DISSERTATION

FAMILIES EXPERIENCING DIVORCE: AGE AT ONSET OF OVERNIGHT STAYS, CONFLICT, AND EMOTIONAL AVAILABILITY AS PREDICTORS OF CHILD ATTACHMENT

Submitted by

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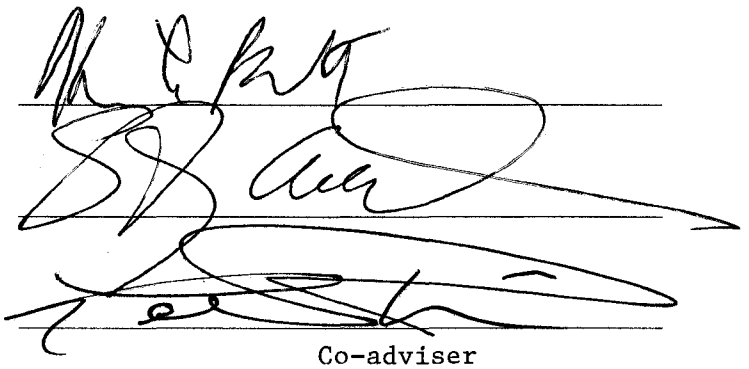
WE HEREBY RECOMMEND THAT THE DISSERTATION PREPARED UNDER OUR SUPERVISION BY SHANNON ALTENHOFEN ENTITLED FAMILIES EXPERIENCING DIVORCE: AGE AT ONSET OF OVERNIGHT STAYS, CONFLICT, AND EMOTIONAL AVAILABILITY AS PREDICTORS OF CHILD ATTACHMENT BE ACCEPTED AS FULFILLING IN PART REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILISOPHY.

Committee on Graduate work



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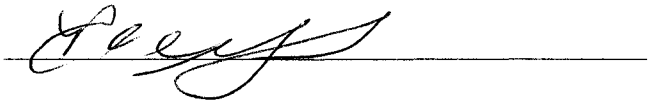

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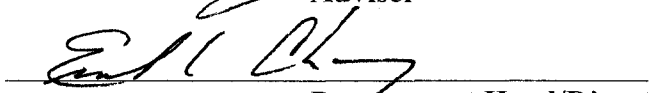

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ABSTRACT OF DISSERTATION

FAMILIES EXPERIENCING DIVORCE: AGE AT ONSET OF OVERNIGHT STAYS, CONFLICT, AND EMOTIONAL AVAILABILITY AS PREDICTORS OF CHILD ATTACHMENT

This study examined the qualities that contribute to post-divorce child attachment in a sample of 24 divorcing mothers and their children, ages 12 to 73 months in the context of shared parenting time arrangements. Child attachment was assessed using Waters' Attachment Q-set (AQS). Qualities such as age at onset of overnight stays, inter-parental conflict and communication, and emotional availability were examined for their importance in attachment security and dependency. Study hypotheses were partially supported. While the study variables collectively did not predict attachment security and dependency outcomes, as hypothesized, the predictor variable of Emotional Availability (EA) Child Involvement proved significantly related with AQS Security. Children who involved their mothers more in interaction were more secure with them. Further, EA Child Involvement contributed to attachment outcomes above and beyond age of onset of overnight stays and parent and partner contributions to inter-parental conflict.

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Families experiencing divorce: Age at onset of overnight stays, conflict, and emotional availability as predictors of child attachment

Half of all marriages in the United States end in divorce (Center for Disease Control and Prevention, 2001). Often children are involved, and more and more families with very young children are finding themselves in the predicament of divorce. Among children who experience the divorce of their parents before age 12, at least two-thirds of children experience it by the time they are 5 years old (Furstenberg, Peterson, Nord, & Zill, 1983). According to Emery (1999), of all children who experience the divorce of their parents by the age of 5, 40% do so in the first year of life, 20% between 1 and 2 years, 15% between 2 and 3 years, 10% between 3 and 4 years, and 15% between 4 and 5 years. Thus, divorce is a common occurrence in the lives of infants, preschool, and early school-age children. Despite the greater likelihood of divorce for the youngest children, the emphasis of divorce-related child development research has been on school-age children and adolescents.

The literature on the adjustment of children after divorce is extensive (e.g., Amato & Keith, 1991). One aspect of adjustment that has been overlooked, likely due to the focus on older children in the divorce literature, is parent-child attachment (Clarke-Stewart, McCartney, Vandell, Owen, & Booth, 2000; Lewis, Feiring, & Rosenthal, 2000; Solomon & George, 1999). Attachment is considered one of the most significant socio-emotional developmental milestones for the infant/toddler age group. Accordingly, the risks associated with divorce for this age group are related to attachment formation. These risks include feelings of loss of contact with attachment figures, resulting in child depression and regressive behavior, as well as separation and relationship difficulties in later development.

Additionally, since young children express their difficulties in the area where they are currently developing, issues with attachment may be seen most clearly during stressful periods, such as the divorce transition. For example, parental separation and divorce may compound the challenges of infancy, toddlerhood, and the preschool period because these children must work at attachment-related issues, such as feelings of safety and security within their families (Pruett, 2000).

Positive attachment outcomes are important for all children. Security and dependency are two aspects of attachment. Regarding security, a secure attachment is linked to positive social and cognitive child outcomes. Specifically a secure attachment to the primary caregiver predicts concurrent and later positive adaptation (Ainsworth, Blehar, Waters, & Wall, 1978). This adaptation includes greater positive affect and competent peer interactions in preschool (Waters, Wippman, & Sroufe, 1979), greater ego-resiliency (Sroufe, 1986), as well as greater emergent literacy (Bus & van Ijzendoorn, 1992). Regarding dependency, it is theorized that the origins of interpersonal relationships lie in the infant's dependency on a caregiver (Ainsworth, 1969). As such, dependency behaviors are assumed to be learned and reinforced in the course of continued care and interaction patterns between the infant and caregiver. Dependent styles of behavior include contact and proximity to the caregiver, as well as help and approval seeking from the caregiver (Ainsworth, 1969). As dependency implies immaturity, it is typical in infants but expected to give way to increasing independence as children progress in age, but just like security, dependency also shows variation in the general population (Waters & Deane, 1985). Thus, understanding the aspects of attachment security and dependency in young children going through the divorce transition is an important research objective.

The judicial system has had the task of applying the best interests of the child principle to decisions about residence and type of contact parents may have with their children during infancy and early childhood. Such decisions are described in a divorcing family's parenting plan, which outlines parenting time responsibility, and replaces the idea of custody. This newer idea is used to reduce the concept of parental ownership of children and to minimize the competitive and parent-centered stance in litigation, where particularly high-conflict families argue about material assets and ownership of children (Fisher & Pullen, 2003; Pruett, Hogan-Bruen, & Jackson, 2000). As such, these newer judicial decisions, based on shared parenting responsibility, are articulated based on children's needs rather than solely on parents' rights or wishes, hence the term, best interests of the child. Despite the emphasis on the best interests of the child principle, the current judicial system implements this principle without empirical support about how such sharing of parenting responsibilities affects children.

Overview of topics in the debate on what is in the "best interests of the child"

One topic that has been central to study of divorce effects, specifically child attachment, is the issue of overnight stays and the age at onset of such stays with the non-residential parent (Baris and Garrity, 1988; Biringen, Greve, Howard, Leith, Moore, Sekoguchi, Tanner, & Williams, 2002; Kelly and Lamb, 2000; Solomon and Biringen, 2001; Warshak, 2000). Over one third of children from divorced families are involved in overnight stays of this nature (Maccoby, Depner, & Mnookin, 1988; Solomon & George, 1999a).

Appreciation for the importance of children's relationships with both parents has elicited the growing sentiment for overnight stays as soon after the divorce as possible. For example, Kelly and Lamb (2000) indicated that frequent transitions, including overnights

within the same week are optimal for the attachment development of the infant and young child to both parents. Similarly, Warshak (2000) saw no reason to have normative standards or restrictions on overnight stays with parents. A different view suggests that frequent separations may disrupt the formation of a secure attachment to one or both parents. Repeated separations early in life are thought to be confusing for infants and young children and create insecurity in attachment potentially to both parents (Solomon and Biringen, 2001; Biringen et al., 2002). Baris and Garrity (1988) wrote a book that is often cited in courts of law on developmentally appropriate decisions for residence and visitation, indicating that infants and children up to the age of two and a half years old should have consistent caregiving by one parent, followed later by overnight stays with the non-residential parent.

Family conflict and communication are also viewed as predictors of children's quality of attachment in divorcing families (Lewis, Johnson-Reitz, & Wallerstein, 2004). Levels of verbal and/or physical aggression between parents have been found to negatively affect children's development and feelings of security (Amato and Keith, 1991).

Another predictor of attachment in divorcing families is the quality of the parent-child relationship. More optimal parent-child relationships have been found to predict attachment security in intact families (vanIjzendoorn, 1995). Research and anecdotal evidence indicates that parent contributions to the parent-child relationship may be temporarily limited during times of stress, such as the divorce transition and child contributions to the parent-child relationship may also be temporarily different as children adjust to changes in their family status and living arrangements (Amato & Keith, 1991), but no published account is available on how the quality of the parent-child relationship predicts attachment and dependency during the divorce transition.

This study uses the Emotional Availability (EA) Scales (Biringen, Robinson, & Emde, 1998; 3rd edition) to examine the idea that relationships may be a predictor of attachment. Attachment Security and Dependency will be examined using the Attachment Q-Set (Waters & Deane, 1985) and in the context of the family's divorce transition.

Thus, it is the goal of this study to contribute to the knowledge on developmental and family processes that affect attachment. Specifically, this study examines the child and family qualities that are related to young children's attachment during the divorce transition in the context of shared parenting time arrangements. Qualities such as age at onset of overnight stays, inter-parental conflict and communication, and EA are examined for their importance in the prediction of attachment Security and Dependency.

Empirical literature

The empirical literature on overnight stays and their relationship to child attachment are exemplified by two studies. The first study is a natural experiment conducted on the kibbutz, a communal living arrangement, in Israel. Infants who were raised on the kibbutz and who slept in "infant homes" at night were compared with infants who were raised on the kibbutz but who slept in their own homes at night. Both were compared to home-reared infants who were not raised on a kibbutz (Sagi, van Izjendoorn, Aviezar, Donnell, & Mayseless, 1994). Kibbutz infants who slept in their own homes at night did not differ in attachment security, as assessed with the Strange Situation, compared to home-reared infants who were not raised on a kibbutz. However, overnight stays in the "infant house" were associated with an increased incidence of insecure attachment as compared to infants who slept in their own homes at night on the kibbutz and in the control group (i.e., home-reared).

These results suggest that it is overnight stays away from the primary caregiver that may present problems.

The second study was conducted by Solomon & George (1999a, b, c) and is more directly relevant for the purposes of this investigation, given the home setting and children being separated from one parent in the context of living with the other parent. Solomon and George examined parent-child attachment in 12 to 18 month olds whose parents had been physically separated for at least a month, including never married as well as divorced couples. Families in which infants were experiencing overnights with the non-residential parent comprised the Overnight group and those in which overnights were not yet started comprised the No Overnight group. A comparison group of non-divorced families was also included. Both mothers and fathers were observed with their infants in this project. A major finding was that those who were in the Overnight group were more likely to be disorganized in their attachment to the residential parent, in this case most often the mother, as well as the non-residential parent, as compared to the non-divorced families. Interestingly, disorganized attachments to the non-residential parent were unusually common among infants in divorced families in both the Overnight or No Overnight groups, suggesting that the experience of overnights with the non-residential parent, typically the father, did not necessarily create a better infant-father nor a better infant-mother relationship. Moreover, when these infants were two years old, those who had participated in the overnights were more likely than those who had not experienced such care to be easily distressed in a five-minute laboratory separation from the residential parent, although they appeared to be fine in a prior non-stressful, problem-solving context.

A second major finding (Solomon & George, 1999a, b, c) was that there was an interaction between overnights and conflict, such that those families engaging in high conflict and overnight stays were most likely to raise infants who were insecure. Overnights in the context of low conflict did not necessarily lead to infant insecurity. Although intriguing, the above-study can be criticized in that never-married couples were grouped with divorced families and not examined separately in analyses. Additionally, results from a single study can be sample-specific, whereby unique sample characteristics inform study outcomes. Thus, there is a need to replicate results.

Despite these intriguing findings on how overnight stays with the father may affect the mother-child relationship, prior published studies have not examined divorcing families in which parents share custody and where overnight stays with both parents are the usual and routine arrangement. The current investigation is a beginning toward providing empirical evidence on this parenting arrangement that has become the most popular public policy for infants and young children and their divorcing parents (Folberg, 1991).

While there are as many different types of parenting time arrangements as there are families, to some extent the selection criterion in the present study limits the variability by including only families where both parents are engaged in overnight stays with the child. Thus, arrangements in which there may be joint legal custody but only regular contact with one parent are not included in this sample.

Possible post-divorce qualities related to child attachment

Age at onset of overnight stays. Kelly and Lamb (2000) and Warshak (2000) have been vocal in suggesting that frequent switches enable infants and young children to keep both parents in mind, and are particularly helpful to the infant, who has not yet developed a

sense of object permanence, citing Piaget (1954). Related to this cognitive limitation, they have reasoned that infants can endure only separations of a few days from either parent.

It is important to note that recent studies related to infants' understanding of object permanence have recognized much earlier emergence of this capacity than originally posited by Piaget (Baillergeon, 1987, Spelke, 1991). This empirically supported evidence of the beginnings of object permanence, as early as 2 or 3 months old, has significant implications for Kelly and Lamb's suggestions, which are based on reasoning related to object permanence. For instance, given the earlier time of emergence of object permanence, a longer period of time would be allowable between visits with the non-residential parent because the infant is able to hold that parent constant. Additionally, and significant to attachment security, frequent separations from the primary caregiver may create distress for the infant, potentially jeopardizing attachment relationships with both parents. This discussion is evident in the assertions made by the opposing group for this debate and who believe in empirical evidence before widespread policy change that affects infants and young children.

Solomon, Biringen, and their colleagues (Solomon & Biringen, 2001; Biringen et al., 2002) as well as Baris and Garrity (1988) assert that infants and young children need a stable relationship with a primary caregiver, and frequent separations from the primary caregiver may lead to feelings of insecurity about the relationship with the primary caregiver. They also argue that instability in the nighttime sleeping arrangement, when the child most needs a stable, primary attachment figure, may lead to feelings of confusion and insecurity.

Inter-parental conflict and communication. When divorcing couples have children, they are immediately confronted with re-negotiating their original spousal relationship

toward parenting aims. How and with what degree of success parents negotiate their continued relationship has been found to have a significant impact on young children's post-divorce adjustment that is quantitatively and qualitatively different from other divorce factors (Lewis, Johnson-Reitz, & Wallerstein, 2004). Within this re-negotiation, the way parents communicate with each other, especially the conflict resolution strategies they use, is particularly important. Due to its reciprocal nature, these communication patterns include both communication behavior and interpretation of verbal and non-verbal cues by the other parent (Sillars, Canary, & Tafoya, 2004).

Inter-parental conflict and communication are closely linked. In fact, conflict is often seen as a category of communication and is one of the most studied components of family communication (Sillars et al., 2004). Inter-parental conflict is defined by verbal and physical aggression between parents. While there are varied reports about continued conflict between ex-partners, with some studies showing a decrease past the two year post-divorce mark (Whiteside, 1998) and others showing a continuation of conflict (Lewis et al., 2004), there is evidence that specific aspects of conflict such as resolution success, mode of expression, and content are more significant to negative child adjustment outcomes than frequency of conflict (Whiteside, 1998).

Although there is no demographic profile that is associated with high-conflict families, the presence of particular qualities that underlie conflict identify families that become embroiled in high-conflict divorces. In one divorce study, Maccoby and Mnookin (1992) identified four factors underlying high conflict. The first factor is the level of parental hostility, established by the level of intensity of negative feeling between ex-partners. Although seemingly the most obvious of the identified factors, this factor actually

demonstrates the smallest correlation to conflict. The second factor is the age of the child at the time of divorce. In this case, families with the youngest children showed the greatest likelihood of protracted litigation. The third factor includes the parents' perceptions of each other's role in child rearing pre-separation. Incongruent perceptions lead to high conflict. The last factor includes each parent's concerns about the child's well being in the care of the other parent. While many parents in this study did express general concern, they did not all resort to legal methods and engage in high-conflict behaviors to address these concerns.

Importantly, behavior associated with both conflict between parents and negative communication style has been referenced as a way parents maintain involvement, albeit negative, with each other. It is often viewed as a way former partners maintain intimacy (Ahrons, 1994). In families where the pre-separation style of communication was primarily negative, the same style is often continued post-separation for a period of time as the couple separates emotionally. Yet, for some families, this dynamic continues long after separation. According to conflict theory (Moscovici, 1976, 1980), conflict is seen as a critical element of all relationships. Divorce in particular is often considered to be contentious by nature. While some divorces are amicable, many are not. Thus, it is important to establish what constitutes a level of conflict and type of communication associated with negative post-divorce child adjustment. Similar to conflict, the child outcomes associated with negative and uncooperative communication styles include reduced focus on child needs, increased child anxiety, and, as children get older, greater split in parental loyalty (Mayes, & Moliter-Siegl, 1999).

Additionally, a study done by Hodges, Landis, Day, and Oderberg (1992) found that when couples had high levels of conflict during their marriage, it resulted in the non-

residential parent having less stable contact with the child after divorce. Specifically, these parents were involved in less regular visits and made frequent changes in visitation plans. Hodges et al. (1992) found that mothers from this group viewed their children as less dependent on them and more tense with the father in her presence. Thus, families engaged in a high level of conflict not only create an environment that negatively impacts child adjustment, but may also promote irregular visitation patterns, exacerbating child adjustment problems.

There are some behaviors associated with individuals who engage in high-conflict divorces. In particular, in divorce proceedings related to custody and assets, these individuals express the needs of their children in terms of their own needs (Pruett, Hogan-Bruen, & Jackson, 2000). An additional and related behavior includes the degree and duration of litigating among these families. In their meta-analysis, Amato and Keith (1991) reported that low levels of conflict and high levels of communication optimally meet the best interests of the child principle observed by the legal community for child residence and parental access decisions. The reverse has also been found to be true, where high levels of conflict in families with shared parenting responsibility result in poor adjustment outcomes for children (Kline, Tschann, Johnston, and Wallerstein, 1988). Children of high-conflict divorce display behavioral, cognitive, emotional, and social problems to a greater degree than children from other separated or divorced families (Amato & Keith, 1991).

The clarification as to what constitutes a significant level of conflict and a problematic style of communication, when some level of conflict may be seen as normal for divorcing families, is an important one. Maintaining both parental relationships, within the

context of a cooperative co-parenting relationship, helps children after divorce by creating an environment that fosters security (Solomon & George, 1999a, b, c; Amato & Keith, 1991).

Additionally, the environment created by the post-divorce parental relationship may also play a part in the effect of overnight visitation, making it more or less likely that children will manage overnight stays successfully. For example, inter-parental conflict and communication may change the relationship between age at onset of overnights and attachment security whereby early age at onset may be a significant predictor of attachment security in high conflict/negative communication families but not in low conflict/positive communication families.

A natural example exists in the relationship between children's attachment security with parent(s) and adjustment to child care. There is a postulate in attachment theory that children have unique attachment relationships with different individuals. At the same time, in part, a history of sensitive parental care is at the heart of a child's sense of security in the early attachment relationship. Much research on parental sensitivity has uncovered that consistently sensitive parental care during the first year of life is predictive of infant attachment security at the end of the year in many contexts (Isabella, 1993). Thus, the constellation of factors affecting post-divorce child attachment may also be inter-dependent.

Emotional availability. Emotional availability is another aspect of parenting that is related to psychosocial adjustment and may provide an alternative explanation for divorce effects, such as attachment problems, in young children. By definition, emotional availability refers to an individual's responsiveness and attunement to another's needs and goals (Emde, 1980). Further, caregiver emotional availability promotes child exploration of the

environment and joint attention with the caregiver via caregiver encouragement within the context of a secure base (Sorce & Emde, 1981).

An important dimension of emotional availability (EA) is caregiver sensitivity. Caregiver sensitivity within the framework of emotional availability includes responsiveness to child signals and communications, as well as taking into consideration the role of caregiver affect and conflict regulation with the child (Biringen, 2000). Sensitivity has been found to be predictive of attachment, as assessed in the Strange Situation (Easterbrooks & Biringen, 2000).

EA emphasizes the importance of both sides of the caregiver-child relationship, rather than focusing solely on caregiver sensitivity, which is the construct that has dominated attachment research and theory (Biringen, 2000; Easterbrooks & Biringen, 2000). Specifically, EA integrates attachment (Ainsworth et al., 1978) and emotional (Emde, 1980, Mahler et al., 1975) perspectives to focus on the emotional tone of parent-child interactions, including both the caregiver's and the child's contributions.

In addition to caregiver sensitivity, caregiver contributions to EA include additional dimensions, such as caregiver structuring, nonhostility, and nonintrusiveness. Caregiver structuring refers to the ability of the caregiver to structure in a way that is received by the child. Caregiver nonintrusiveness refers to the caregiver's ability to be available without limiting the child's autonomy. Last, caregiver nonhostility refers to the caregiver's verbal and behavioral manifestations of covert (e.g. impatience, boredom) or overt (e.g. negative statements) hostility in interactions with the child.

Child contributions to emotional availability include child responsiveness to the caregiver and involvement of the caregiver. Child responsiveness refers to the child's ability

to explore on his own while also maintaining affective connection with the caregiver. Child involvement refers to the child's ability to incorporate the parent into play schemes, striking a balance with autonomous play.

Emotional tone in parent-child relationships during the divorce process may have an effect on how well the child adjusts to changes in family structure. During this time parents are under considerable stress, which may affect their emotional relationship with the child. Parenting from a divorced context can also be stressful as a result of parenting as a single rather than as a couple. A pitfall of this change in family structure is the degree to which the parent is engaged in meeting many, if not all, of the family's immediate needs and the degree to which parent-child interaction and play become secondary. Parental EA may be important to child attachment during this period but may also be difficult for the parent to provide as a result of difficulties in adjustment to their new status as a divorced parent. The transitional period for the parent to their new single status requires a great deal of mental processing and is known to be associated with depression (Dreman, 1994). Parents are often preoccupied with their own thoughts related to the divorce during the divorce transition.

Similarly, child responses to parental adjustment to divorce may affect the child's side of EA, (e.g., emotional responsiveness of the child to the parent and the way the child involves the parent). Child involvement of the caregiver is particularly applicable with toddler-age children who are gaining autonomy while still using the parent as a support to their play. Although parents may be adjusting to their new status and mentally processing their divorce, given a history of a positive parent-child relationship, it is expected that children would continue to make efforts to involve parents in their play, replicated in other measures assessing child response to lack of harmony in parent-child relationships, such as

the Face-to-Face-Still-Face (FFSF) paradigm (Tronick, Als, Adamson, Wise, & Brazelton, 1978). At the same time, in protracted divorce cases, when the parental adjustment period is extended, children may learn to involve parents in their play less frequently. Thus, the child's side of EA, as a way to examine rapport in parent-child relationships, has potential significance as a variable for child attachment outcomes in divorce.

Broader impacts of study

Greater understanding of the way in which factors such as age at onset of overnight stays, inter-parental conflict and communication, and emotional availability (EA) may be related to and predict attachment to the primary caregiver is beneficial for a couple of reasons. As there is currently little empirical information on this topic, study outcomes may help guide decision-making for legal professionals and parents thinking about the needs of infants and toddlers related to the development of parenting plans, specifically parenting time arrangements. Additionally, parent-child attachment is viewed as the significant socio-emotional milestone of the infant and toddler years and positive attachment outcomes with the primary caregiver predict concurrent and later positive adaptation (Ainsworth, Blehar, Waters, & Wall, 1978). Thus, findings are likely to further the basic science of attachment.

Research question and hypothesis

This study examines the child and family qualities that are related to young children's attachment security and dependency during the divorce transition in the context of shared parenting time arrangements. Qualities such as age at onset of overnight stays, inter-parental conflict and communication, and emotional availability (EA) are examined for their importance in attachment Security and Dependency. No single factor is expected to predict these child outcomes. Rather, it is hypothesized that attachment Security and Dependency is

associated with and predicted by age at onset of overnight stays, inter-parental communication and conflict, and EA.

Method

Participants

The sample consists of 24 mothers who are predominantly White (95.8%), and their children, 13 boys and 11 girls. The children range in age between 12 to 73 months ($M = 37$, SD = 13.39), but the majority are between 2 and 4 years old. Study families are also early on in the divorce process ($M = 8$, SD = 6.42 months since physical separation) and report shared parenting time arrangements ($M = 8$ overnights per month with father). While all study families reported shared parenting time arrangements, fathers typically had less caregiving responsibility, (overnights with father M = 8.08, SD = 4.88), and engaged in fewer consecutive overnight stays with their children (M = 5.13, SD = 5.91) than did mothers.

The sample of mothers is educated, 41.7% with one to three years of college, and analyses showed education and placement in child care to be related. Almost half, 45.8%, of study children were engaged in full-time child care, a growing trend for many families, and likely similar for study mothers (Federal Interagency Forum on Child and Family Statistics, 2007). Related to birth order, half of study children were the only children in the family.

The sample is further described using measures of central tendency (mean or percentage, when indicated) and dispersion (standard deviation and range) for continuous/ordinal scaled variables. See Table 1 for more detail.

Recruitment procedures. Mothers were enlisted via the court-mandated parent education class, contracted through Divorce Transitions of Larimer County. Completion of this class is required of all Colorado families who have filed for divorce. The investigator

was given permission to attend the latter part of this class to recruit families. Also, posted flyers relating to the study were distributed in Fort Collins and surrounding areas. Only mothers from families in which there were regular overnights with the father were included in the sample. Remarried and never married families were not included. Both boys and girls were recruited and recruitment efforts were made to span the entire age range included in this project.

Procedure

Phone contact was made to establish the child's birth date, gender, and age at onset of overnight stays. During this contact, brief instruction was given regarding a parent report measure to be completed by the mother as part of the lab protocol.

The following lab protocol was used: Written consent was obtained from the mother at the beginning of the visit. Parent and child engaged in free play with age appropriate materials (e.g., children's books and soft toys for younger children and a dollhouse, cars and trucks, and Play-doh for older children). During the free play session, the mother completed two questionnaires, one related to inter-parental conflict and the other related to inter-parental communication. The purpose of completing these questionnaires simultaneous to the free play session is twofold. First, it creates a more home-like environment. At home, caregivers typically have multiple demands on their attention. Second, socio-emotional outcomes are effectively assessed under conditions where there are some demands on the caregiver and, thus, negotiations between the caregiver and child typically take place (Smith & Pederson, 1988). This 30-minute section of the lab procedure was videotaped for later scoring of emotional availability. Next, after review of prior telephone instructions, the mother completed a child attachment measure related to the target child. This part of the

procedure lasted approximately 30 minutes. Last, the mother participated in a semi-structured interview covering: parent's education level, participating child's birth order, participating child's child care history, time elapsed since physical separation, and, finally, a detailed account of the parenting plan since the separation. Telephone numbers and names of two contacts were obtained to aid in follow-up with mothers after participating in the study. This part of the procedure lasted approximately 30 minutes. The entire procedure lasted approximately 90 minutes per family.

Measures

Attachment Security. Attachment Security and Dependency were assessed using Waters' Attachment Q-Set (AQS) (Vaughn & Waters, 1990; Waters, 1987; Waters & Deane, 1985). The measure consists of 90 items designed to describe young children's attachment behaviors observed during periods of interaction with the primary caregiver, in this case the mother. The task is to sort these 90 items into a 9-pile distribution with 10 cards in each pile. The 9 piles of items are sorted based on a continuum from "least like the child", which would be assigned a score of 1, to "most like the child", which would be assigned a score of 9. For example, item 50 states, "child's initial reaction when people visit the home is to ignore or avoid them, even if he eventually warms up to them." In this case, the mother would assign this item a score between 1 (least like the child) to 9 (most like the child), based on her perception of the child's behavior. Importantly, since the mother completes the card sort, measure outcomes are based on her perception of the child's attachment relationship with her. Items that are neutral or not observed are placed in the middle. The card placement in the sort determines the final score of the measure and conforms to a symmetrical, unimodal distribution.

To obtain AQS Security and Dependency scores, the participant's raw scores were correlated with AQS criterion scores for AQS Security and Dependency (Waters, 1990). The resulting correlation coefficients are the target child's AQS Security and Dependency scores. Scores range from -1.0 to 1.0. Thus, a higher AQS Security score indicates better security and a higher AQS Dependency score indicates healthier levels of dependency (i.e., physical and emotional independence).

The AQS Security and Dependency scores show modest convergent validity with the Strange Situation, and predict child social competence as indicated in a meta-analysis by De Wolff & van Ijzendoorn (1997). In the National Institute for Child Health and Development (NICHD) study of early child care (1997), within-site reliability of the AQS was assessed across the data collection period. Across all research assistants at all sites, the correlation was .73.

Age at onset of overnight stays and related information. Parents were interviewed regarding important aspects of parenting time responsibilities. These include the child's Age at onset of overnight stays, and the exact days and times of current parenting time responsibilities. In addition to the Age at onset of overnight stays, information about the total number of overnights with each parent per month and the number of consecutive overnights, defined as the total number of back-to-back overnights per month, was collected.

Inter-parental conflict. Inter-parental conflict was assessed using the Straus Conflict Tactics Scale (SCTS). This is a brief self-report questionnaire designed to measure the degree of conflict in a relationship and the tactics used to express or resolve conflicts (Straus, 1979). Mothers were asked to rate, on a 7-point scale, from 0 times to 20 or more times, the frequency with which they engaged in each of the 18 presented conflict tactics in the last

year. The tactics ranged from "Discuss the issue calmly" to "Use a gun." Mothers were also asked to report on their former partner's frequency of engaging in each of the 18 presented conflict tactics.

The items yield four different scales (reasoning, verbal aggression, moderate aggression, and severe violence). Within each scale, individual items are averaged, resulting in 4 scale scores. Since the measure ranges from less to more severe conflict tactics, and potentially because the sample size for this study was small, data were truncated with limited representation of moderate and severe conflict tactics. To address this, we created composite summary scores for the parent and the partner, separately. First, the measure was re-scaled by dividing the averaged scale score by the maximum score. This resulted in each scale being given a score of 0-1. Second, the 4 scales were weighted to represent a continuum. Specifically, 0 was added to the reasoning scale, 1 was added to the verbal aggression scale, 2 was added to the moderate aggression scale, and 3 was added to the severe aggression scale. Importantly, this procedure was only done for participants with a score greater than 0. The purpose of this re-scaling was to balance the number of frequency points for engagement in a conflict tactic equally with the number of scales. Last, a final SCTS Parent and SCTS Partner score was calculated by summing all 4 of the scale scores.

Generally, the SCTS has adequate construct validity (Straus, 1979, Hertzberger, 1991). In establishing construct validity, reports from husbands and wives were correlated. In addition, reports from parents and their children were evaluated and correlations of .19 to .80, with a mean of .4, were reported (Family Measurement Techniques, 2001). More specifically, studies by Bulcroff and Straus (1975) have found spousal aggression reported by the children in relation to their fathers' reports correlate higher ($r = .51$ for verbal aggression,

r = .64 for violence) than the reports from children and their mothers (r = .43 for verbal aggression, r = .33 for violence) (Hertzberger, 1991). Within the reasoning scale, the children's reports do not correlate as well with the parents' self reports (Hertzberger, 1991). Observed internal consistency reliability varies considerably within the three tactics measured with the alpha coefficients, ranging from .5 to .69 for reasoning, .77 to .88 for verbal aggression, and .62 to .88 for violence (Hertzberger, 1991). Straus (1979) reported similar findings regarding internal consistency within the three tactic scales among the various family participants, that is, child to parent, parent to child, husband to wife, and wife to husband, noting the reasoning tactic scale displayed the lowest correlation. Chronbach's alpha was .80 for the present sample. Overall, the SCTS adequately estimates the violent nature of the environment in which the family members reside (Hertzberger, 1991) and has been used with divorce populations (Hitchner, 1996).

Inter-parental communication. Inter-parental communication was assessed using the Ahrons Communication Scale (Ahrons, 1981). The measure examines the extent to which the divorcing couple communicates and participates in shared decision-making about the target child, including day-to-day problems, medical issues, socialization, developmental progress, as well as the co-parenting relationship. Ahrons (1981) reports high internal consistency, .93 for mothers, and the scale has been used by others (Johnson, 1989) to understand the co-parenting alliance. Scores on all of the 11 items are summed to yield a single communication score.

Emotional Availability (EA). Emotional availability was assessed using the Infancy/Early Childhood version of the Emotional Availability (EA) Scales, 3rd edition (Biringen, Robinson, & Emde, 1998). Conceptualized as a dyadic measure, EA uses

caregiver-child interactions to assess emotional availability. Thus, scoring of the caregiver or the child cannot be done without taking into consideration the behaviors of the other member. In this study, mother-child interactions were videotaped for 30 minutes and coded after the fact, using observational video coding.

EA includes both caregiver and child scales. The 4 caregiver scales are: Sensitivity, Structuring, Nonintrusiveness, and Nonhostility. The 2 child scales are: Responsiveness to the caregiver and Involvement of the caregiver. Assessment focuses on the overall behavioral style, rather than frequency of specific behaviors, of the dyadic member while considering that style in relation to the other member. For example, EA Caregiver Sensitivity scoring takes into consideration the caregiver's affect and timing as well as adjustments to the child's needs as they are displayed during interaction. Similarly, EA Child Involvement scoring takes into consideration the child's involvement of the caregiver in activities as well as the child's need to pursue the caregiver based on the mother's display of behavior during the interaction. Caregiver Sensitivity is scored on a 9-point scale. Caregiver Structuring, Nonintrusiveness, and Nonhostility are scored on 5-point scales. Child Responsiveness and Involvement are scored on 7-point scales. All scales are scored from low to high and are treated as continuous.

EA has been directly linked to AQS (Shivers, 2007; Aberle et al., in press). EA is also related to security of infant attachment, using the Ainsworth Strange Situation, and adult attachment representations using the Adult Attachment Interview (Aviezar, Sagi, Joels, & Ziv, 1999). Various studies document the construct validity of EA. For instance, Kogan and Carter (1996) found that more sensitive mothers showed lower levels of "avoidant and resistant re-engagement behavior" and less sensitive mothers displayed higher levels of such

behavior. EA has high test-retest reliability and an inter-rater reliability of .80. Observations over one hour in length have produced an even higher inter-rater reliability, up to .90 or above (Biringen et al., 1998). Importantly, EA is also applicable for the age range of this study (Aviezar, Sagi, Joels, & Ziv, 1999; Biringen, Emde, Campos, & Appelbaum, 1995; Easterbrooks & Biringen, 2000).

Covariates

Identified covariates included child's gender, mother's education, birth order, involvement in child care, time elapsed since physical separation of parents, and current age of child. These variables were observed for significant correlation with the outcome measure.

Results

Overview of analyses

Study analyses are presented in the following way. First, basic descriptive statistics of predictor and outcome variables are presented. Second, zero-order correlations among predictor variables are presented. Third, zero-order correlations between covariates and outcome variables are discussed. Fourth, zero-order correlations between predictor and outcome variables are shown. Finally, Hierarchical Multiple Regressions (HMRs) are presented. It was expected that Age of onset of overnight stays, SCTS, and EA would be predictive of AQS Security and Dependency during the divorce transition. However, very specific and focused predictions were not made. Hence, all analyses are two-tailed and set at the .05 alpha level.

Descriptive statistics of predictor and outcome variables

The mean Age (in months) at onset of overnight stays (M = 28.96, SD = 13.72) was approximately 2 ½ years old with a standard deviation that provided an opportunity to review

children's experience across a range of infant and preschool ages. SCTS scores were on the lower end of the scale for both parents and former partners (M = 1.89, SD = 1.34 Parent; M = 2.39, SD = 1.83 Partner) and on the higher end of the scale for the Ahrons Communication Scale (M = 41.13, SD = 10.16). These relatively low levels of conflict and high levels of communication make sense given that participants came from the normative rather than high-conflict divorce classes. Additionally, EA Sensitivity (M = 5.60, SD = 1.59), which is scored on a 9-point scale, was relatively low in comparison with other EA caregiver subscales, which are scored on 5-point scales, and EA child scales, which are scored on 7-point scales. See Table 2 for more detail.

In relation to the outcome variable of AQS Security, the mean score (M = .12, SD = .45) were somewhat low. Based on collection of AQS data in normative samples, 67% of sorts have been shown to have AQS scores of .33 or above and so this is used as a cutoff for security (Kerns, Klepac, & Cole, 1996; Park & Waters, 1989; Teti & Ablard, 1989). In this sample of divorcing families sharing parenting responsibilities, 54% of children showed an insecure attachment with the mother. As there is not a precedent in the literature for normative cutoffs for Dependency, AQS Dependency scores (M = -.01, SD = .16) in this sample cannot be interpreted. See Table 2 for more detail.

Zero-order correlations among predictor variables

Analyses were performed to examine relations among variables. Significant relations were observed between SCTS Parent and EA. Specifically, the EA scores for Caregiver Sensitivity, Structuring, and Nonintrusiveness, as well as Child Responsiveness and Involvement were related to the mother's frequency and level of conflict with her former partner. Mothers who engaged in more frequent and severe conflict tactics with their former

partners showed lower EA Sensitivity, Structuring, and Nonintrusiveness with their children and had children who showed lower EA Responsiveness and Involvement with them. See Table 3 for more detail.

Zero-order correlations between covariates and outcome variables

Analyses were performed to examine relations between the covariates (gender, parental education, birth order, child care history, time elapsed since physical separation of parents, and current age of child) and AQS Security and Dependency outcomes. Timing variables such as child's age at physical separation, total number of overnights per month, and number of consecutive overnights were also examined. This analysis established relations between these variables and the outcome variables of AQS Security and Dependency. In the end, this ensured that independent variables being reviewed pertained best to the aim of examining qualities related to better post-divorce child attachment.

The key factor in reviewing these variables was to examine potential relations between covariates, timing variables, and AQS outcomes. No significant relations were found between potential covariates or timing variables and AQS Security or Dependency.

Predictor variable relations with AQS Security and Dependency

The relations between predictor variables and outcome measures of AQS Security and AQS Dependency were examined. These variables included Age at onset of overnight stays, SCTS for parent and partner separately, Ahrons Communication Scale, and EA.

First, we asked the question, "What is the relation between Age at onset of overnight stays and AQS Security and Dependency?" No significant correlations were found between this potential predictor variable and attachment outcomes. See Table 4 for more detail.

Second, we asked the question, "What is the relation between SCTS and AQS Security and Dependency?" Again, no significant correlations were found between this potential predictor variable and attachment outcomes. See Table 5 for more detail.

Third, we asked the question, "What is the relation between Ahrons Communication Scale and AQS Security and Dependency?" No significant correlations were found between this potential predictor variable and attachment outcomes. See Table 6 for more detail.

Last, we asked the question, "What is the relation between EA and AQS Security and Dependency?" The relation between Child Involvement and AQS Security was significant, $r(21) = .447$, $p = .042$ indicating that children who involved their mothers more in the free play interaction, both physically and mentally, were more securely attached to them. See Table 7 for more detail.

Overview of Hierarchical Multiple Regression (HMR) analyses

In the following analyses, Age of onset of overnight stays and SCTS were both maintained due to their salience in the divorce literature and practical significance to this topic. Additionally, SCTS Parent and SCTS Partner scores were examined in separate regression analyses. The Ahrons Communication Scale was dropped from analyses due to its lack of statistical significance in relation to attachment outcomes. Last, EA was maintained. The Child Involvement subscale was included due to its conceptual and statistical significance with attachment outcomes.

Age at onset of overnight stays, SCTS Parent, and EA Child Involvement as predictors of AQS Security

The first Hierarchical Multiple Regression examined Age of onset of overnight stays, SCTS Parent, and EA Child Involvement as predictors of AQS Security. The full model was

not significant. Step 1 and step 2 variables did not contribute significant variance to the prediction of AQS Security. At the third step, EA Child Involvement contributed a significant portion of the variance, predicting a significant 20% of the variance in AQS Security above and beyond Age at onset of overnight stays and SCTS Parent. See Table 8 for more detail.

Age at onset of overnight stays, SCTS Partner, and EA Child Involvement as predictors of AQS Security

The second Hierarchical Multiple Regression examined Age of onset of overnight stays, SCTS Partner, and EA Child Involvement as predictors of AQS Security. The full model was not significant. Step 1 and step 2 variables did not contribute significant variance to AQS Security. At the third step, EA Child Involvement contributed a near-significant portion of the variance ($p = .085$), and accounted for 15% of the variance in AQS Security above and beyond Age at onset of overnight stays and SCTS Partner. See Table 9 for more detail.

Age at onset of overnight stays, SCTS Parent, and EA Child Involvement as predictors of AQS Dependency

The third Hierarchical Multiple Regression examined Age of onset of overnight stays, SCTS Parent, and EA Child Involvement as predictors of AQS Dependency. The final model was not significant and Step 1, Step 2, and Step 3 variables did not contribute significant variance to the prediction of AQS Dependency. See Table 10 for more detail.

Age at onset of overnight stays, SCTS Partner, and EA Child Involvement as predictors of AQS Dependency

The fourth Hierarchical Multiple Regression examined Age of onset of overnight stays, SCTS Partner, and EA Child Involvement as predictors of AQS Dependency. Once again, the final model was not significant, and Step 1, Step 2, and Step 3 variables did not contribute significant variance to the prediction of AQS Dependency. Again, AQS Dependency was not predicted by these chosen variables and may be better understood by other potential variables not assessed in this investigation. See Table 11 for more detail.

Discussion

The guiding question of this study was whether particular child and family qualities (e.g., age at onset of overnight stays, inter-parental conflict and communication, and emotional availability) are predictive of young children's attachment security and dependency during the divorce transition in the context of shared parenting time arrangements. The study was designed to evaluate the hypothesis that no one quality of the child or family would predict attachment outcomes, but instead these variables would collectively be associated with and predict attachment outcomes.

A goal of this investigation was to begin the process of garnering empirical information on families sharing parenting arrangements and overnight stays, with regard to attachment and dependency. Legal decisions could then be guided by empirical information.

Study hypotheses were partially supported. While the study variables collectively did not predict attachment security and dependency outcomes, one predictor variable proved significantly related with attachment outcomes. Children who involved their mothers more in the free play interaction, both physically and mentally, were more secure with them. Further, EA Child Involvement contributed to attachment security above and beyond age of onset of overnights and parent and partner contributions to inter-parental conflict. Thus, when a

mother is experiencing temporary stress and self-absorption, infants who are more emotionally involving contribute to their own sense of security with her.

Although we do not have information about these families prior to the divorce transition, infants who were more involving may have had positive experiences in their families, before the potentially stressful divorce transition. For example, in the still-face situation (Tronick, Als, Adamson, Wise, & Brazelton, 1978), where caregivers are instructed to become still and affectless for a few minutes, infants are typically distressed and want interaction with their mothers. Interestingly, securely attached infants are more likely to expect engagement during the still and affectless face portion of the procedure (Tronick, 1989; Tronick, Cohn, & Shea, 1985).

It is possible that the divorce transition, in the context of a history of a secure parent-child relationship, may be buffered by continued child involvement of the caregiver. The child assuming an important role during the divorce transition, however, should not be overstated. It is possible that extensions of the transition beyond a certain point may change the nature of the parent-child relationship, causing children to become less involving of the parent or to take on age-inappropriate levels of responsibility for the relationship. The child side of emotional availability in a relationship may be especially telling about the parent-child relationship in the context of the divorce transition, but should be re-evaluated to assure that children are not overtaxed by this emotional responsibility.

Similar to the natural experiment on the kibbutz and to the Solomon and George study (1999 a, b, c), children in the present study, all of whom were experiencing overnight stays away from the primary caregiver (i.e., mother), showed more insecure attachment, in this study (54%), compared to norms of insecurity for non-divorced families (30-33%: Kerns,

Klepac, & Cole, 1996; Park & Waters, 1989; Teti & Ablard, 1989). Simply put, children experiencing shared parenting time arrangements, including overnights, showed a higher likelihood of insecurity and possibly dependency, although cutoffs for dependency have not been established in the way security cutoffs have been, as assessed by the AQS (Waters & Dean, 1985). Notably, however, this study did not include a comparison group of children without overnight stays, making it impossible to make inferences about attachment security in relation to overnight stays specifically.

Additionally, study findings showed that child contributions (i.e., EA Child Involvement) are implicated in attachment security with the mother. Moreover, inter-correlations between predictor variables of SCTS Parent and EA showed that mothers' increased level of frequency and severity of conflict with her former partner was related to decreased level of emotional availability with the child. From a family systems perspective (Bowen, 1976), in which the family is viewed as an emotional unit, the inter-relationships of conflict between parents and emotional availability, and the relations between emotional availability and attachment indicators further explains the dynamics associated with divorce, in general, and in particular the early stages of the divorce process for both children and parents. It adds complexity to the assumption in attachment theory that children have unique relationships with different individuals. From this study, it appears likely that spillover from other relationships influences the mother-child attachment relationship.

Limitations

While the divorce process is generally stressful and complex, this is even more the case for parents going through this process who have young children and are sharing parenting time arrangements. For this reason, this is a difficult group to involve in research.

In fact, this study provides data from 24 families, collected across the span of 4 years. While the present study makes an important contribution to the divorce literature, a study involving a larger sample size would address three factors that this one does not. First, a larger sample size would increase the likelihood of detecting existing differences in the population while maintaining identified predictor variables in study analyses. Specifically, the effect size of .45 for EA Child Involvement is moderate and shows that it predicts approximately 21% of the variance in AQS Security, yet the multiple regression including EA Child Involvement and other predictors in relation to AQS Security did not reach conventional levels of significance. Second, a larger sample size would allow for a review of divorcing families that includes both mothers and fathers and examines them separately. Inclusion of mothers and fathers separately would eliminate the potential bias inherent in mothers reporting on fathers' behaviors (e.g., SCTS Partner and Ahrons Communication Scale). In having to limit the sample size for the scope of this study, the justification for altering the sample as it is described in this design rests in the literature related to the Solomon and George (1991) study that showed disorganized attachment in children's relationships with both the residential and non-residential parent in young children with overnight stays coming from high conflict families. In their study, the residential parent was typically the mother. Third, a comparison group of equal size, matched for gender, education level, and ethnicity would be integrated into a larger study design. The purpose of the control group in the study would be to understand whether the extent of AQS Security or Dependency is comparable between the divorcing and control groups.

Implications and directions for future research

Findings related to EA Child Involvement point to the importance of examining child behavior in dyads. Often, during divorce proceedings, parents undergo unusual scrutiny regarding parenting skill to determine child residence and/or parenting time arrangements. Child behaviors may be useful for both the reason that leakage of the actual dyadic tone is more evident by viewing child behaviors as well as noting typical parental defensiveness to evaluation during a high-stress period, such as the divorce process. Moreover, observation of child behaviors gives young children a voice in divorce proceedings despite their limited verbal abilities.

Age at onset of overnight stays was not found to be a significant predictor of AQS Security or Dependency in this study. Nonetheless, it remains an important consideration for divorcing couples with young children as they develop parenting time arrangements. It is also an important consideration for legal professionals charged with the task of helping families formulate these arrangements. The children in this study were at least 12 months old at the time of study in order to assess attachment outcomes and showed predominantly low AQS Security scores. It could be argued that these children, having formed an attachment relationship with both parents, are at greater risk for insecurity and/or dependency due to shared parenting time arrangements. This problem could be further examined by enlisting divorcing couples that have children and are sharing parenting time prior to attachment formation, and following them longitudinally.

Finally, it is important to note that AQS Security and Dependency were assessed as mother self-report measures. Although Q-Sort methodology has much strength over a simple self-report method, the final AQS Security and Dependency scores of the young child are from the perspective of the mother. Although this investigation garners strength in the use of

the observational EA Child Involvement dimension, future research examining observed indices of attachment security and dependency would also be helpful in our scientific understanding of whether young children are more likely to be insecure in the context of the divorce transition in families with shared parenting responsibilities.

Tables

Table 1

Sample characteristics: Percentages and means

Variable	Percentage	Mean	Median	SD	Range
Mother characteristics					
Mother education:					
High school	8.3%				
1-3 yrs. college	41.7%				
4 yrs. college	16.7%				
Master's degree	25.0%				
Beyond Masters	8.3%				
Mother ethnicity:					
White	95.8%				
Mixed race	4.2%				
Child characteristics					
Child age (in months)		37.24	35.4	13.39	12-73
Child birth order:					
Only child	50.0%				
First born	4.2%				
Second born	25.0%				
Third born	16.7%				
Fourth born	4.2%				
Current child care status:					
No child care	33.0%				
Part-time child care	20.8%				
Full-time child care	45.8%				
Separation and custody variables					
Time since separation (in months)		7.96	6.0	6.42	1-24
Child age at separation (in months)		27.96	27.0	13.86	5-68
Overnights with father (per month)		8.08	8.0	4.88	1-16
Consecutive overnights (per month)		5.13	2.0	5.91	1-16

Table 2

Descriptive Statistics of Predictor and Outcome Variables

Variable	Mean	Median	SD	Range
Age at onset of overnight stays (In months)	28.96	28.00	13.72	7-68
SCTS:				
Parent	1.89	1.71	1.34	.29-7.29
Partner	2.39	1.71	1.83	.29-7.57
Ahrons Communication Scale	41.13	43.00	10.16	21-61
EA:				
Caregiver:				
Sensitivity	5.60	5	1.59	7
Structuring	3.48	3	1.25	4
Nonintrusiveness	4.05	4	1.15	3.50
Nonhostility	4.00	4	1.11	4
Child:				
Responsiveness	5.00	5	1.52	5
Involvement	5.45	5	1.34	4
AQS Security	.119	.090	.447	-.59-.70
AQS Dependency	-.008	-.014	.159	-.34-.35

Table 3

Intercorrelations Among Predictor Variables ($N = 21$)

Variable	1	2	3	4	5	6	7	8	9	10
1. Age at onset of overnight stays	__	-.054	-.153	-.098	.222	.333	.346	.252	.220	.216
SCTS:										
2. Parent		__	.651**	.044	-.534*	-.522*	-.608**	-.343	-.547*	-.476*
3. Partner			__	-.003	-.269	-.175	-.314	-.135	-.231	-.200
4. Ahrons Communication Scale				__	-.095	-.133	.047	.043	-.208	-.267
EA:										
Caregiver:										
5. Sensitivity					__	.922**	.580**	.641**	.915**	.819**
6. Structuring						__	.592**	.669**	.923**	.850**
7. Nonintrusiveness							__	.452**	.545*	.456*
8. Nonhostility								__	.581**	.708**
EA:										
Child:										
9. Responsiveness									__	.885**
10. Involvement										__

*p < .05; **p < .01

Table 4

Correlations Between Age at Onset of Overnight Stays and AQS Security and Dependency ($N = 24$)

Variable	AQS Security	AQS Dependency
Age at onset of overnight stays	.119	-.177

*p < .05; **p < .01

Table 5

Correlations Between SCTS and AQS Security and Dependency ($N = 24$)

Variable	AQS Security	AQS Dependency
SCTS:		
Parent	-.125	.088
Partner	-.300	-.108

*p < .05; **p < .01

Table 6

Correlations Between Ahrons Communication Scale and AQS Security and Dependency (N = 24)

Variable	AQS Security	AQS Dependency
Ahrons Communication Scale	-.256	.329

*p < .05; **p < .01

Table 7

Correlations Between EA and AQS Security and Dependency ($N = 21$)

Variable	AQS Security	AQS Dependency
EA:		
Caregiver:		
Sensitivity	.272	-.019
Structuring	.296	-.187
Nonintrusiveness	-.118	-.203
Nonhostility	.310	-.185
Child:		
Responsiveness	.235	-.075
Involvement	.447*	-.149

*p < .05; **p < .01

Table 8

Summary of Hierarchical Multiple Regression Analysis for Variables Predicting AQS Security ($N = 21$)

Variable		ΔR^2	df	ΔF	β
Step 1					
	Age at onset of overnight stays	.031	1, 19	.609	.176
Step 2					
	SCTS Parent	.003	2, 18	.060	-.057
Step 3					
	EA Child involvement	.197	3, 17	4.355*	.513*

*p< .05; **p< .01

Table 9

Summary of Hierarchical Multiple Regression Analysis for Variables Predicting AQS Security ($N = 21$)

Variable	ΔR^2	df	ΔF	β
Step 1				
Age at onset of overnight stays	.031	1, 19	.609	.176
Step 2				
SCTS Partner	.043	2, 18	.843	-.212
Step 3				
EA Child involvement	.152	3, 17	3.346	.405

*p< .05; **p< .01

Table 10

Summary of Hierarchical Multiple Regression Analysis for Variables Predicting AQS Dependency ($N = 21$)

Variable	ΔR^2	df	ΔF	β
Step 1				
Age at onset of overnight stays	.044	1, 19	.880	-.210
Step 2				
SCTS Parent	.004	2, 18	.081	.066
Step 3				
EA Child Involvement	.007	3, 17	.133	-.099

*p< .05; **p< .01

Table 11

Summary of Hierarchical Multiple Regression Analysis for Variables Predicting AQS Dependency ($N = 21$)

Variable	ΔR^2	df	ΔF	β
Step 1				
Age at onset of overnight stays	.044	1, 19	.880	-.210
Step 2				
SCTS Partner	.091	2, 18	1.885	-.307
Step 3				
EA Child Involvement	.025	3, 17	.510	-.165

*p< .05; **p< .01

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Appendix

Literature Review

Introduction

Currently, 51% of all United States marriages end in divorce (Center for Disease Control and Prevention, 2001). As this percentage has increased over the years, more families with young children are experiencing divorce. Among children who experience the divorce of their parents before age 12, at least 2/3 of them experience it by the time they are 5 years old (Furstenberg, Peterson, Nord, & Zill, 1983). According to Emery (1999), of all children who experience the divorce of their parents by the age of 5, 40% do so in the first year of life, 20% between 1 and 2 years, 15% between 2 and 3 years, 10% between 3 and 4 years, and 15% between 4 and 5 years. Thus, divorce is a common occurrence in the lives of infants, preschool, and early school-age children.

The rising divorce rate has created public concern for its possible impact on children. The general consensus among the public, in the mental health profession, and in the legal community regarding children's dependent nature has spurred, as a protective measure, empirical study to better understand the effects of divorce on children and to inform therapeutic applications and social policy. At the same time, empirical study has struggled to keep up with the significant increase in the divorce rate. The divorce rate rose from 0.3 per 1, 000 population in 1967 to its highest rate of 5.3 per 1, 000 population in 1979. The change in social attitudes related to modern urbanization, including increased education and employment for women combined with smaller numbers of children per household, and the change in legal guidelines that allowed for no-fault divorce primarily account for this considerable change (Westoff, 1978). While the incidence of divorce has increased across all

age groups, the group most impacted is young adults (Norton, 1983). As a result of this trend, by nature of parental age, the group of children most affected is pre-school age children (Wallerstein, 1985).

Anecdotally, There remains a gap in people's ideation of dissolution of marriage when couples have young children and the statistical reality of the incidence of divorce among families with pre-school age children. Essentially, people do not think of families with infants and toddler-age children as divorcing. Coincidentally, most empirical study on the effects of divorce on children has focused on school-age and adolescent children rather than this group. Thus, there is very limited empirical study on pre-school age children (Amato, 2001, Clarke-Stewart et al., 2000, Mayes & Moliter-Segal, 1999). Unfortunately, at the same time that infants and toddler-age children increased in representation within the divorce population, the least amount of study was being completed on them. In fact, the least attention paid to this age group is evidenced in the studies completed in the 1990s (Amato, 2001).

Additionally, the majority of empirical study on the effects of divorce on children has been aimed at child adjustment. In this capacity, these studies have commonly focused on cognitive effects, such as school performance, and psychological and social functioning, including behavioral problems (Amato & Keith, 1991). The relationship between the child outcomes studied in prior research and chronological age is clear and reflects the tendency to study school-age groups.

Yet, several developmental theories suggest that the youngest children experience the greatest effects of divorce (Emery, 1999). Given that children express their difficulties in the area where they are currently developing (Emery, 1999), it makes sense to focus attention on

divorce effects for the youngest children in significant developmental areas for their age group. Attachment is considered one of the most significant socio-emotional milestones in early development. However, only a few studies have given attention to attachment effects related to divorce. (Clarke-Stewart, McCartney, Vandell, Owen, & Booth, 2000; Lewis, Feiring, & Rosenthal, 2000; Solomon & George, 1999).

Simultaneously, the judicial system has had the task of considering divorce in the context of children's best interests. This focus dates back to the 19th century where it was legally specified that children have rights independent of their parents. This assumption was the basis for the later "best interests of the child" principle. The term was coined in the 1925 Finlay vs. Finlay case and places judicial officers in a parental role to the family, determining what scenario best suits the needs of a given minor child (Pruett, Hogan-Bruen, and Jackson, 2000). During the early 1900s the realm of parenting responsibility was predominantly determined by gender, with mothers being responsible for nurturance and fathers being responsible for discipline. The general consensus in divorce proceeding resided in mother's parenting role carrying greater weight for children's development than fathers. As a result, the majority of residence decisions placed children with their mothers. This earlier approach was mirrored in the 1970s with the Uniform Marriage and Divorce Act that emphasized the emotional needs of children in the "tender years" as best being served in residing with their mothers (Pruett, Hogan-Bruen, and Jackson, 2000). This presumption has been scrutinized for its unconstitutionality and has gradually been replaced by a case-by-case review amongst judicial officers applying the best interests of the child principle.

Currently, the principle primarily pertains to decisions about child residence and parental access. These decisions are established in the form of parenting plans with outlined

parenting time responsibility. What remains the same is the aim of the principle, which is to reduce the concept of parental ownership of children and minimize a competitive stance in litigation, with resulting judicial decisions articulated based on children's needs rather than parent's rights. The basis for understanding what is in children's best interest has evolved out of collaboration between the legal and mental health professions. Specifically, between 1973 and 1986 and revised in 1996, the principle encompassed the idea that custody decisions should: "safeguard the child's need for continuity of relationships; reflect the child's sense of time; take into account the law's incapacity to make long-range predictions and to manage family relationships; and provide the least detrimental available alternative for safeguarding the child's growth and development" (S. Goldstein, Solnit, J. Goldstein, & Freud, 1996). Some states used a criteria set forth in Michigan as a check against this conceptual definition of the best interests of the child principle. Yet, for the most part, states have used case law to guide decisions about child residence and access (Pruett, Hogan-Bruen, and Jackson, 2000).

Regardless of the availability of identified criteria or case law used to normalize the best interests of the child principle, the lack of empirical research has limited its application. Namely, without empirical research as a guide, the application of the "best interests of the child" principle has been fraught with difficulty and fodder for individuals involved in residence and access disputes, formerly known as custody disputes, to manipulate its intent for their purposes (Fisher & Pullen, 2003). In particular, individuals involved in high-conflict divorces, often centered on children and assets, express the needs of their children predominantly in terms of their own needs (Pruett, Hogan-Bruen, & Jackson, 2000).

Thus, it is the goal of this study to contribute to the knowledge on developmental and family processes that affect attachment. Specifically, this study examines the child and

family qualities that are related to young children's attachment during the divorce transition in the context of shared parenting time arrangements.

Overview of Attachment Theory

As this study is rooted in John Bowlby's Attachment Theory (Bowlby, 1969, 1973, 1980) it is important to briefly review the theory's major assumptions and key concepts. The theory's premise is that an infant forms close ties with the individual(s) who care for them and that the infant experiences security when they are present and distress when they are gone. The quality of the infant's tie to the caregiver is based on the type of interactions that take place between them.

This premise is taken primarily from psychoanalytic theory and ethology. Bowlby was involved, both in conflict and agreement, with important theorists from each of these disciplines, Melanie Klein, Konrad Lorenz, and Charles Darwin. His theory leans to the latter perspective with a departure from psychoanalytic theory. At the time, psychoanalytic theory focused on the father figure and Oedipal conflict as key to child adjustment. While Melanie Klein began to include the mother in the infant's mental world, Bowlby included the mother in both an external and internal way. For example, he noted the importance of observable mother-child interactions as well as the mental representations of mother that a child held as formative to child attachment via the interaction between the two. An ethological focus also replaced the normative psychoanalytic theory of the day, which identifies infant drive to reduce hunger as key to child-parent relationships. Alternatively, ethology is concerned with the adaptive value of behavior. In this vein, proximity-seeking behavior by the child to the caregiver is motivated by the protection that the mother provides the child from physical

danger. From the parent side, attachment behaviors are motivated by the desire to further genetic propagation.

Attachment theory encapsulates three related aspects of child-caregiver relationships. The first is the concept of attachment, the second is attachment behavior, and the third is the attachment behavior system. The concept of attachment refers to the state and quality of an individual's relationships. Attachment theory has a main assumption about a child's need for secure, trusting, comfortable relationships between children and their important caregivers. Typically, this relationship is between children and their parent(s). Bowlby clarified that the attachment figure could be a "mother substitute". Thus, the attachment figure could be an individual other than the parent, provided that it is a close, continuous relationship. Thus, the quality of attachment development is closely linked to caretaker sensitivity to the child's needs. Related to the concept of attachment is the belief that children have separate and unique relationships with caregivers. These may be interactive with the relationship that the child has with a primary caregiver. However, differing attachment quality between relationships is possible and evident (van den Boom, 2001). The concept of attachment is operationalized by attachment behavior. Attachment behavior includes observable aspects of the concept, such as proximity-seeking behavior by the child and distress in the absence of the caregiver, and comes from Bowlby's ethological leanings. Last, both attachment and attachment behavior are based on the attachment behavior system, which is a relationship framework. This framework interacts with other systems regulating affiliation, exploration, and fear responses (Gubler & Bischof, 1990). The attachment behavior system is moderated by general developmental changes in the infant. As children acquire more motor, cognitive, and affective skill, the child's repertoire increases, as does the flexibility of the attachment

behavior system. Additionally, individuals interpret current and future relationships from this framework. The effect of child-caregiver interactions over time develops internal working models of attachment. Thus, relationships with caretakers greatly influence the child's way of thinking about new people and experiences and can reinforce an individual's attachment style (van den Boom, 2001).

An important consideration of Attachment Theory is the developmental parameters related to attachment formation in young children. Bowlby suggests four stages in which this formation occurs. First, from infancy to approximately 12 weeks, infants exhibit indiscriminate and varied attachment behaviors that serve the function of establishing physical closeness to a caretaker for safety. He describes the next phase, from 12 weeks to six to eight months, as one of discriminating sociability where children establish firmer concepts of regular caretakers based on repeated and intensified attachment responses. In the third stage, emerging at approximately six to eight months, attachment behaviors become focused on specific individuals. This is also reflected in stranger anxiety where infants are fearful of being separated from caregivers and are, thus, fearful of strangers. Cognitively, self-other differentiation emerges and children enter the last stage, goal-corrected partnership, around three or four years old. During this phase, children begin to behave with intentional and goal-directed behavior. With the additional capacity of perspective taking, they begin to recognize the goals of others. This is a more sophisticated form of earlier reciprocity between the child and their caregivers (van den Boom, 2001).

Supporting evidence for Attachment Theory. Mary Ainsworth came to John Bowlby's research team by following her husband from the U.S. to London for his doctoral studies. She replied to a newspaper advertisement for position as John Bowlby's Research Assistant.

Similar to Bowlby's relationship with his supervisor, Melanie Klein, Ainsworth agreed with Bowlby on many accounts of attachment, but had different ideas about advancing the theory. She studied in graduate school under a professor, William Blatz, who emphasized security in parent-child relationships. Her aim was to further the study of attachment beyond its conceptual status to include classification of attachment quality.

She is credited as the individual who furthered Bowlby's Attachment Theory by way of two important contributions. The first is conceptual. She agreed with Bowlby's assertion that children form attachments to their caregivers, with the attachment behavior system emerging as early as 10 months. However, she noted that the quality of the child-caregiver relationship varies from child to child. Specifically, she identified the importance of security or insecurity within child-caregiver relationships beyond the existence of the attachment relationship. Ainsworth's second contribution is an assessment of attachment, called the Strange Situation (Ainsworth, M.D.S., Blehar, M.C., Waters, E., & Wall, S. (1978), and proved to be an important aspect of theory testing for Bowlby's Attachment Theory. The Strange Situation empirically tests the nature and quality of the child-caregiver attachment relationship. Children are typically assessed at 12-18 months through a 20-minute lab session. Fist, the caregiver and child are brought into an unfamiliar room. They stay in the room together for a few minutes and an unfamiliar adult enters. The caregiver leaves the infant with the unfamiliar adult and then the caregiver returns. At this point, the unfamiliar adult leaves the room. Next, the caregiver leaves the infant alone in the room and the unfamiliar adult returns to the room. The assessment concludes with the caregiver returning. Through the Strange Situation, children are assessed, primarily on their responses to the caregiver's returns, called reunions. Originating from her earlier graduate school training,

Ainsworth believed that the security of child attachment was rooted in a secure base phenomenon where children needed a secure base from which to explore their environment. She believed that security could be determined by stressing the attachment behavior system through repeated, brief separations and reunions. Her assessment categorizes children into one secure category or one of three different insecure categories: Secure, Insecure/avoidant, Insecure/resistant (dependent), or Insecure/disorganized.

Ainsworth was to leave Bowlby's research team for her husband's first professional post in Uganda. While she had some misgivings about ethology as a comprehensive mechanism to understand child-parent attachment, she was invested in the premise of child-parent relationships as primary for child adjustment. She urged Bowlby to consider the need to empirically validate his theory and suggested that she would complete naturalistic observations of Ugandan families through her position at the East African Institute for Social Research in Kampala. There, she observed 26 mother-child sets twice a month for two hours at a time for a period of nine months. Her observations focused on proximity-seeking behaviors among the children. Through these naturalistic observations she was able to validate the major assumption of Bowlby's ethologically based theory before his major works were written. In this way, her research further developed his theory and validated his extant major theoretical assumptions.

In 1963, Ainsworth began another observational study. This study was done in the homes of new mothers, observing their early caretaking behaviors with their infants through their first year. One important focus of this work was to examine meaningful attachment behaviors within their natural context, a concept she had embraced from her graduate studies as well as her research with Bowlby. This study was the first to use Ainsworth's Strange

Situation, and further develop the attachment classification categories. With it's categorical representations rooted in Bowlby's Attachment Theory, namely proximity-seeking behavior indicating child security, the Strange Situation served to validate Bowlby's theory as well as provide a mechanism to further test his theory.

Attachment and the debate on what is in the "best interests of the child"

Overnight stays for young children between parent residences are a practical consideration for families experiencing divorce. These stays provide a natural opportunity to study divorce effects in child attachment quality while providing valuable information to individuals making decisions about parenting time. This study is rooted in attachment theory. As such, a discussion of the theoretical and empirical foundations of this theory as it relates to overnight stays and time away from either parent is important.

Ironically, both sides of the debate about parenting time, specifically overnight stays, are rooted in attachment theory. Most notable are two theoretical positions argued in Kelly and Lamb (2000) and Solomon and Biringen (2001). Elaborating on these two positions will serve as an introduction to the theoretical foundations of attachment theory. As a basis, Kelly and Lamb (2000) suggest frequent and broad contact in order to lessen child separation anxiety and support secure, trusting, comfortable parent-child relationships.

Additionally, they consider evening and overnight times important for providing activities related to attachment formation between infants and both parents, such as bathing and bedtime rituals, that are absent in daytime activities. They assert the notion that there is no evidence that overnight stays with both parents disrupt parent-child relationships (Kelly and Lamb, 2000). Alternately, they suggest that overnight stays with both parents provide an opportunity, not only to maintain and deepen attachments, but also to "provide children with

a diversity of social, emotional, and cognitively stimulating experiences that promote adaptability and healthy development"(Kelly and Lamb, 2000). In this argument, they emphasize the benefit of overnight stays in strengthening the child's adaptability, originating from attachment theory's theoretical underpinnings in ethology. In this case, the idea of selection is suggested related to separation experiences that assist the child in adapting to new environmental expectations (van den Boom, 2001).

Solomon and Biringen (2001) also root their discussion about overnight stays in attachment theory, but with a different conclusion than Kelly and Lamb (2000). In their discussion, the basis for decision-making about overnight stays lies in the importance of sustaining the relationship between the child and the primary attachment figure. This presupposition stems from clinical observation and study (Bowlby, 1944, 1951, 1980, 1973, 1982) that led to the formation of attachment theory where it was observed that infants undergoing protracted separation from their primary caregivers exhibited affected personality development.

In asserting that infants and young children need a stable relationship with a primary caregiver, it is supposed that frequent separations from that person may lead to feelings of insecurity about the relationship with the primary caregiver. Solomon and Biringen (2001) also argue that instability in the nighttime sleeping arrangement, when the child most needs a stable, primary attachment figure, may lead to feelings of confusion and insecurity.

Barris and Garrity (1988) describe the significant developmental tasks of children from infancy to approximately 2 ½ years in a publication focused on residence and visitation from a developmental perspective. Attachment is a significant developmental task for this age group in their discussion. They specifically focus their attention on the importance of

building an attachment to a primary caretaker. The risks they associate with divorce for this age group are also related to attachment formation. These risks include feelings of loss of contact with the primary attachment figure, resulting in child depression and regressive behavior. Also cited are separation and relationship difficulties in later development (Barris and Garrity, 1988). In their opinion, the risks inherent to separation from the primary caretaker for extended periods not only impact current development, but also threaten the foundational task of attachment formation and subsequent developmental tasks. Consequently, their recommendations for residence and visitation based on developmental principles do not include overnight visitation for this age group (Barris and Garrity, 1988).

Many of the assumptions and key concepts of attachment theory have been explored, thus far, in the context of overnight stays for young children. Already discussed is the assumption in attachment theory regarding the need for secure, trusting, comfortable parent-child relationships, as introduced by Kelly and Lamb (2000). They also introduce the concept, although somewhat currently considered outdated (van den Boom, 2001), of child adaptability to environmental demands, originating from attachment theory's theoretical underpinnings in evolutionary theory. Additionally, Solomon and Biringen (2001) discuss the concept of the primary attachment figure and the importance of sustaining the relationship between the child and that individual. Last, Barris and Garrity (1988) discuss the assumption concerning the relationship between attachment formation and subsequent child tasks such as separation and relationship development.

It is important to outline additional assumptions and concepts of attachment theory related to the topic of overnight stays that have not been, as yet, discussed. Attachment theory assumes that the quality of attachment development is closely linked to caretaker

sensitivity to the child's needs. One concept related to this assumption is the notion of the effect of these interactions over time in development of internal working models of attachment. Essentially, relationships with caretakers greatly influence the child's way of thinking about new people and experiences (van den Boom, 2001). Another concept related to attachment theory is the belief that children have separate and unique relationships with caregivers. These may be interactive with the relationship that the child has with primary caregivers. However, differing attachment quality between relationships is possible and evident (van den Boom, 2001). Last, developmental parameters related to attachment formation in young children, outlined earlier, are an important consideration of concepts related to attachment theory that may impact children in the context of divorce and shared parenting time arrangements.

Cognitive development and attachment. Cognitive development has been mentioned for its influential role in attachment development. For example, the recognition of other people's feelings and goals, a more sophisticated type of reciprocity, is closely intertwined with cognitive ability in perspective taking. The reverse has also been found to be true. Attachment formation impacts cognitive outcomes. This has been particularly studied in school-age populations with respect to school performance and literacy (Murray & Cooper, 1999, Ahmad & Worobey, 1984). Given that child-parent attachment is viewed as the socio-emotional milestone of the early years, and a secure attachment to the primary caregiver predicts concurrent and later positive adaptation, including greater positive affect and competent peer interactions in preschool, greater ego-resiliency (Sroufe, 1986), as well as greater emergent literacy (Bus & van Ijzendoorn, 1992), it makes sense to focus on how family and developmental factors might affect attachment to the primary caregiver and how

that interfaces with child cognitive development, namely object concept. In sum, a discussion pertaining to cognitive tasks for the youngest children and their relationship to attachment quality further supports the need for study on divorce effects in young children, as the impact may also include cognitive outcomes for children.

This discussion also clarifies timeframes for the emergence of infant object concept. One of the focal points in the debate about overnight stays for this age group surrounds infants' capacity for object concept in their cognitive repertoire. For this reason, it is important to discuss the original assumptions about object concept in young children (Piaget, 1954) as well as the current empirical view (Baillergeon, 1987, Durand, 2002, Luo, 2003, Spelke, 1991).

Kelly and Lamb (2000) and Warshak (2000) have been vocal in suggesting that frequent switches enable infants and young children to keep both parents in mind, and are particularly helpful to the infant, who has not yet developed a sense of object permanence, citing Piaget (1954). Consistent with his constructivist position, Piaget placed the emergence of object concept along the six sub-stages of his sensorimotor period. Specifically, the first four sub-stages show an extension of accommodation and appear in the form of anticipation behaviors. In sub-stage five the infant sees an object in motion but is constrained by their perception of that object. Piaget suggests that it is in sub-stage six that object concept is firmly in place. In this stage the child views the object as autonomous based on their emerging capacity for mental representation (Piaget, 1954). Put simply, there is a continuum of change in child understanding of object concept, and the defining characteristic of acquisition is a child's ability to mentally represent an object without its physical presence. According to Piaget, the timeframe for emergence of this skill rests at around eight months

old. That is when, he believed, infants are able to both mentally represent the continued existence and physically search for an occluded object (Piaget, 1954).

Many researchers have viewed Piaget's methods, which required physical search and receptive language comprehension for position terms, as having inherent confounds in skill requirements for young children. As a result, recent studies have employed alternative methods, such as the looking time response. These studies have established much earlier emergence of object permanence than originally posited by Piaget (Baillergeon, 1987). In later studies, further exploring infants' reasoning about objects (Aguiar & Baillergeon, 2002) it was found that three to 3 ½ -month- old infants expect to see an emerging part of an object when it is occluded by another object. It was also shown that when this does not happen, infants reason that there must be two objects behind the occluding object. This was, again, shown through increased surprise exhibited by a looking time response.

Another study attempted to attend to critique of object permanence at this early age by examining infants' preference for three-dimensional figures rather than two-dimensional figures. It has been suggested that infants may need perspective cues to understand items presented in two-dimensional form and that an impossible or strange event may be seen as a novel stimulus to the infant, thus causing increased looking time that is not representative of object permanence. It was established that 4-month-old infants look longer at the impossible event, controlling for novelty (Durand & Lecuyer, 2002).

These recent studies related to infants' understanding of object permanence have established much earlier emergence of this capacity than originally posited by Piaget (Baillergeon, 1987, Spelke, 1991). This empirically supported evidence of earlier emergence of object permanence, as early as two to three months old, has significant implications for

Kelly and Lamb's suggestions that infants can endure only separations of a few days from either parent. Specifically, given the earlier time of emergence, a longer period of time would be allowable between visits with the non-residential parent because the infant is able to hold that parent constant in their mind.

Additionally, and significant to attachment security and dependency, frequent separations from the primary caregiver may create distress for the infant, potentially jeopardizing attachment relationships with both parents. This premise, based on infant object concept development, is evident in the assertions made by Solomon, Biringen, and their colleagues (Biringen, 2000; Solomon & Biringen, 2001; Biringen, 2003; Biringen et al., 2002) as well as Baris and Garrity (1988) who assert that frequent separations from the primary caregiver may lead to feelings of insecurity about that relationship with the primary caregiver.

An important and related extension to the discussion of infants' object permanence capacity and its implications for overnight stays includes further investigation of infants' capacity for object concept. Namely, this includes a treatment of their understanding of animate compared to inanimate objects. To begin, people, as opposed to objects, offer three important things related to social cognition. First, ongoing contingency behavior is a function of caregiver-infant interaction. Second, reciprocity between caregiver and infant is characteristic of interaction from birth including varied sensory applications such as caregiver voice tone inflection and infants' pre-speech sounds, eye gaze, and touch. Third, communication is specific to animate interaction. 2 and 3-month-olds show social behavior toward responsive caregivers and reserve smiling behavior for animate objects only (Poulin-Dubois, 1999). Interestingly, Piaget referred to infants' preference for animate objects in

terms of horizontal decalage where animate objects, such as caregivers, provide the aforementioned supports to cognitive development that are not present in inanimate objects (Piaget, 1954).

Empirical literature

The empirical literature on overnight stays and their relationship to child attachment are exemplified by two studies. The first study is a natural experiment conducted on the kibbutz, a communal living arrangement, in Israel. Infants who were raised on the kibbutz and who slept in "infant homes" at night were compared with infants who were raised on the kibbutz but who slept in their own homes at night. Both were compared to home-reared infants who were not raised on a kibbutz (Sagi, van Izjendoorn, Aviezar, Donnell, & Mayseless, 1994). Kibbutz infants who slept in their own homes at night did not differ in attachment security, as assessed with the Strange Situation, compared to home-reared infants who were not raised on a kibbutz. However, overnight stays in the "infant house" were associated with an increased incidence of insecure attachment as compared to infants who slept in their own homes at night on the kibbutz and in the control group (i.e., home-reared). These results suggest that it is overnight stays away from the primary caregiver that may present problems.

The second study was conducted by Solomon & George (1999a, b, c) and is more directly relevant for the purposes of this investigation, given the home setting and children being separated from one parent in the context of living with the other parent. Solomon and George examined parent-child attachment in 12 to 18 month olds whose parents had been physically separated for at least a month, including never married as well as divorced couples. Families in which infants were experiencing overnights with the non-residential

parent comprised the Overnight group and those in which overnights were not yet started comprised the No Overnight group. A comparison group of non-divorced families was also included. Both mothers and fathers were observed with their infants in this project. A major finding was that those who were in the Overnight group were more likely to be disorganized in their attachment to the residential parent, in this case most often the mother, as well as the non-residential parent, as compared to the non-divorced families. Interestingly, disorganized attachments to the non-residential parent were unusually common among infants in divorced families in both the Overnight or No Overnight groups, suggesting that the experience of overnights with the non-residential parent, typically the father, did not necessarily create a better infant-father nor a better infant-mother relationship. Moreover, when these infants were two years old, those who had participated in the overnights were more likely than those who had not experienced such care to be easily distressed in a five-minute laboratory separation from the residential parent, although they appeared to be fine in a prior non-stressful, problem-solving context.

A second major finding (Solomon & George, 1999a, b, c) was that there was an interaction between overnights and conflict, such that those families engaging in high conflict and overnight stays were most likely to raise infants who were insecure. Overnights in the context of low conflict did not necessarily lead to infant insecurity. Although intriguing, the above-study can be criticized in that never-married couples were grouped with divorced families and not examined separately in analyses. Additionally, results from a single study can be sample-specific, whereby unique sample characteristics inform study outcomes. Thus, there is a need to replicate results.

Despite these intriguing findings on how overnight stays with the father may affect the mother-child relationship, prior published studies have not examined divorcing families in which parents share custody and where overnight stays with both parents are the usual and routine arrangement. The current investigation is a beginning toward providing empirical evidence on this parenting arrangement that has become the most popular public policy for infants and young children and their divorcing parents (Folberg, 1991).

While there are as many different types of parenting time arrangements as there are families, to some extent the selection criterion in the present study limits the variability by including only families where both parents are engaged in overnight stays with the child. Thus, arrangements in which there may be joint legal custody but only regular contact with one parent are not included in this sample.

Possible post-divorce qualities related to child attachment

Age at onset of overnight stays. As has been noted, Kelly and Lamb (2000) and Warshak (2000) have been vocal in suggesting that frequent switches enable infants and young children to keep both parents in mind, and are particularly helpful to the infant, who has not yet developed a sense of object permanence, citing Piaget (1954). Related to this cognitive limitation, they have reasoned that infants can endure only separations of a few days from either parent.

It is important to note that recent studies related to infants' understanding of object permanence have recognized much earlier emergence of this capacity than originally posited by Piaget (Baillergeon, 1987, Spelke, 1991). This empirically supported evidence of the beginnings of object permanence, as early as 2 or 3 months old, has significant implications for Kelly and Lamb's suggestions, which are based on reasoning related to object

permanence. For instance, given the earlier time of emergence of object permanence, a longer period of time would be allowable between visits with the non-residential parent because the infant is able to hold that parent constant. Additionally, and significant to attachment security, frequent separations from the primary caregiver may create distress for the infant, potentially jeopardizing attachment relationships with both parents. This discussion is evident in the assertions made by the opposing group for this debate and who believe in empirical evidence before widespread policy change that affects infants and young children.

Solomon, Biringen, and their colleagues (Solomon & Biringen, 2001; Biringen et al., 2002) as well as Baris and Garrity (1988) assert that infants and young children need a stable relationship with a primary caregiver, and frequent separations from the primary caregiver may lead to feelings of insecurity about the relationship with the primary caregiver. They also argue that instability in the nighttime sleeping arrangement, when the child most needs a stable, primary attachment figure, may lead to feelings of confusion and insecurity.

Inter-parental communication and conflict. Inherent in divorce when there are children is the immediate re-negotiation of the original spousal relationship toward parenting aims. How and to what degree of success parents negotiate their continued relationship has been found to have a significant impact on young children's post-divorce adjustment that is quantitatively and qualitatively different from other divorce factors (Lewis, Johnson-Reitz, & Wallerstein, 2004). Within this re-negotiation, the way parents communicate with each other, especially the conflict resolution strategies they use, is particularly important. Due to its reciprocal nature, these communication patterns include both communication behavior and

interpretation of verbal and non-verbal cues by the other parent (Sillars, Canary, & Tafoya, 2004).

At the same time, according to conflict theory, conflict is seen as a critical element of all relationships. Divorce in particular is often considered to be contentious by nature. While some divorces are amicable, many are not. Thus, it is important to establish what constitutes a type of communication and a level of conflict associated with negative post-divorce child adjustment.

Inter-parental communication and conflict are closely linked. In fact, conflict is often seen as a category of communication and is one of the most studied components of family communication (Sillars et al., 2004). Inter-parental conflict is defined by verbal and physical aggression between parents. While there is varied report about continued conflict between ex-spouses with some studies showing a decrease past the two year post-divorce mark (Whiteside, 1998) and others showing a continuation of conflict (Lewis et al., 2004), there is evidence that specific aspects of conflict such as resolution success, mode of expression, and content are more significant to negative child adjustment outcomes than frequency of conflict (Whiteside, 1998).

While there is no demographic profile that is associated with high-conflict families, the presence of particular qualities that underlie conflict identify families that become embroiled in high-conflict divorces. In one divorce study, Maccoby and Mnookin (1992) identified four factors underlying high conflict. The first factor is the level of parental hostility, established by the level of intensity of negative feeling between ex-spouses. Although seemingly the most obvious of the identified factors, this one is the least correlated among the group. The second factor is the age of the child at the time of divorce. In this case,

families with the youngest children showed the greatest likelihood of protracted litigation. The third factor includes the parent's perception of each other's role in child rearing pre-separation. Incongruent perceptions lead to high conflict. The last factor includes each parent's concerns about the child's well-being in the care of the other parent. While many parents in this study did express general concern, they did not all resort to legal proceedings and high-conflict behaviors to address these concerns.

Importantly, behavior associated with both negative communication style and conflict between parents has been referenced as a way parents maintain involvement, albeit negative, with each other. It is often viewed as a way former partners maintain intimacy (Ahrons, 1994). In families where the pre-separation style of communication was primarily negative, the same style is often continued post-separation for a period of time as the couple separates emotionally. Yet, for some families, this dynamic continues long after separation. Similar to conflict, the child outcomes associated with negative and uncooperative communication styles include reduced focus on child needs, increased child anxiety, and, as children get older, greater split in parental loyalty (Mayes, L.C. & Moliter-Siegl, A., 1999).

Additionally, a study done by Hodges, Landis, Day, and Oderberg (1992), found that couples with high levels of pre-separation conflict produced less stable visitation patterns in non-residential parents. Specifically, these parents were involved in less regular visits and made consistent changes in visitation plans. Hodges et al. (1992) found that mothers from this group viewed their children as less dependent on them and more tense with the father in her presence. Thus, families engaged in a high level of conflict not only create an environment that negatively impacts child adjustment, but may also promote irregular visitation patterns, exacerbating child adjustment problems.

There are some behaviors associated with individuals who engage in high-conflict divorces. In particular, in divorce proceedings related to custody and assets, these individuals express the needs of their children in terms of their own needs (Pruett, Hogan-Bruen, & Jackson, 2000). An additional and related behavior includes the degree and duration of litigating among these families. In their meta-analysis, Amato and Keith (1991) reported that low levels of conflict and high levels of communication optimally meet the best interests of the child principle observed by the legal community for child residence and parental access decisions. The reverse has also been found to be true, where high levels of conflict in families with shared parenting responsibility result in poor adjustment outcomes for children (Kline, Tschann, Johnston, and Wallerstein, 1988). Children of high-conflict divorce display behavioral, cognitive, emotional, and social problems to a greater degree than other children from separated or divorced families (Amato & Keith, 1991).

The clarification as to what constitutes a problematic style of communication and a significant level of conflict, when some level of conflict may be seen as normal for divorcing families, is an important one. The maintenance of both parental relationships in a spirit of cooperation helps children after divorce by creating the context for security. Additionally, the environment created by the post-divorce parental relationship may also play a part in the effect of overnight visitation, making it more or less likely that children will manage overnight stays successfully. In this way the constellation of factors affecting post-divorce child adjustment are more clearly inter-dependent, which is the point of view of this study.

Emotional availability. Emotional availability is another aspect of parenting that is related to psychosocial adjustment and may provide an alternative explanation for divorce effects, such as attachment problems, in young children. By definition, emotional availability

refers to an individual's responsiveness and attunement to another's needs and goals (Emde, 1980). Further, caregiver emotional availability promotes child exploration of the environment and joint attention with the caregiver via caregiver encouragement within the context of a secure base (Sorce & Emde, 1981).

An important dimension of emotional availability (EA) is caregiver sensitivity. Caregiver sensitivity within the framework of emotional availability includes responsiveness to child signals and communications, as well as taking into consideration the role of caregiver affect and conflict regulation with the child (Biringen, 2000). Sensitivity has been found to be predictive of attachment, as assessed in the Strange Situation (Easterbrooks & Biringen, 2000).

EA emphasizes the importance of both sides of the caregiver-child relationship, rather than focusing solely on caregiver sensitivity, which is the construct that has dominated attachment research and theory (Biringen, 2000; Easterbrooks & Biringen, 2000). Specifically, EA integrates attachment (Ainsworth et al., 1978) and emotional (Emde, 1980, Mahler et al., 1975) perspectives to focus on the emotional tone of parent-child interactions, including both the caregiver's and the child's contributions.

In addition to caregiver sensitivity, caregiver contributions to EA include additional dimensions, such as caregiver structuring, nonhostility, and nonintrusiveness. Caregiver structuring refers to the ability of the caregiver to structure in a way that is received by the child. Caregiver nonintrusiveness refers to the caregiver's ability to be available without limiting the child's autonomy. Last, caregiver nonhostility refers to the caregiver's verbal and behavioral manifestations of covert (e.g. impatience, boredom) or overt (e.g. negative statements) hostility in interactions with the child.

Child contributions to emotional availability include child responsiveness to the caregiver and involvement of the caregiver. Child responsiveness refers to the child's ability to explore on his own while also maintaining affective connection with the caregiver. Child involvement refers to the child's ability to incorporate the parent into play schemes, striking a balance with autonomous play.

Emotional tone in parent-child relationships during the divorce process may have an effect on how well the child adjusts to changes in family structure. During this time parents are under considerable stress, which may affect their emotional relationship with the child. Parenting from a divorced context can also be stressful as a result of parenting as a single rather than as a couple. A pitfall of this change in family structure is the degree to which the parent is engaged in meeting many, if not all, of the family's immediate needs and the degree to which parent-child interaction and play become secondary. Parental EA may be important to child attachment during this period but may also be difficult for the parent to provide as a result of difficulties in adjustment to their new status as a divorced parent. The transitional period for the parent to their new single status requires a great deal of mental processing and is known to be associated with depression (Dreman, 1994). Parents are often preoccupied with their own thoughts related to the divorce during the divorce transition.

Similarly, child responses to parental adjustment to divorce may affect the child's side of EA, (e.g., emotional responsiveness of the child to the parent and the way the child involves the parent). Child involvement of the caregiver is particularly applicable with toddler-age children who are gaining autonomy while still using the parent as a support to their play. Although parents may be adjusting to their new status and mentally processing their divorce, given a history of a positive parent-child relationship, it is expected that

children would continue to make efforts to involve parents in their play, replicated in other measures assessing child response to lack of harmony in parent-child relationships, such as the Face-to-Face-Still-Face (FFSF) paradigm (Tronick, Als, Adamson, Wise, & Brazelton, 1978). At the same time, in protracted divorce cases, when the parental adjustment period is extended, children may learn to involve parents in their play less frequently. Thus, the child's side of EA, as a way to examine rapport in parent-child relationships, has potential significance as a variable for child attachment outcomes in divorce.

Broader impacts of study

Greater understanding of the way in which factors such as age at onset of overnight stays, inter-parental conflict and communication, and emotional availability may be related to and predict attachment to the primary caregiver is beneficial for a couple of reasons. As there is currently little empirical information on this topic, study outcomes may help guide decision-making for legal professionals and parents thinking about the needs of infants and toddlers related to the development of parenting plans, specifically parenting time arrangements. Additionally, parent-child attachment is viewed as the significant socio-emotional milestone of the infant and toddler years and positive attachment outcomes with the primary caregiver predict concurrent and later positive adaptation (Ainsworth, Blehar, Waters, & Wall, 1978). Thus, findings are likely to further the basic science of attachment.

Research question and hypothesis

This study examines the child and family qualities that are related to young children's attachment security and dependency during the divorce transition in the context of shared parenting time arrangements. Qualities such as age at onset of overnight stays, inter-parental conflict and communication, and emotional availability are examined for their importance in

attachment security and dependency. No single factor is expected to predict these child outcomes. Rather, it is hypothesized that attachment security and dependency are associated with and predicted by age at onset of overnight stays, inter-parental communication and conflict, and emotional availability.

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