toth, Cicchetti, Macfie, Maughan, et al., 2000).

The current investigation provides further evidence for our view that representational abilities continue to evolve over the preschool period. Specifically, increases over time, independent of intervention, were found for adaptive and maladaptive maternal representations, positive self-representations, and mother–child relationship expectations. Given that these results for time occurred for all groups independent of intervention effects, support is provided for the continued development of representational capacities of preschool-aged children. Although with increasing age children also become better able to articulate story themes, which may account for this change, the fact that the coding system utilized assesses nonverbal actions as well as verbalizations minimizes the viability of this interpretation. Moreover, verbal ability was not related to any of the outcome variables assessed in the current investigation.

These findings possess important implications for theoretical positions related to stability versus change in attachment and internal working models that occur over time. Given that the current investigation found evidence that representations of self and of self in relation to other continue to evolve over the early years of life in maltreated and in nonmaltreated preschoolers, assumptions regarding the stability of attachment organization as representational abilities continue to evolve may need to be examined further.

The results of the current investigation also raise the possibility that intervening prior to the consolidation and stabilization of representational models provides a greater window of opportunity to effect change and underscores the importance of providing prevention even prior to the emergence of differences in representational variables. Although the current investigation cannot address the age at which representational models may become less amenable to change, it does support the view that during the preschool period, representations of self and of self in relation to other are malleable.

In fact, our findings of significant study condition by time interactions provide support for this conceptualization. Rather than finding that representations are driven by development alone (i.e., the presence of time main effects only), we obtained several significant study condition by time interaction effects with respect to the qualitative aspects of representations. Specifically, we found that change in maladaptive maternal representations over time was dependent on intervention condition. Children in the PPP intervention group exhibited a highly significant decrease in maladaptive maternal representations over time, whereas only a marginally significant decline in maladaptive maternal representations was found in the narratives of children in the PHV

condition. In contrast, baseline and postintervention maladaptive maternal representation scores in the CS and NC conditions remained stable over time. Additionally, it was found that PPP child participants exhibited a greater decline (i.e., change) in maladaptive maternal representations over the course of the intervention period than did children in the NC or CS groups. The declining trend in maladaptive maternal representations in the narratives of PHV children, on the other hand, was not significantly different from the amount of change found in the narratives of children in the other three groups. It is interesting that similar intervention effects were not found for the adaptive maternal representation composite variable.

Consistent results emerged for children with respect to negative self-representations. Children in the PPP intervention condition exhibited a significant decrease in negative self-representations over time whereas children in the PHV, CS, and NC groups evidenced no significant temporal change in negative self-representations from baseline to postintervention. In fact, PPP child participants evidenced more of a change in negative self-representations over time than children in the three other conditions. Even more interesting was the direction of change in negative self-representations across the four conditions. PPP participants evidenced a decrease in negative self-representations from baseline to postintervention. Conversely, although not statistically significant, children in the PHV and CS groups evidenced increases in their negative self-representations over time, suggesting that in the absence of an intervention targeted at self-representation, the self-system processes of maltreated children become increasingly negative over time.

Furthermore, there was a trend for children's positive self-representations to change differently over time as a function of study condition. In particular, PPP, CS, and NC child participants exhibited significant increases in positive self-representations from baseline to postintervention whereas PHV participants evidenced only a marginally significant increase in positive self-representation over time. Between group analyses revealed that there was a trend for children in the PPP condition to display a greater increase in positive self-representations over time than children in the PHV group. With respect to false self-representations, no main or interaction effects were obtained.

Finally, although children in all four conditions evidenced increasingly positive expectations of the mother–child relationship, children in the PPP condition evidenced the most dramatic positive change. This finding, in conjunction with the maladaptive maternal representation results, indicates that children in the PPP intervention evidenced increasingly positive maternal representations and decreasingly negative maternal representations as a function of their participation in the intervention.

In trying to understand these results, further implications for developmental theory emerge. First, as alluded to above, it seems clear that representations of self and of caregiver continue to develop over the early preschool years. Findings that, in the absence of intervention, maltreated children's representations of self and of caregiver become more negative and/or remain stable over time whereas those of children receiving specific intervention services become more positive and less negative are striking and suggest that, in fact, the story-stem narrative technique is effective in evoking feelings and beliefs about self and self in relation to other that are tied closely to the caregiving relationship. Importantly, our findings with respect to intervention effects also point to the potential malleability of these representations of self and of self in relation to other, most significantly when an intervention derived from attachment theory (PPP) is provided. Rather than assuming that "sensitive" periods exist during infancy whereby the attachment relationship becomes less amenable to change, our findings suggest that, at least during the preschool years, the internalized mother–child relationship continues to evolve and remains open to reorganizations.

The fact that maltreated children in the PPP intervention evidenced increases in positive and decreases in negative self-representations is consistent with the findings of Cicchetti and Rogosch (1997) on pathways to resilience in maltreated school-age children. Based on their findings of differential predictors of resilient functioning in maltreated versus nonmaltreated children, with the former being more resilient

when positive personality and self-system processes are present and the latter being more linked to relationship variables, Cicchetti and Rogosch (1997) suggest that interventions for maltreated children would do well to focus on enhancing self-system processes. The improvements found in the self-system processes of children in the PPP intervention are a positive sign that resilient strivings may have been initiated. If so, then the gains evidenced by these youngsters may continue to serve beneficial protective functions in future years. The positive changes in the PPP children's representations of maternal figures also bode well for these children's future receptivity to peers and other potential relationship partners, thereby moving them forward on a more adaptive relationship trajectory.

To our knowledge, this is the first evaluation of an intervention with a high-risk population of preschoolers that has utilized a story-stem narrative procedure to access representational variables as an index of intervention efficacy. Thus, our findings of change as a function of intervention are particularly noteworthy and make an important contribution to the literature.

Although the findings of the current investigation are compelling, the study is not without limitations. It is important to note that changes in representation over time may be confounded by chronicity of maltreatment. However, because nonmaltreated children also display increases in representational capacities over time, this interpretation is less viable. Rather, our data support the likelihood that representation evolves with development. In addition, because the current report focused exclusively on a measure of representation, constructs that might be expected to improve more dramatically in the PHV model (e.g., improved parenting skills and knowledge of child development) could not be addressed. Moreover, because this is an ongoing longitudinal investigation, it is important to note that the group cell sizes will increase. This augmented sample size will not only afford us increased statistical power to detect specific intervention effects but also enable us to examine observational measures related to mother–child interaction, including indices of maternal sensitivity and quality of parenting and maternal psychopathology in tandem with narrative outcome variables. Such information will allow us to be more specific with respect to the potential differential effects of our models of intervention and also will facilitate in the identification of possible mediators and moderators of intervention efficacy.

In summary, the current investigation contributes to the growing corpus of studies that have found narrative procedures to be effective in accessing children's representations of self and of caregivers. Because changes in representation occurred not only as a function of time but also because of the provision of a theoretically informed model of intervention designed to improve representations of self and caregiver, support for the malleability of internalized working models of self and of self in relation to other was also obtained. The fact that the PPP model of intervention was the most effective in modifying maladaptive representations of self and caregiver also provides support for the specificity of theory-informed interventions. Although studies of intervention efficacy are complex and challenging to conduct, they hold considerable promise for continuing to refine our theories of attachment organization, representational development, and developmental psychopathology.

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Appendix A. Introduction of Figures and Warm-Up Narrative

The following abbreviations are used in the discourse: E, examiner; M, mother; F, father; GM, grandmother; C^1, protagonist child; and C^2, sibling child. The nine story-stems are indentified as being narratives from the MSSB (Bretherton, Oppenheim, Buchsbaum, Emde, and The MacArthur Narrative Group, 1990), the ASCT (Bretherton, Ridgeway, & Cassidy, 1990), or the first author of the current investigation (SLT).

E: "Look who we have here." (Brings out the family.) "Here's our family. This is the grandma, this is the mommy, this is the daddy, and these are the girls, Jane and Susan." (Child characters are male [Mark and George] when participants are boys.)

E: "Who do we have here?" (Points to family figures and encourages child to name each family member.) "You know what? I have an idea. Let's pretend to make up some stories about them. Tell you what, how about I start a story about our family and you finish it."

Warm-up story-stem: Family birthday party (*MSSB*)

Characters: M, F, GM, C^1, C^2; props: table, birthday cake

E: "Here's their table and what's this? [Show cake to child participant and wait for subject to name it.] What kind of cake? Yes, it's a birthday cake. You listen carefully to the story. The mommy has baked this beautiful birthday cake and she calls out:"

M: "Come on Grandma, come on Dad, come on girls, let's have a birthday party."

E: "Show me and tell me what happens now."

Examiner prompts (if necessary):

1. "Whose birthday is it?"
2. "How old is he/she?"
3. "What flavor cake is it?"

Story-stem #1: Spilled juice (*ASCT*)

Characters: M, F, C^1, C^2; props: table, dinner dishes

E: (Shake the box with the dishes.) "Can you help me set the table for dinner?" (Give the box to the participant, wait until he or she has set the table, help if necessary.) "Now put the family around the dinner table so they're ready to eat."

E: "Here's our family eating dinner and Jane gets up and reaches and spills her juice."
M: "Jane you spilled your juice!" (reproachful tone of voice)
E: "Show me and tell me what happens now."

Examiner prompts (if necessary):

1. "What do they do about the spilled juice?"
2. "Does anything else happen in the story?"

Story-stem #2: Hurt knee (*ASCT*)

Characters: M, F, C^1, C^2; props: felt grass, sponge rock

E: "Okay. Look what I have got." (Set out piece of green felt and sponge rock.) "This is the park. Do you sometimes go to the park? Here's our family and they're out walking in the park, and at this park there is this high, high rock."
C^1: "Look, Mommy and Daddy. Watch me climb this high, high rock." (C^1 climbs the rock and then falls off.) "Boo-hoo, I've hurt my knee." (crying voice)
E: "Show me and tell me what happens now."

Examiner prompts (if necessary):

1. "What do they do about the hurt knee?"
2. "Does anything else happen in the story?"

Story-stem #3: Monster in the bedroom (*ASCT*)

Characters: M, F, C^1, C^2; props: bed, blanket

M: "It's bedtime. Go up to your room and go to bed."
C^1: "Mommy! Daddy! There's a monster in my room! There's a monster in my room! [alarmed tone of voice]."
E: "Show me and tell me what happens now."

Examiner prompts (if necessary):

1. "What do they do about the monster in the room?"
2. "Does anything else happen in the story?"

Story-stem #4: Exclusion (*MSSB*)

Characters: M, F, C^1; props: couch, toy box

F: "I'm home from work, Honey!"
M: "Hi, dear!" (M and F hug and kiss while C^1 watches.)
F: "Hi, Jane. Mom and I want some time alone in the living room right now. You go in the other room and play with your toys."
E: "Show me and tell me what happens now."

Examiner prompts (if necessary):

1. (If C^1 goes to her parents): "I thought Mom and Dad said they want to be alone."
2. (If C^1 plays alone.): "Does Jane wish she could be with Mom and Dad? What's going to happen?"
3. "Does anything else happen in this story?"

Story-stem #5: Keys (*MSSB*)

Characters: M, F, C^1, C^2; props: none

E: "Jane comes into the room and sees Mom and Dad looking at each other like this. Look at my face." (E imitates angry expression.)
M: "You lost my car keys!" (angry tone of voice)
F: "I did not!" (angry tone of voice)
E: "Show and tell me what happens now."

Examiner prompts (if necessary):

1. "What's going to happen about Mom and Dad's argument?"
2. "What's going to happen? Mom lost her car keys."
3. "Does anything else happen in this story?"

Story-stem #6: Stealing (*MSSB*)

Characters: M, C^1; props: checkout counter, candy bar

E: "Mom and Jane are at the grocery store check-out line. You know how there are always candy bars there?"
C^1: "Can I have a candy bar?"
M: "No, you already had one today. Let's go home." (M walks away. C^1 takes a candy bar and walks away.)
M: "You took a candy bar! I told you not to!"
E: "Show me and tell me what happens now."

Examiner prompts (if necessary):

1. (If no response to the stealing.) "Jane took the candy bar. What does Mom do?"

2. (If M responds to the stealing.) "Does Jane say anything or do anything?"
3. "Does anything else happen in the story?"

Story-stem #7: Cooking (*MSSB*)

Characters: M, F, C^1, C^2; props: stove, pot

M: "We're going to have a good supper but it's not ready yet. Don't get too close to the stove."
C^1: "That looks good. I don't want to wait. I want some now." (C^1 knocks pot of gravy off the stove.) "Ow! The gravy burned me. It hurts!"
E: "Show me and tell me what happens now."

Examiner prompts (if necessary):

1. "What about Jane? She got burned."
2. "What does Mom say?"

Story-stem #8: Horsie (*MSSB*)

Characters: M, F, C^1, C^2; props: toy horsie

C^1: "This is my brand new horsie. I can ride it all around the room. Watch me!"
C^2: "I want a turn!" (C^2 pushes C^1 off the horse and hits her.) "Let me ride it!"
C^1: "Ouch! That hurt! I want my horsie back!"
E: "Show me and tell me what happens now."

Examiner prompts (if necessary):

1. (If C^2 rides the horse.) C^1: "I want my horsie back!"
2. (If C^1 gets the horse back.) C^2 : "I want to ride the horsie!"
3. "Does anything else happen in the story?"

Story-stem #9: Wet pants (*SLT*)

Characters: M, F, C^1, C^2; props: toilet, underpants

C^1: "Mommy, I had to go potty." (sad tone of voice)
M: "Are your pants wet? Oh! You had an accident! You wet your pants."
E: "Show me and tell me what happens now."

Examiner prompts (if necessary):

1. "What are they going to do about the underpants?"
2. "Does anything else happen in the story?"

Story-stem #10: Departure (*ASCT*)

Characters: M, F, GM, C^1, C^2; props: felt grass, car

E: "Here we have the front lawn, and here we have their car, this is the family car. You know what it looks like to me, (participant's name). It looks like the mommy and daddy are going on a trip."
M: "Okay girls. Your Dad and I are going on a trip. We are leaving on our trip now."
F: "See you tomorrow. Grandma will stay with you." (Ask participant to put the mom and dad in the car.)
E: "And away they go. Show me and tell me what happens now."

Examiner prompts (if necessary):

1. "What do the children do while the mom and dad are gone?"
2. "Does anything else happen in the story?"

Story-stem #11: Reunion (*ASCT*)

Characters: M, F, GM, C^1, C^2; props: felt grass, car

E: "Okay. You know what? It's the next day and Grandma looks out of the window and she goes:"
GM: "Look girls, here come your mommy and daddy. They're home from their trip."
E: "Show me and tell me what happens now."

Examiner prompts (if necessary):

1. "What do we do now that the mom and dad are home?"
2. "Does anything else happen in the story?"