

Representations of Attachment Relationships in Children of Incarcerated Mothers

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Representations of attachment relationships were assessed in 54 children ages 2.5 to 7.5 years whose mothers were currently incarcerated. Consistent with their high-risk status, most (63%) children were classified as having insecure relationships with mothers and caregivers. Secure relationships were more likely when children lived in a stable caregiving situation, when children reacted to separation from the mother with sadness rather than anger, and when children were older. Common reactions to initial separation included sadness, worry, confusion, anger, loneliness, sleep problems, and developmental regressions. Results highlight need for support in families affected by maternal imprisonment, especially efforts to promote stable, continuous placements for children, in addition to underscoring the importance of longitudinal research with this growing but understudied group.

The development of secure attachment relationships is closely associated with resilience in high-risk children (Masten & Coatsworth, 1998). Attachment relationships provide the context for the development of mental representations of self and others (Bowlby, 1973, 1982; Bretherton, 1990, 1993) that guide an individual's behavioral and emotional reactions and provide a lens for interpreting future interactions, thus reflecting developmental trajectories leading toward interpersonal competence or incompetence (Bowlby, 1982; Bretherton, 1996; Bretherton & Munholland, 1999; Milan & Pinderhughes, 2000). Although previous research has documented associations between disruptive family experiences and children's negative representations of relationships (e.g., Grych, Wachsuth-Schlaefel, & Klockow, 2002; Toth, Cicchetti, Macfie, & Emde, 1997), children do not exhibit uniform responses to family adversity (e.g., Cicchetti, Rogosch, & Toth, 1998; Werner, 2000). Further study of children who hold positive representations of relationships

despite disruptive family experiences can reveal processes associated with potential resilience and contribute to our understanding of developing attachment relationships.

Children of imprisoned mothers are a growing but understudied group who have experienced significant disruptions in their care (Seymour, 1998; Young & Smith, 2000). Recent estimates indicate that more than 1.3 million children in the United States have mothers under correctional supervision, and most affected children are less than 10 years old (Greenfeld & Snell, 1999; Mumola, 2000). Lengthy parent–child separations often occur as a result of maternal imprisonment in addition to changes in children's living arrangements (Mumola, 2000). Whereas 90% of children remain with their mothers when fathers are incarcerated, grandparents are most likely to assume responsibility for children when mothers go to prison (Enos, 2001; Snell, 1994). Although several recent papers have stressed the negative implications of disruptions in developing attachment relationships between children and their incarcerated mothers (e.g., Johnson & Waldfogel, 2002; Myers, Smarsh, & Amlund-Hagen, 1999), no study has empirically investigated the quality of children's attachment relationships or representations in this population. Indeed, few studies of families affected by parental incarceration even involve direct assessment of children (Gabel & Johnston, 1995). Because only 10% of children with imprisoned mothers are placed in traditional foster care (Enos, 1997; Mumola, 2000), foster care research

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(Dozier, Stovall, & Albus, 2001; Stovall-McClough & Dozier, 2004) has not included a substantial number of these children.

The present study was conducted to expand our knowledge base about young children affected by maternal imprisonment and to increase our understanding of potential resilience in the relationships of children who have experienced significant disruptions in their care. Thus, the primary goal of the study was to examine family experiences associated with children's representations of positive relationships despite risks associated with maternal incarceration. A secondary goal was to examine how children react emotionally to separation from mothers at the time of imprisonment and how these reactions relate to children's attachment representations.

Children's Attachment Representations

Mental representations of attachment relationships. In his later writings, Bowlby (1973, 1982, 1988) argued that children develop internal working models of self and others within the context of early relationships. These mental representations emerge during the toddler years from early family interactions and experiences. As children's symbolic development and capacity for language increase during the preschool years, these representations become more elaborated, refined, and enduring (Bretherton, 1990, 1993) and function as a lens for interpreting future interpersonal experiences (Bretherton & Munholland, 1999; Thompson, 2000), thus providing a basis for developmental pathways leading to social and emotional competence or problems (Bowlby, 1988). Internal working models of early relationships are thought to reflect the quality of care that children receive. Children develop representations of relationships that are less optimal when attachment figures are not available and responsive, such as when discontinuity in care, prolonged separation, or maltreatment occurs (Bowlby, 1973; Toth, Maughan, Manly, Spagnola, & Cicchetti, 2002). Although some children show resilience, or the attainment of positive developmental outcomes despite adversity (e.g., Cicchetti et al., 1998; Werner, 2000), experiences associated with representations of positive family relationships following disruptive experiences remain unclear.

Assessing mental representations of relationships. Although internal working models of attachment cannot be assessed directly, they can be inferred from a child's behaviors and verbalizations (e.g., Main, Kaplan, & Cassidy, 1985), such as through observation of infant attachment behaviors during the

Strange Situation procedure. As children grow older, their mental representations of others and self also are reflected through symbols, including play and language. Scholars have used creative methods to access young children's internal representations of relationships, such as conducting puppet interviews (e.g., Cassidy, 1988), analyzing children's responses to pictures depicting separations (e.g., Walsh, Symons, & McGrath, 2004), or enacting story stems using small doll props (e.g., Bretherton, Prentiss, & Ridgeway, 1990; Bretherton, Ridgeway, & Cassidy, 1990). Story stem techniques such as the Attachment Story Completion Task (ASCT; Bretherton, Ridgeway, et al., 1990) and the MacArthur Story Stem Battery (MSSB; Bretherton, Oppenheim, Buchsbaum, Emde, & the MacArthur Narrative Group, 1990) have grown increasingly popular in the attachment literature. These methods present children with attachment-relevant story stems and ask them to narrate and enact solutions using small doll figures and props. Children's mental representations of attachment are then inferred from children's verbal and nonverbal responses.

Validity of story stem techniques. The validity of story stem techniques has been established with young children from middle- and low-socioeconomic (SES) backgrounds, including children who have experienced family disruption. Children's ASCT security classifications correspond with infant attachment assessed by the Strange Situation, concurrent separation-reunion behavior, and maternal Adult Attachment Interview (AAI) classifications (Bretherton, Ridgeway, et al., 1990; Gloger-Tippelt, Gomille, Loening, & Vetter, 2002). Greig and Howe (2001) found that children classified as insecure on the basis of their ASCT responses performed more poorly on an emotional understanding task and had mothers with more depressive symptoms compared with children classified as secure. In addition, prosocial and affiliative themes coded from middle-SES children's story stem enactments have been associated with fewer externalizing behavior problems at home and school and lower teacher-rated hostility (Oppenheim, Nir, Warren, & Emde, 1997; Warren, Oppenheim, & Emde, 1996; Zahn-Waxler, Friedman, Cole, Mizuta, & Hiruma, 1996). For children from divorced families, child-mother proximity seeking in story completions predicted more teacher-rated social competence and fewer behavior problems in the preschool setting (Page & Bretherton, 2001). Grych et al. (2002) found that children who experienced family violence had less positive representations of mothers and self and were more likely to include escalating themes of interparental conflict,

avoidance, and lack of coherence compared with children from a nonviolent community sample. In a series of studies, Toth and colleagues (Macfie et al., 1999; Toth et al., 1997; Toth, Cicchetti, Macfie, Mughan, & Vanmeenen, 2000) reported that maltreated children had more negative representations of parents and self and portrayed parents as responding less often to children's distress compared with nonmaltreated preschoolers. The most compelling evidence regarding the validity of story stem techniques comes from Toth et al. (2002), who found that maltreated children who participated in an attachment-based parent psychotherapy program showed a decrease in negative maternal representations over time compared with children in two nonattachment interventions.

Approaches to coding story stems. Children's responses to attachment-relevant story stems have been coded using both categorical and thematic approaches. Originally, Bretherton, Ridgeway, et al. (1990) categorized children as secure (very or fairly) or insecure (fairly avoidant, highly avoidant, or disorganized) on the basis of global ratings of their ASCT responses. Whereas some scholars have followed this approach to classify children (Greig & Howe, 2001), others have devised their own systems using multistep qualitative analysis or clinical judgment to categorize children into a secure-insecure dichotomy (e.g., Gloger-Tippelt et al., 2002) or into other groups such as confident or frightened (e.g., Solomon, George, & DeJong, 1995). An alternative analytic approach to the ASCT or MSSB involves coding specific themes in children's narrative enactments without creating categories. Thematic approaches code variables such as positive-nurturing behavior, discipline, relieving distress, conflict escalation, aggression, and coherence (e.g., Grych et al., 2002; Hodges, Steele, Hillman, Henderson, & Kaniuk, 2003; Toth et al., 2002). Thematic codes are then used to compare children (e.g., maltreated vs. nonmaltreated) or predict children's behavioral and emotional outcomes.

Although Page and Bretherton (2001) argued that categorical and theme-based approaches to analyzing story stems are compatible, these approaches have been used separately with their own set of advantages and disadvantages. Thematic approaches provide concrete examples that reflect specific, dimensional behavioral patterns (Page & Bretherton, 2001) and generally have high interrater reliability. However, thematic approaches typically examine content and structure codes separately, although the meaning of positive or negative themes in children's responses is best understood within the context of narrative structure (see Shields, Ryan, & Cicchetti,

2001, for a discussion of this issue). If a child's response includes positive thematic content, it does not necessarily reflect a representation of a secure relationship because some children may attempt to cope with traumatic experiences by defensively excluding negative material (Bowlby, 1980; Main et al., 1985; Shields et al., 2001). When defensive exclusion occurs, however, narrative structure cannot be maintained and coherence is sacrificed (Bretherton & Munholland, 1999; Lyons-Ruth & Jacobvitz, 1999). Given these considerations, a primary strength of the categorical approach is its focus on identifying higher level organizational patterns derived from both the content and structural characteristics of children's responses (Page & Bretherton, 2001). However, categorical approaches relying on multistep qualitative analysis, global ratings, or clinical judgment are difficult to duplicate, and there is substantial overlap in classification groups, especially among the insecure categories (Bretherton, Ridgeway, et al., 1990; Solomon et al., 1995).

The present study integrated thematic and categorical approaches to maximize the advantages and minimize the disadvantages of each approach. Specific themes and structure variables were coded initially and then, using cluster analysis, children were categorized on the basis of both the structure and content codes. Thus, higher level organizational patterns could be identified on the basis of concrete examples that reflected specific, dimensional behavioral patterns. Using this approach, I hoped to identify at least one group of children whose narrative enactments reflected secure relationships and thus were coded high on coherence and low on avoidance, with interpersonal content involving nurturing, responsive family interactions; nonpunitive discipline; and lack of interpersonal aggression or violence. I also hoped to identify at least one group of children whose narrative enactments reflected insecure relationships and thus were coded low on coherence or high on avoidance and contained interpersonal aggression, violence, or an absence of nurturing (e.g., Bretherton, Ridgeway, et al., 1990; Cassidy, 1988). Following identification of such groups, I then could examine family experiences associated with representations of secure and insecure relationships.

Family Experiences Associated With Attachment in Children of Incarcerated Mothers

Studying children of incarcerated mothers who hold positive internal representations of relation-

ships can reveal processes associated with emerging resilience and contribute to our understanding of developing attachment relationships in this high-risk group. The present study examined several family experiences that could potentially function as promotive factors, including whether the caregiving situation was stable, whether caregiver depressive symptoms were absent, what children were told about the incarceration, and whether the child had visited the mother at the prison.

Attachment theory and research suggest that developing positive relationships with consistently available and responsive alternative adults can help ameliorate the effects of parental loss or problems, whereas instability in the caregiving situation does not (Howes, 1999; Stovall & Dozier, 1998). Although children of incarcerated mothers are at risk for experiencing multiple changes in their placements with grandparents and other relatives (Seymour, 1998), we know little about how these shifts relate to quality of children's family relationships. However, even in a stable caregiving situation, problems such as elevated depressive symptoms may interfere with a caregiver's ability to provide responsive and nurturing care. Indeed, a growing literature has documented the presence of mental health risks in grandparents raising their grandchildren as a result of parental problems (e.g., for reviews see Burton, Dilworth-Anderson, & Merriwether-de Vries, 1995; Poehlmann, 2003). In children whose mothers are not incarcerated, elevated maternal depressive symptoms have negative implications for attachment relationships and representations (Cicchetti et al., 1998; Oppenheim, Emde, et al., 1997).

The attachment literature highlights the importance of emotionally open communication in relationships (e.g., Bretherton, 1990, 1995; Bretherton & Page, 2004). Telling children about difficult situations in honest, sensitive, and developmentally appropriate ways affirms their trust in caregivers. In contrast, when information is hidden, distorted in a manner that contradicts the child's experience, or includes details that frighten a child, distrust or mental health problems may ensue (Bowlby, 1973). Although we know little about what children are told regarding their mothers' incarceration, previous studies suggest that many families attempt to hide this information because of social stigma (Enos, 2001). Information about maternal imprisonment may seem relatively easy for families to hide or distort because few children have regular visits with their incarcerated mothers. Although family scholars have suggested that visits between incarcerated parents and their children play an important role in the

maintenance of family relationships (Gabel & Johnston, 1995; Young & Smith, 2000), less than half of imprisoned mothers receive regular visits from their children (Mumola, 2000; Snell, 1994). Lack of mother-child contact during imprisonment may result in children viewing the mother as not available when needed, which may have implications for children's representations of attachment relationships. However, regular contact with mothers was not viewed as crucial for the formation of a representation of the mother *per se*. In a study that included assessments of children's relationships with their fathers, Shields et al. (2001) argued that

day-to-day contact with one's biological father living in the child's primary residence was not considered crucial for the formation of father representations, as many children in single-family homes do have contact with or memories of their biological fathers. In addition, when father figures are unpredictable, intermittently available, or abandoning, theory suggests that children develop models of fathers as unavailable, inconsistent, and/or rejecting and that such negative representations have profound implications for children's social development. (p. 323)

In addition to family experiences that occur following maternal incarceration, children's emotional and behavioral reactions to separation may be important indicators of the quality of their relationships. Previous research has found that school-age children react to parental imprisonment with feelings of loneliness, fear, embarrassment, stigma, and behavior problems such as aggression (Hale, 1988; Hungerford, 1993; Thompson & Harm, 1995). Although early observations by attachment scholars documented negative behaviors in infants of jailed mothers (e.g., Spitz, 1956), we know little about young children's normative reactions to separation from incarcerated parents and their association with family relationships. Descriptions of children's emotional and behavioral reactions and how they relate to representations of relationships may elucidate processes associated with early disruptions in care and help identify children's needs for support during separation from mothers.

Other potentially confounding variables, such as the number of previous separations from the mother and the length of separation from the mother, were examined, as they may be related to attachment representations. In addition, because previous studies have found relations between children's story stem responses and their age or verbal skills (e.g.,

Bretherton, Ridgeway, et al., 1990; Easterbrooks & Abeles, 2000; Grych et al., 2002; Verschueren & Marcoen, 1999), these variables were included as controls in analyses of children's attachment representations.

Research Questions and Hypotheses

The central questions investigated in this study were: (a) What is the quality of children's representations of relationships with mothers and caregivers in families affected by maternal incarceration? (b) What emotional and behavioral reactions do young children exhibit when their mothers go to prison and how do these reactions relate to children's attachment representations? (c) What family experiences are associated with representations of secure and insecure relationships in young children of incarcerated mothers? It was hypothesized that children's representations of positive, secure relationships would be associated with a stable caregiving situation, telling children about the mother's imprisonment in an emotionally open and sensitive manner, visiting the mother at the prison, and low caregiver depressive symptoms, controlling for children's age and verbal skills, number of previous separations from the mother, and length of the current separation.

Method

Participants

Data were collected from 60 children, their incarcerated mothers, and children's nonmaternal caregivers. Participants were part of a larger study focusing on the impact of maternal incarceration on the family (Poehlmann, in press). Incarcerated mothers were recruited from a medium–minimum security women's state prison in the Midwest, and children's caregivers were contacted on the basis of information provided by mothers. Inclusion criteria for families included: (a) the mother had at least one child between the ages of 2.5 and 7.5 years of age, (b) the mother functioned as the child's primary caregiver for some time before incarceration, (c) the mother retained her legal rights to the child, (d) the child had never been placed in foster care because of abuse or neglect by the mother, (e) the mother was incarcerated for at least 2 months, (f) the child was placed with a relative, and (g) the caregiver and child lived within the state in which the mother was imprisoned. If a mother had more than one child in the specified age range, one child was randomly

selected to participate. Characteristics of participants mirrored those of national surveys of incarcerated women (Greenfeld & Snell, 1999; Mumola, 2000), although mothers in this study were slightly younger, more likely to be single, and had fewer previous incarcerations (Poehlmann, 2005, in press). Mothers' offenses included 28 (47%) drug-related crimes, 13 (22%) property crimes, 12 (20%) forgery crimes, and 7 (12%) violent crimes. Most children ($n = 41$, 68%) were cared for by a grandparent, whereas 13 (22%) were cared for by their fathers and 6 (10%) by another relative. Approximately half the children ($n = 29$, 48%) were African American, 24 (40%) were European American, 3 (5%) were Latino, and 4 (7%) were Native American. Thirty-one (53%) children were boys and 29 (47%) were girls. Additional family characteristics are presented in Table 1.

Measures

Data were collected using multiple methods (interviews, questionnaires, coded videotapes, standardized assessment) with multiple informants (caregivers, mothers, children) to minimize the chance of obtaining significant findings because of within-method or within-respondent variance and to obtain the perspectives of several family members.

Children's representations of attachment relationships. The ASCT (Bretherton, Ridgeway, et al., 1990) was used to assess children's representations of relationships with mothers and caregivers. The ASCT, which partially overlaps with the larger set of MSSB story stems (Bretherton, Oppenheim, et al., 1999) was designed to elicit responses reflecting the attachment relationship between the child and a parental figure in four increasingly stressful story stems: (a) parental figure as authority (spilled juice), in which a child spills his or her juice at dinner; (b) parental figure as comforter (hurt knee), in which a child falls off a rock and hurts his or her knee; (c) parental figure as protector (monster), in which a child calls for the parental figure, thinking he or she has seen a monster; and (d) separation of the child from the parental figure as he or she leaves for a trip and the subsequent reuniting of the child with the parental figure the next day (separation–reunion). The ASCT was designed for preschool-age children but is appropriate for school-age children as well, and it has been administered effectively in the home environment (Goodman, Aber, Berlin, & Brooks-Gunn, 1998). The ASCT has been modified for special populations, such as children of divorced parents (Page & Bretherton, 2001) and children living in a kibbutz (Eshel, Landau, Shlayer, & Ben-Aaron, 1997). Similar

Table 1
Background Characteristics of Mothers, Caregivers, and Children

| Variable | Range or percentage | <i>M</i> | <i>SD</i> |
|-------------------------------------|---------------------|----------|-----------|
| Age of mother (years) | 19–42 | 27.58 | 5.82 |
| Years of maternal education | 6–15 | 11.35 | 1.68 |
| Maternal preincarceration income | \$0–\$48,000 | \$14,288 | \$12,001 |
| Months of sentence | 3–120 | 46.56 | 23.88 |
| Months of sentence served | 2–48 | 16.92 | 10.20 |
| Number of previous arrests | 0–50 | 2.93 | 7.46 |
| Age of caregiver (years) | 21–80 | 46.77 | 13.99 |
| Years of caregiver education | 4–16 | 11.79 | 2.22 |
| Caregiver yearly income | \$4,500–\$85,000 | \$23,320 | \$16,729 |
| Number of dependents | 1–13 | 3.68 | 2.82 |
| Age of child (months) | 27–89 | 56.83 | 18.36 |
| Age of child at separation (months) | 0.25–72 | 33.00 | 20.28 |
| Gender of child | | | |
| Boy | 32 (53%) | | |
| Girl | 28 (47%) | | |
| Ethnicity of child | | | |
| African American | 29 (48.3%) | | |
| European American | 24 (40.0%) | | |
| Hispanic American | 3 (5.0%) | | |
| Native American | 4 (6.7%) | | |
| Caregiver's kin relation to child: | | | |
| Grandparent | 41 (68.3%) | | |
| Father | 13 (21.7%) | | |
| Other relative | 6 (10.0%) | | |
| Maternal offense | | | |
| Drug related | 28 (46.7%) | | |
| Property | 13 (21.7%) | | |
| Forgery | 12 (20.0%) | | |
| Violent | 7 (11.6%) | | |

story completion assessments have been used with typically developing (Oppenheim, Emde, et al., 1997) and maltreated children (Macfie, Cicchetti, & Toth, 2001; Toth et al., 2000).

Eleven key thematic codes, drawn from two versions of the ASCT coding manual (Golby, Bretherton, Winn, & Page, 1995; Page & Bretherton, 1995) and a review of the literature, were selected to capture structural and content characteristics of children's narratives. The four structural codes for each story stem included: avoidance, coherence, bizarre behavior, and congruence between the child's affect and story content. The seven content codes for each stem included: positive behavior of child to adult, nurturing behavior of adult to child, nonpunitive discipline, negative behavior of child to adult, negative behavior of adult to child, general violence, and self-reliance. These variables were coded in a binary fashion for each of the four story stems from review of videotapes and transcripts. Scores for each code were summed across the four story stems so that

children's scores ranged from 0 (*present in none of the stems*) to 4 (*present in all of the stems*). Two codes (congruence of affect, self-reliance) were dropped because of inadequate interrater reliability, resulting in retention of nine codes that reflected both structural and content aspects of children's narratives. Two coders independently coded each category across 10 (19%) randomly selected tapes. Kappas ranged from .64 to .86 (see Table 2). Six children's responses could not be coded because of equipment failure (2), lack of cooperation from the child (1), and the caregiver not allowing videotaping in the home (3). Thus, all analyses focusing on the ASCT included 54 cases.

Children's visits. Mothers and caregivers were asked whether children had visited the mother at the prison during the past 2 months of incarceration. Letters and telephone calls were not included because of the young age of target children. Visits were coded in a binary manner to reflect whether the child visited at least once in the past 2 months (1) or

Table 2
Narrative Content and Structure Codes for the Attachment Story Completion Task

| Code and kappa | Description |
|--|---|
| Content codes | |
| Child to adult positive behavior ($\kappa = .67$) | Child hugs, kisses, seeks proximity to, pleasantly greets, or complies with parental figure. |
| Adult to child nurturing ($\kappa = .79$) | Parental figure praises, comforts, supports, helps, or expresses physical affection to child. |
| Nonpunitive discipline ($\kappa = .71$) | Parental figure sets rules, leads, supervises, or disciplines child in a constructive manner. |
| Child to adult negative behavior ($\kappa = .86$) | Child is verbally or physically aggressive with parental figure, whines repeatedly, or does not comply. |
| Adult to child negative behavior ($\kappa = .72$) | Parental figure is verbally or physically aggressive with child, demeans child, or engages in corporal punishment. |
| General violence or aggression ($\kappa = .74$) | Includes themes related to death, destruction, violence, injury (other than hurt knee in second story stem), or any verbal or physical aggression not involving child–parent interaction. |
| Structure/process codes | |
| Avoidance ($\kappa = .64$) | Child does not respond to story stem after prompt, child denies “problem” in story stem, child turns away from task, child says “I don’t know” to prompts. |
| Coherence ($\kappa = .64$) | Story is solved using a logical progression, with clear connections among story elements, characters, and feelings, with few contradictions. |
| Bizarre actions ($\kappa = .82$) | Uninterpretable behavior such as randomly swiping dolls onto the floor, swirling dolls in the air, or tapping dolls together with no clear meaning or explanation. |

whether the child had not visited (0). This approach was used because many children experience infrequent or sporadic contact with their mothers (Gabel & Johnston, 1995) and because of the need to increase the accuracy of the retrospective reports. Mothers and caregivers obtained 100% agreement on this binary variable.

Caregiver depressive symptoms. The Center for Epidemiologic Studies–Depression Scale (CES–D; Radloff, 1977) was used to assess caregiver depressive symptoms. The CES–D is a 20-item self-report questionnaire that asks respondents to rate their symptoms of depression on a 4-point scale ranging from 0 (*rarely/none of the time*) to 4 (*most/all of the time*) during the past week. Scores of 16 and above are considered in the clinical range. The CES–D discriminates between patients and nonpatients and has been used in clinical and epidemiological research with a wide range of populations, including custodial grandparents (e.g., McCallion & Kolomer, 2000). Internal consistency ranges from .85 to .90. Cronbach’s alpha was .87 in this study.

What children were told about the incarceration. Caregivers participated in a semistructured interview modeled after previous work with nonmaternal caregivers (Gabel & Johnston, 1995). During the interview, they were asked what they told children about the mother’s incarceration. Responses were transcribed verbatim and coded using a thematic

content approach (Strauss & Corbin, 1998). Five initial codes emerged, including simple and honest explanations, developmental explanations, distortions, telling the child many frightening details, or telling the child nothing. Subsequently, these codes were examined and combined to create abstract categories (Strauss & Corbin, 1998). Thus, simple and honest explanations were combined with developmental explanations to reflect emotionally open and developmentally appropriate communication (0), whereas distortions, too much detail, and no information were combined to reflect less optimal communication strategies (1). Finally, an independent coder assigned 20% of caregiver responses to these categories with 92% agreement.

Children’s separation reactions. During their interviews, caregivers and mothers were asked to provide narrative descriptions of children’s reactions to separation from the mother during the first 2 weeks the mother was gone. Responses were transcribed verbatim and combined for analysis using a thematic content approach (Strauss & Corbin, 1998). This approach was thought to be comprehensive because nearly one fourth of mothers did not have contact with the child or caregiver and thus had not observed or obtained information about the children’s reactions, and approximately one fourth of current caregivers had not initially cared for the child at the time of the separation because of changes in living

arrangements. Seven categories emerged from the analysis: crying/sadness or calling for mothers, confusion or lack of understanding, anger/acting out, sleep problems, developmental regressions, indifference/detachment, and fear. Because children could exhibit more than one reaction, emergent categories were not mutually exclusive. Caregivers also completed an emotions reaction checklist derived from the work of Hale (1988). The list included 10 emotions that children may experience following parental incarceration, including sadness, worry/confusion, anger, fear, embarrassment, depression, loneliness, denial, and guilt. The responses were scored in a binary fashion (absent = 0, present = 1).

Stability of the caregiving situation. As part of their interviews, mothers were asked to recall detailed information about who cared for the child since imprisonment. On the basis of this information, a binary variable was created to reflect whether children had shifted among two or more caregivers following the mother's imprisonment (unstable = 0) or whether they had lived continuously with one caregiver (stable = 1). Caregivers were asked to confirm this information, and agreement was 100% for the binary coded variable.

Children's verbal reasoning. The Vocabulary and Comprehension subtests of the Stanford-Binet Intelligence Scale, 4th edition (Thorndike, Hagan, & Sattler, 1986) were administered to children. The Stanford-Binet is a widely used, individually administered standardized test of verbal and nonverbal cognitive skills for children age 2 years to adulthood. The Vocabulary and Comprehension subtests were combined to create a verbal reasoning standard age score (SAS), which has a mean of 50 and standard deviation of 8.

Procedure

Eligible mothers were recruited from a medium-minimum security state prison for women. Human subjects approval was obtained from Institutional Review Boards of the University and the State Department of Corrections. As part of the rehabilitation process, mothers of minor children were required to take a parenting class at the prison (unless they had taken a similar course before transferring from a different correctional facility). The parenting teacher informed eligible attendees about the study using a script, and women who were interested in the project were contacted by the researcher and participated in a 1- to 2-hr private interview at the prison. During their interviews, mothers provided caregivers' names, addresses, and telephone numbers. All

mothers were able to provide this information, even if the child and caregiver did not visit them at the prison. For each woman who participated, a toy was donated to the prison for use during children's visits. Using information provided by mothers, caregivers were contacted by letter, telephone, or in person (if they had no telephone and did not respond to the letter). Within 2 to 3 weeks of the maternal interview, a home visit was arranged with the child and his or her caregiver. During the home visit, one research assistant conducted the caregiver interview while the other conducted the child assessments in a different room. First, the Stanford-Binet was administered to the child, followed by the ASCT.

For each set of ASCT stories, children were told the beginning of four stories, one at a time, with the examiner acting out the story stem with dolls and props. Children were then asked to complete the stories. An initial story about a birthday party, not included in coding or analyses, was used to establish rapport and to familiarize children with the procedure. The race of the dolls and the gender of the child dolls were matched to the race and gender of each participant. For adult dolls who represented family members, the relation of the caregiver doll was matched to that of the caregiver's kin relation to the child (e.g., grandmother, aunt). Props included household items such as a table, chairs, dinnerware, a sink, and car. Half of the children were presented with the mother story stems first, whereas the other children were presented with the caregiver story stems first, with a brief playtime in between these administrations. The adult dolls were referred to as "mother" or "grandmother, aunt, and so forth" in each story stem, thus reminding the children of the relationship that was being assessed in each set. Within each set, the four story stems were administered in the same order by one of two examiners in a session lasting approximately 30 to 45 min. All of the sessions were videotaped and transcribed verbatim for later coding. Home visits lasted 2 to 3 hr; caregivers were paid \$15 and children were given an age-appropriate toy.

Results

In this section, I first present descriptive results, including what children were told about the mother's incarceration and children's reactions to separation from mothers; I then describe the cluster analysis of thematic codes from the ASCT; and I finally turn to testing hypotheses focusing on family experiences associated with children's attachment representations.

Descriptive Results

Half of the caregivers ($n = 30$) indicated that they told children simple, honest explanations about the mother's incarceration ("Your mom is in jail") and 7% ($n = 4$) used developmental explanations ("Your mama did something naughty and now she is in a really big time out"). However, 20% ($n = 12$) of caregivers told children distorted explanations (the mother is in college, at the hospital, on vacation, in the park, etc.) and 15% ($n = 9$) indicated that they had never said anything to the child about the mother's incarceration. Five caregivers (8%) told children about the mother's situation in a manner that included many frightening details, such as the mother's involvement with guns, knives, blood, gangs, crime, and drugs. During administration of the ASCT, however, it became apparent that some children knew more about the mother's incarceration than what they were told by caregivers. For example, one child (whose caregiver said she never directly told the child anything) spontaneously whispered during the ASCT: "Don't tell anyone, but my mommy's in jail. Nobody knows but me." Another child whose caregiver said that the mother was in the hospital spontaneously remarked: "Mama's at a hospital. I think she hit her head. Maybe it the jail-hospital."

Caregivers and mothers reported that 44 (73%) children had visited with the mother at the prison at least once within the past 2 months, with a range of zero to eight visits and median of one visit. Consistent with previous studies (e.g., Mumola, 2000), 20 (33%) children visited less than once per month, and only 8 (13%) children had regular weekly visits. Although most children (60%) lived with one caregiver since maternal incarceration, 24 children (40%) lived with at least one other caregiver before their current situation; 30% of the children in the latter group had changed caregivers four or more times. Caregiver CES-D scores ranged from 2 to 47, with a mean of 15 ($SD = 9.8$); 42% of caregiver CES-D scores fell in the clinically significant range. Children's verbal reasoning scores ranged from 35 to 63, with a mean of 47 ($SD = 5.5$).

Children's Reactions to Separation

Interview data. Thematic content analysis of mother and caregiver interview responses revealed seven categories reflecting children's emotional and behavioral reactions to separation from the mother. In this section, the proportion of children in each group (using combined data) and representative quotes are presented. The most common reaction to

separation was crying, sadness, and/or repeatedly calling for and looking for mothers. Fifty (83%) children showed this type of reaction: "He'd sit there and cry, saying 'I want my mommy.'" "She just cried and cried and wouldn't stop crying no matter what we said. She said she wanted her mama." "She goes to the window and calls out mama's name." Thirty-one (52%) children seemed confused and did not understand the situation: "I think she was confused because she didn't know what happened." "He couldn't understand why I was not there. He thinks this is a place where all mommies go and asks 'Are you coming home?'" "He's too young to understand. He told mom, 'I will be good if you come home.'" Twenty-four (40%) children exhibited angry and acting out behaviors: "Misbehavior, tore things up. . . . He tore up every picture I owned but not the picture of mom." "He was always fighting, being mean, and biting. He wouldn't be held." "She said she hated me, was mad at me." Twenty (33%) children were described as acting indifferent or detached: "He always had a don't-care attitude." "Not a big deal. He was used to people being in and out and shuffled around." "She didn't pay it no attention." Nineteen (32%) children were described as having sleep problems: "He has sleeping problems because he was used to sleeping with mom. He is always screaming and crying in the middle of the night." "She would wake up in the night crying, saying 'I want my mommy . . . would not sleep alone.'" "He needs a lot more special treatment at night. He says he can't sleep because his mama is not here." Thirteen (22%) children experienced developmental regressions, most often related to toileting: "She started peeing in her pants again. She was potty trained and then relapsed . . . acting like a baby, clinging." "He wouldn't eat, cried so much . . . toileting was a problem, he wet on himself now." Eleven (18%) children exhibited fear reactions: "She was afraid of me, afraid of everything out here." "He's afraid of the police now." Most ($n = 49$, 82%) children exhibited more than one reaction following separation from the mother.

Checklist data. On the emotions checklist, the following proportions of children experienced different feelings about separation from their mothers according to caregivers: 76% sadness, 49% worry and confusion, 39% loneliness, 36% anger, 24% fear, 14% depression, 12% denial, 10% relief, 3% embarrassment, and 2% guilt. However, caregivers rated 7 (12%) children as not experiencing any of these emotions following separation from the mother.

Thus, according to content analysis of interview data and the emotions checklist, a substantial

majority of this sample of young children experienced sadness, crying, and calling for mothers following separation. Other common reactions included confusion and worry, anger and acting out, loneliness, fear, developmental regression, sleep problems, and indifference or detachment. Most children exhibited multiple reactions, reflecting the complexity of their emotional and behavioral responses.

Bivariate correlations between the separation reactions checklist data and ASCT codes were generated. Because of the limited sample size, the separation reactions significantly associated with ASCT variables (sadness, worry and confusion, anger, loneliness; $p < .05$) were selected to use in subsequent regression analyses. These four variables represented children's most common reactions to separation from mothers as a result of her imprisonment.

Quality of Attachment Representations

Mother-caregiver differences. Initially, paired t tests were conducted to determine whether mother and caregiver ASCT codes differed. Only the general violence code approached significance, $t(53) = -1.86$, $p = .07$, with mother story completions containing slightly more violence than caregiver story completions. There were no differences on the other ASCT codes, and the codes did not differ based on the order in which each set was presented.

Cluster analysis of ASCT themes. Cluster analysis was used to identify groups of children who demonstrated distinct patterns of responses to the ASCT on the basis of both structural and content codes (Shields et al., 2001). Two sets of cluster analyses were performed: one for the child's representation of the mother and one for the child's representation of the caregiver. For each type of representation, a two-step procedure was used to maximize the benefits of hierarchical and nonhierarchical clustering algorithms (Hair, Anderson, Tatham, & Black, 1998; Milligan & Cooper, 1987). First, children were grouped using Ward's hierarchical method using squared Euclidean distances with the nine ASCT codes as criterion variables. The number of clusters was determined by examining the relative values of the fusion coefficient, or the value at which various cases merge to form a cluster. A significant increase in the value of the coefficient indicates that two dissimilar clusters have been merged and the solution before the merge is most appropriate (Aldenderfer & Blashfield, 1984). Examination of the fusion coefficients for both mother and caregiver representations revealed a large increase at the four-cluster solution, implying that a three-cluster solu-

tion would be most appropriate for both sets of analyses. Second, the resulting cluster centroids from the three-cluster solution for each set were entered as the starting point for the K -means iterative procedure. Mean values of ASCT codes for the three-group final cluster solutions are presented in Table 3. To verify whether the cluster analysis successfully differentiated groups of children from patterns evident in their narratives, mean ASCT scores for each cluster were compared. For mother representations, a significant multivariate analysis of variance (MANOVA), $F(18, 86) = 14.73$, $p < .001$, and univariate tests ($p < .001$) indicated that the three clusters differed on all nine ASCT codes. A significant MANOVA, $F(18, 86) = 10.00$, $p < .001$, and univariate tests ($p < .01$) for caregiver stories indicated that the three clusters differed on eight ASCT codes, with the exception of the code "caregiver negative to child" (the code with the lowest overall frequency).

Description of clusters. Cluster 1 in each set consisted of children whose story completions were coded highest on coherence and lowest on avoidance, bizarre behavior, and general violence. On average, children in this group were rated as having three to four coherent story stem completions per set. In addition, the stories were coded high on positive relationship codes (child positive to adult, adult nurturing to child, nonpunitive discipline) and low on negative relationship codes (child negative to adult, adult negative to child). This pattern of thematic and structural codes is consistent with attachment theory's description of narratives that reflect secure relationships (e.g., Bretherton, Ridgeway, et al., 1990; Greig & Howe, 2001). Twenty children (37%) were categorized in the secure-positive cluster for mother representations, and in a separate analysis, the same proportion was classified in the secure-positive cluster for caregiver representations.

Cluster 2 included children whose story stem completions were coded highest on general violence, low to moderate on coherence, and moderate on avoidance. In addition, the stems were coded high on bizarre negative actions and high on all positive and negative relationship codes. On average, children in this cluster enacted two to four story stems per set that included general violence and aggression. Because these story completions were characterized by enactments of negative and positive adult-child interactions in the context of negative structural codes and high general violence, this cluster was seen as being consistent with representations of highly ambivalent and disorganized relationships (e.g., Bretherton, Ridgeway, et al., 1990).

Table 3
Mean Scores on Attachment Story Completion Task (ASCT) Codes for Mother and Caregiver Clusters

| ASCT codes | M (SE) for mother | | | M (SE) for caregiver | | |
|--------------------------------|---------------------------|------------|------------|---------------------------|------------|------------|
| | Cluster 1 | Cluster 2 | Cluster 3 | Cluster 1 | Cluster 2 | Cluster 3 |
| Child positive to adult | 2.55 (.21) _{abc} | 1.86 (.25) | 0.60 (.21) | 1.90 (.22) _{bc} | 2.29 (.26) | 0.45 (.22) |
| Adult nurturing to child | 2.25 (.17) _{abc} | 1.14 (.20) | 0.20 (.17) | 1.75 (.19) _{bc} | 2.14 (.23) | 0.20 (.19) |
| Nonpunitive discipline | 2.70 (.22) _{abc} | 1.71 (.26) | 0.35 (.22) | 1.80 (.24) _{abc} | 2.93 (.28) | 0.30 (.24) |
| Child negative to adult | 0.30 (.16) _{ac} | 1.21 (.19) | 0.20 (.16) | 0.00 (.15) _a | 0.79 (.18) | 0.45 (.15) |
| Adult negative to child | 0.30 (.16) _{ac} | 1.21 (.19) | 0.15 (.16) | 0.02 (.17) _a | 0.71 (.01) | 0.35 (.17) |
| General violence or aggression | 0.70 (.22) _{abc} | 3.21 (.26) | 1.55 (.22) | 0.25 (.22) _{abc} | 2.50 (.26) | 1.55 (.22) |
| Avoidance | 0.20 (.20) _{abc} | 1.07 (.24) | 2.35 (.20) | 0.35 (.22) _{bc} | 0.43 (.27) | 2.15 (.22) |
| Coherence | 3.40 (.18) _{ab} | 0.50 (.22) | 1.00 (.18) | 3.30 (.19) _{abc} | 1.93 (.22) | 0.60 (.19) |
| Bizarre actions | 0.70 (.25) _{abc} | 2.79 (.30) | 1.60 (.25) | 0.60 (.26) _b | 1.50 (.31) | 2.15 (.26) |

Note. Subscript a indicates Clusters 1 and 2 differed at $p < .05$, subscript b indicates Clusters 1 and 3 differed at $p < .05$, and subscript c indicates Clusters 2 and 3 differed at $p < .05$.

Fourteen children (26%) were categorized in Cluster 2 for mother and caregiver representations.

Children grouped into Cluster 3 in each set enacted story stems characterized by the highest avoidance (on average, two to three of their stems were rated as avoidant), moderate general violence, the lowest positive relationship codes (each child had only zero to one story stem enactment per set that included positive child–adult interaction), low to moderate negative relationship codes, moderate to high bizarre negative actions, and low to moderate coherence. Responses in this cluster appeared negative-avoidant or detached. Twenty children (37%) were categorized in Cluster 3 for mother and caregiver representations.

Because Clusters 2 and 3 in each set were consistent with descriptions of children's representations of insecure relationships (Bretherton, Ridgeway, et al., 1990) and because of the relatively small sample size, Clusters 2 and 3 were combined to create an insecure-negative group. This binary variable (insecure = 0, secure = 1) was used in subsequent analyses.

Congruence in clusters for mother and caregiver representations. Consistent with their high-risk status, most children ($n = 34$, 63%) held representations of insecure-negative relationships with mothers, and the same proportion had representations of insecure-negative relationships with caregivers. Examination of congruence in representations of mothers and caregivers indicated that 10 (18%) children had one secure and one insecure representation. The remaining 72% were congruent, with about half of the children ($n = 29$, 54%) classified as insecure-negative for both mother and caregiver representations and 15 (28%) children classified as

secure-positive for both. This high degree of congruence in relationship quality is consistent with previous research conducted with young children (e.g., Lynch & Cicchetti, 1991).

Family Experiences Associated With Children's Attachment Representations

Binary logistic regression analysis was used to identify family experiences associated with children's representations of secure and insecure relationships. Children's representation of relationships with mothers was regressed on the controls (children's age and verbal reasoning skills, number of previous separations from mother, length of separation from mother), stability of the caregiving situation, information the child was given about the incarceration, child's visitation at the prison, caregiver depressive symptoms, and children's reactions of sadness, worry and confusion, anger, and loneliness. The model was significant, $\chi^2(12, N = 54) = 37.07$, $p < .001$. Results indicated that children were more likely to have representations of secure relationships with mothers when children were older and when they did not react to the initial separation with anger (see Table 4). There was also a trend for children who had not visited their mother during the past 2 months to have slightly more secure-positive representations ($p = .07$). However, children's verbal skills, stability of the caregiving situation, caregiver depressive symptoms, number of previous separations from the mother, and length of separation from the mother were not associated with children's representations of mothers.

When children's representation of caregivers was regressed on the same predictors, the model was

Table 4
Child and Family Variables Associated With Children's Narrative Representations of Mothers

| Outcome: Mother representation | | | | | Nagelkerke's R ² |
|--------------------------------|--------|-------|-------------------|-----------|--------------------------------|
| Predictor | B | SE | Wald | % correct | |
| | | | | 87% | .69 |
| Age of child | 0.100 | 0.041 | 5.99* | | |
| Verbal reasoning SAS | 0.077 | 0.050 | 2.36 | | |
| Number of previous separations | -0.219 | 0.509 | 0.19 | | |
| Length of separation | -0.615 | 0.708 | 0.75 | | |
| Stability of situation | -0.492 | 1.141 | 0.19 | | |
| What child was told | -0.338 | 0.367 | 0.84 | | |
| Child visited prison | -1.924 | 1.073 | 3.22 ⁺ | | |
| Caregiver depression | 0.043 | 0.054 | 0.63 | | |
| Sadness | 2.185 | 1.597 | 1.87 | | |
| Anger | -2.543 | 1.223 | 4.33* | | |
| Worry/confusion | -0.243 | 1.153 | 0.04 | | |
| Loneliness | 0.923 | 1.120 | 0.68 | | |

Note. SAS = standard age score.

⁺ $p = .07$. * $p < .05$.

significant, $\chi^2(12, N = 54) = 51.16, p < .001$. Representations of secure relationships with caregivers were more likely when children lived in a stable caregiving situation, when children were older, and when children reacted to initial separation from the mother with sadness (Table 5). Children who lived with the same caregiver since separation from the mother experienced 85 times the odds of having a secure relationship with the caregiver compared with children who had changed placements one or more times. In addition, there were trends for what children were told about the incarceration and children's experience of loneliness following separation. Children who were told about the incarceration in an open, honest, and developmentally appropriate manner ($p = .06$) and children who reacted with loneliness to the separation ($p = .06$) were slightly more likely to have secure-positive representations of caregivers. However, caregiver depressive symptoms, visitation at the prison, and controls (other than the child's age) were not significantly related to caregiver representations.

Discussion

Although scholars have expressed concern about disrupted relationships in children of imprisoned mothers (e.g., Myers et al., 1999), this is the first study to document children's representations of attachment relationships during their mothers' incarceration. Consistent with their high-risk status, most (63%) children held representations of insecure re-

lationships with mothers and caregivers. However, secure relationships were more likely when children lived in a stable caregiving situation, when children reacted to separation from the mother with sadness rather than anger, and when children were older. These findings add to the burgeoning literature linking disruptive family relationship experiences with problematic attachment relationships (Grych et al., 2002; Shields et al., 2001) and suggest processes associated with potential resilience in children of incarcerated mothers.

Quality of Attachment Representations

Using a method that integrated thematic and classification approaches to analyzing children's attachment-relevant story stem completions, this investigation found that nearly two thirds of children held representations of attachment relationships characterized by intense ambivalence, disorganization, violence, or detachment. These hallmarks of insecurity are not surprising given that all children had experienced prolonged separation from their mothers and one or more changes in caregivers. These results confirm concerns raised by recent reviews regarding the attachment status of children of incarcerated mothers (Myers et al., 1999). Because internal models of relationships are thought to provide an interpretive lens for future interpersonal interactions, children who hold negative views of relationships may engage in behaviors that elicit rejecting or less optimal responses from others (Bowl-

Table 5
 Child and Family Variables Associated With Children's Narrative Representations of Caregivers

| Outcome: Caregiver representation | | | | | |
|-----------------------------------|--------|-------|-------------------|-----------|-----------------------------|
| Predictor | B | SE | Wald | % correct | Nagelkerke's R ² |
| | | | | 94% | .84 |
| Age of child | 0.291 | 0.138 | 4.41* | | |
| Verbal reasoning SAS | 0.010 | 0.063 | 0.03 | | |
| Number of previous separations | -0.092 | 0.468 | 0.04 | | |
| Length of separation | 1.781 | 1.386 | 1.65 | | |
| Stability of situation | 4.447 | 2.019 | 4.85* | | |
| What child was told | -2.367 | 1.239 | 3.65 ⁺ | | |
| Child visited prison | -3.247 | 2.038 | 2.54 | | |
| Caregiver depression | -0.069 | 0.076 | 0.84 | | |
| Sadness | 6.207 | 3.014 | 4.24* | | |
| Anger | -2.952 | 2.158 | 1.87 | | |
| Worry/confusion | 2.022 | 1.835 | 1.21 | | |
| Loneliness | 5.253 | 2.703 | 3.78 ⁺ | | |

Note. SAS = standard age score.

⁺ $p < .05$. * $p < .05$.

by, 1982; Bretherton & Munholland, 1999), thus confirming and solidifying children's representational models.

Despite their disruptive relationship experiences, 28% of children had representations of secure relationships with both the mother and caregiver. Their responses were characterized by nurturing content in the context of positive structural characteristics (e.g., high coherence). Given these findings, it is important to identify family experiences associated with representations of secure relationships to further our understanding of emerging resilience in this high-risk group. Using attachment theory as a guide, the present study examined several family variables potentially related to children's representations of relationships.

Family Experiences Associated With Representations of Relationships

Although confirming previous observations that many children experience multiple placements following maternal incarceration (Seymour, 1998), the present study found that stability of the caregiving situation was the strongest predictor of children's representations of relationships with caregivers. Children who lived with one continuous caregiver since the mother's incarceration were much more likely to have a secure relationship with the caregiver than were children who changed placements one or more times. From an attachment perspective, developing relationships with consistently available

alternative adults can ease the negative effects of parental loss and facilitate interpersonal resilience, whereas experiencing multiple shifts in caregivers undermines this process (Howes, 1999; Stovall & Dozier, 1998). These findings underscore the importance of promoting stable, continuous placements for children following maternal incarceration. Indeed, stability of the caregiving situation may overshadow other aspects of caregiver emotional availability (or lack thereof), such as depressive symptoms. In this investigation, caregiver depressive symptoms of brief duration were not associated with children's attachment representations, although more than 40% of caregivers experienced depressive symptoms in the clinical range. Perhaps caregiver depressive symptoms begin to affect children's relationships when symptoms are chronic (e.g., Campbell, Cohn, & Meyers, 1995) or when the child has lived with the caregiver for an extended period. Longitudinal research is needed to determine whether, when, and how caregiver mental health affects children of incarcerated mothers over time and how this interacts with stability of the caregiving situation.

Despite substantial congruence in classification of mother and caregiver representations, stability of the caregiving situation was not a significant predictor of children's relationships with mothers. Rather, the association between stability and attachment representations was specific to the child-caregiver relationship. Because different predictors emerged for children's relationships with mothers and caregivers, it is likely that young children hold both global and

specific representational models of relationships (Lynch & Cicchetti, 1991). The only predictor that significantly related to both mother and caregiver representations was children's age. As in previous research (e.g., Grych et al., 2002; Oppenheim, Emde, et al., 1997; Shields et al., 2001), older children were more likely to hold representations of secure relationships than were younger children. Because children's cognitive and communication capabilities increase with age, older children may understand the complexity of the situation and integrate their thoughts and feelings about the absent mother better than younger children, although individual differences in children's verbal skills did not relate to relationship representations in this study. Conversely, as children grow older, they may learn to describe mothers in a way that is more congruent with social norms (Oppenheim, Nir, et al., 1997). Overall, these findings suggest that very young children are particularly vulnerable to relationship disruption when mothers are incarcerated and may need additional monitoring, support, and developmentally appropriate clarification about the situation. Future research should focus on processes through which children begin to make sense of disruptive relationship experiences that occur as a result of parental incarceration.

Children's Separation Reactions

According to mothers and caregivers, most young children exhibited multiple emotional and behavioral reactions to maternal imprisonment. Consistent with attachment theory (Bowlby, 1973; Kobak, 1999), the majority of children initially reacted to separation with sadness, crying, and calling for or looking for mothers. Other common reactions included confusion, worry, anger, acting out, fear, developmental regression, sleep problems, and indifference. Although many of these responses are similar to reactions exhibited by older children following parental incarceration, such as loneliness, fear, anger, and aggression (Hale, 1988; Hungerford, 1993; Thompson & Harm, 1995), young children's sleep patterns and maintenance of developmental milestones appeared highly vulnerable to disruption following separation from mothers. Clearly, prolonged separation from an imprisoned mother who once cared for the child is a stressful experience. These findings highlight young children's needs for emotional and developmental support during maternal imprisonment and caregivers' needs for information regarding children's common reactions to separation. Although some children were described as indiffer-

ent or showing no emotional reaction following maternal incarceration, it was unclear whether this description referred to detachment (defensive inhibition of attachment behavior; Bowlby, 1973; Solomon & George, 1999) or a true lack of reaction. Additional research is needed to examine this issue in detail, especially studies that are observational and longitudinal.

Results of regression analyses indicated that children who experienced sadness following initial separation from the mother were more likely to have a positive representation of the caregiver. When children express their sadness, it may provide caregivers with opportunities to respond in nurturing, comforting ways, thus fostering security in the relationship (Stovall-McClough & Dozier, 2004). Because sadness is often perceived as a normative reaction to loss, children who react with sadness may experience more positive responses than those who react with more perplexing emotions such as anger. When children expressed anger during the initial separation, they were less likely to have representations of secure relationships with mothers. Intense expressions of anger and acting out in the early period following maternal incarceration may reflect prior problems in the mother-child relationship, or conversely, these early reactions may lead to deterioration in the mother-child relationship in the absence of regular contact. In some families, children's angry reactions may echo the feelings that many family members harbor toward the incarcerated mother (Enos, 2001), although children's expressions of anger were not associated with quality of the caregiver-child relationship. These results provide support for Stovall-McClough and Dozier's (2004) conclusion that children's early adjustment to nonparental care has long-term consequences for how dyads function, highlighting the need for intervention and provision of support shortly after placement.

This study has implications for theory, methodology, and practice. Consistent with the tenets of attachment theory, this study suggests that certain family experiences, such as developing relationships with consistent caregivers, may help children develop positive attachment relationships despite experiences of adversity. The study also presented an innovative method of analyzing children's story stem completions so that higher level organizational patterns could be identified on the basis of specific, dimensional codes. In addition, two trends in the data are worthy of discussion because of their potential implications for intervention. Children were slightly more likely to hold positive representations of caregivers when they were told about the

mother's incarceration in simple, honest, and developmentally appropriate ways, underscoring the importance of emotionally open and sensitive communication within the family (Bretherton, 1990, 1995). Whereas honest, sensitive, and developmentally appropriate communication may affirm children's trust in caregivers, problematic relationships are more likely to develop when information about the mother's incarceration is hidden, distorted, or presented in manner designed to frighten young children (Bowlby, 1973). Many families feel uncomfortable discussing the mother's incarceration because of social stigma (Enos, 2001) or because of a young child's apparent confusion about the situation. These families may need professional support and guidance following parental incarceration. What caregivers told children about the incarceration, however, was not associated with children's representations of the mother. From the young child's point of view, perhaps open communication conveyed more information about the trustworthiness of the caregiver (the messenger) than information about the mother (the subject of the message). Children may discover clues to the mother's whereabouts from sources other than caregivers, such as witnessing the arrest, visiting the mother at the prison, overhearing portions of adult conversations, or hearing what others tell them directly (e.g., older siblings). Hearing conflicting pieces of information may exacerbate the confusion that many young children experience following the mother's incarceration. However, as children grow older, they may be able to integrate information gleaned from various sources.

There also was a trend for children who had visited the mother at the prison to have slightly less positive representations of mothers than children who had not visited, contrary to expectations. One explanation for these findings is that a recent visit may activate the child's attachment system (Solomon & George, 1999) without affording opportunities to work through intense feelings about the relationship because the separation continues. In addition, visits in some prisons are not all that child friendly. In this prison, razor wire fencing surrounded the outdoor play area, women were required to sit at tables during indoor visits rather than playing on the floor with children, and privacy was unavailable. Young children may need additional emotional support and reassurance to cope effectively with such a prison visit so that the experience functions as a positive means of maintaining and strengthening parent-child relationships. Concerns about the "scariness" of some prisons cause some families to limit chil-

dren's visitation (Poehlmann, 2003). However, lack of contact may occur for other reasons, including distance, cost, lack of transportation, concerns about children's behaviors following visits, and conflicted mother-caregiver relationships (Baunach, 1985; Bloom & Steinhart, 1993; Enos, 2001; Poehlmann, *in press*). Although previous research has documented positive associations between visitation and maternal perceptions of the child and maternal well-being (Poehlmann, *in press*; Snyder, Carlo, & Mullins, 2001), this is one of the first studies to examine the implications of visitation from the young child's perspective. In interpreting these findings, however, it is critical to note that this study is based on visitation in only one prison and that causality should not be inferred from these results.

Other limitations of this study should be noted as well, including the lack of longitudinal data, the retrospective nature of the mothers' and caregivers' reports regarding children's separation reactions, assessment of presence or absence of visits rather than quality, and measuring quality of two different relationships in close temporal proximity. In addition, there are limits to the generalizability of the findings because of the relatively small sample size, the inclusion criteria (e.g., mothers who retained their legal rights to the child), exclusion criteria (e.g., no children who were in traditional foster care), and potential response bias in mothers or caregivers. Comparison of characteristics of incarcerated women from national surveys suggests that this study's sample was slightly lower risk, potentially leading to underestimated effects. Longitudinal studies that incorporate multiple assessments of children's relationships in larger samples will be important in differentiating the effects of maternal incarceration from the effects of current and past caregiving contexts, thus pinpointing the etiology of children's relationship quality. Although incarceration may initiate a series of relationship risks, other risks may occur before maternal imprisonment, as most incarcerated women live in poverty and abuse substances before arrest. Although the number of previous separations from the mother was not a significant predictor of children's relationship quality in this study, this was only an indirect indicator of previous relationship disruption.

In sum, the present investigation adds to the literature focusing on children who have experienced disrupted family relationships. Maternal incarceration is a growing but understudied cause of family dissolution and distress (Young & Smith, 2000) that is associated with complex emotional, behavioral, and relationship concerns in young children. The

present study suggests that young children and families affected by maternal incarceration may benefit from efforts to promote stability in the caregiving situation and provide emotional and behavioral support to children, particularly in the initial period following maternal imprisonment. Longitudinal research focusing on relationship development in children of incarcerated parents is crucial for a full understanding of processes that lead to resilience in this high-risk population.

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