

2006

The relationship between behavior problems, placement disruption, and maladaptive attachment in adolescent foster children

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THE RELATIONSHIP BETWEEN BEHAVIOR PROBLEMS, PLACEMENT
DISRUPTION, AND MALADAPTIVE ATTACHMENT
IN ADOLESCENT FOSTER CHILDREN

Thesis

Submitted to

The College of Arts and Sciences of the
UNIVERSITY OF DAYTON

In Partial Fulfillment of the Requirements for

The Degree

Master of Arts in Psychology

by

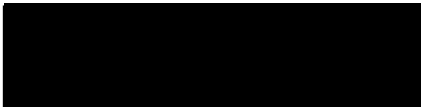
Gail Maureen Stielper

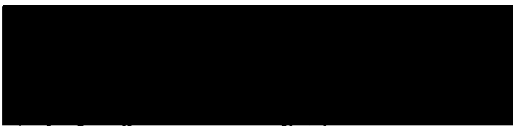
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Dayton, Ohio

January, 2006


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ABSTRACT

THE RELATIONSHIP BETWEEN BEHAVIOR PROBLEMS, PLACEMENT DISRUPTION, AND MALADAPTIVE ATTACHMENT IN ADOLESCENT FOSTER CHILDREN

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This study, using a multiple regression, examined the relationship between behavior problems, placement disruption, and maladaptive attachment in adolescent foster children. While researchers have already noted a correlation between behavior problems and placement disruption (Palmer, 1996; Newton, Letrownik, & Landsverk, 2000), and behavior problems and poor attachment (Leathers, 2002), no research to date has attempted to examine the relationship between behavior problems, placement disruption, and maladaptive attachment. In addition, very little research has been conducted on attachment in adolescents. Given the evidence linking attachment problems with psychopathology (e.g. Reeber, 1996; Fonagy et al., 1997; Bacon & Richardson, 2001), additional research on attachment in adolescents is crucial. Archival data compiled by the National Survey of Child and Adolescent Wellbeing (NSCAW), including descriptive information, externalizing behavior problems, the number of foster home placements experienced, and an attachment measure, were obtained from Cornell University ($N = 188$). Consistent with hypotheses, a

multiple regression indicated that a measure of behavior problems was a significant predictor of poor caregiver-child attachment. Contrary to hypotheses, placement disruption was not a significant predictor of poor attachment, although this finding may be attributable to limitations of the dataset. Also contrary to hypotheses, no significant correlations were found between externalizing behavior problems and placement disruption in adolescent foster children. These findings confirm the importance of continued research on attachment in this population, provide a framework for future research, and contribute to the understanding of attachment so that future interventions for maladaptive attachment can be formulated.

ACKNOWLEDGEMENTS

I would like to extend my sincerest appreciation to Dr. Lane Pullins, my advisor, for her perpetual patience, diligence, and extraordinary effort in bringing this thesis to its conclusion. Without her guidance and expertise, this work would not have been possible.

I would also like to thank those associated with the National Survey for Child and Adolescent Wellbeing for providing the data for this thesis, and for their continued efforts to assist in this endeavor.

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CHAPTER I: INTRODUCTION

The present study examines the relationship between placement disruption, child behavior problems, and attachment in foster children. Attachment has long been associated with relationship quality, social development, and psychopathology in both childhood (Bretherton & Waters, 1985; Sroufe, 1983) and adulthood (Hazan & Shaver, 1994). This association is particularly critical for foster children in that they experience not only the loss of their parent(s), but typically experience a pattern of subsequent attachments and displacements as they move through the foster care system (Newton, Litrownik, & Landsverk, 2000).

Researchers have already documented a correlation between behavior problems in foster children and poor attachments to caregivers (Leathers, 2002), as well as a correlation between behavior problems and placement disruption. Typically, foster children with behavioral disturbances have difficulty maintaining placements (Palmer, 1996; Newton, Litrownik, & Landsverk, 2000). It seems logical, therefore, that the emotional trauma of having to detach from multiple caregivers to form new attachments would not only create behavior problems, but also make it increasingly difficult for these children to form healthy attachments in each subsequent placement. However, the question of whether it is placement disruption or problem behavior that most impacts attachment remains unclear.

While researchers, to date, have not focused on the attachment – placement disruption – behavior problem relationship, it is clear that attachment patterns can

change. As van IJzendoorn and DeWolff (1997) point out, these patterns are affected when a child is subjected to negative life events, such as placement in foster care. Why attachments change, however, and to what extent specific factors may predict poor parent-child attachments remains unknown.

The present study attempts to clarify the developmental implications of the attachment – behavior – disruption relationship. This is accomplished first by examining the change in attachment over time, based on the number of foster placements experienced and behavior difficulties. In addition, this study examines this relationship within the adolescent population. This is of particular importance as researchers to date have examined attachment in both childhood and adulthood, while research with regard to adolescents is clearly lacking.

Concept of Attachment

Before examining the relationship between attachment, behavior, and foster placement disruption, it is necessary to understand the concept of attachment. Attachment has been defined as a biological, as well as an emotional, concept. Behaviorists defined attachment as a reinforced trait or secondary drive derived from a primary need such as hunger. Because the mother fulfilled primary needs, behaviorists believed that infants associated the mother with fulfillment of those needs, and this formed the basis of attachment (Hock, 1999). The biological benefits of holding and carrying children, as well as allowing children to suck at the breast even when they are not hungry, also provide evidence that attachment is a necessity for survival. For example, rhythmic, repetitive oral motor activity, such as sucking the breast, activates central serotonergic neurons that inhibit pain sensations (Le Bars,

1988; Fornal, et al., 1996). Other researchers suggest that the act of holding and carrying affects cortisol secretion, heart rate, and oxygen saturation in infants, thereby reducing infant stress and increasing alert states (Gregg et al., 1976; Stang, et al., 1997; Gormally et al., 2001).

Konrad Lorenz, in his well-known research on goslings, was the first to link attachment to aggression. In as early as 1935, Lorenz indicated that only animals capable of forming personal attachments were capable of aggression. This researcher also found that animals could form attachments to substitute caregivers, a process he labeled "imprinting". More importantly, he discovered that animals could form attachments unrelated to survival, when he noted that goslings formed bonds with humans who did not feed them (1935).

Additional research in the field of ethology supported the notion that attachment is even more important to psychological well-being than physical health. A classic study performed by Harlow (1958) provides an example. Using surrogate "mothers," one made of wire fitted with a feeding bottle and the other covered with material more resembling fur, baby monkeys were found to prefer the surrogate most similar to their mother and, unless feeding, ignored the wire surrogate completely. This dispelled the theory that the monkey would form an attachment to the wire surrogate based on its' fulfillment of the monkey's need for food. In other research, Schaffer and Emerson (1964) noted that human infants also became attached to people who did not feed them. Additionally, Robertson and Bowlby (1952) found that children exhibited a pattern of angry protest and despair when separated from their mothers, even when fed and cared for by an alternate

caregiver. Furthermore, Bowlby (1956) found that infants became attached even after being physically abused by their mothers.

A study of a contemporary hunting and gathering culture conducted by Marjorie Shostak (1981) demonstrated the psychological benefits of attachment. Shostak investigated attachment behavior within the !Kung San tribe of northwest Botswana. Within this culture, !Kung infants were breastfed upon demand, on the average of four times per hour. Children were carried continually in a sling at the mother's side, and slept in the same bed as their mother. According to Shostak, !Kung children formed secure attachments more rapidly than children of industrialized nations in that those under the age of five ventured further away from their mothers, demanded less parental attention, and socialized more with their peers. The ability to use their mothers as a base from which to explore suggests that these children felt safe in their environment, and is indicative of secure attachment.

While researchers have established the importance of attachment to physical and psychological health, they generally differ on what constitutes attachment. Bowlby (1969) originally defined attachment as an affectional bond between a child and caregiver. According to Bowlby, this bond allows for the fulfillment of a basic, ingrained need to connect emotionally to another human being, and establishes an individual's internal working model of attachment. This working model is subsequently applied to each new attachment made.

While Kozlowska (2002) agrees with the concept of an internal working model, she goes on to label it as a kind of trinity simultaneously consisting of an emotional relationship, a pattern for processing information, and a behavioral

strategy for obtaining support and protection from the attachment figure. This definition provides a three-dimensional view of attachment as a construct that is essentially a relationship affecting not only the child's behavior toward the caregiver, but all mental organization.

In contrast, Sroufe (2002), dismisses the idea that attachment is an emotional bond. While he agrees that attachment is an internal working model, he emphasizes that it is primarily behavioral. He also confirms that attachment cannot be limited to the mother-child relationship, stressing that it is a pattern affecting all subsequent relationships.

For the purpose of this study, these definitions of attachment are combined. While attachment can be viewed as an internal working model that affects behavioral patterns, this model can change in accordance with an individual's experiences, ultimately changing behavior. As a result, while early experiences with the child's first primary caregiver create this model, subsequent relationships to alternate caregivers not only qualify as attachments, but can change attachment behaviors.

Measurement of Attachment

Once attachment is defined, the next problem becomes one of measurement. Quantifying such a controversial concept is a difficult undertaking, and measurements differ based on the conceptualization of attachment and the developmental stage of the respondents.

The first system created for the assessment of attachment behaviors was developed by Ainsworth, Blehar, Waters, and Wall (1978), and originally identified three distinct patterns of attachment in 8½ to 12-month old infants. These infants

were placed in an unfamiliar setting with their mother and a stranger (Ainsworth, Blehar, Waters, & Wall, 1978). The children were then exposed to different availability levels of the mother. For example, the mother was either present and involved, present but mildly occupied, or absent. In addition, the child was separated from the mother twice in this setting, being left completely alone once, and left alone once with a stranger. Those infants who attended to the mother, desired interaction with her, and greeted her positively after being separated were considered securely attached. Those infants who avoided the mother both during the paradigm and upon reunion were designated as insecure-avoidant. Those who sought contact with the mother and who were difficult to comfort upon reunion also displayed anger. These children were considered insecure-resistant, or insecure ambivalent.

Different patterns of attachment in this study were found to be consistent with different patterns of maternal responsiveness (Ainsworth, Blehar, Waters, & Wall, 1978). Mothers of securely attached children were the quickest to respond, and responded the most consistently, to their children's needs; while mothers of insecure-resistant infants tended to respond inconsistently. These children resisted contact and interaction with their mothers, and generally displayed more aggression and far less exploratory behavior in the presence of the primary caregiver. Mothers of insecure-avoidant children were typically unresponsive to their children's needs. Often, the attitude demonstrated by these children toward their primary caretakers was the same as that displayed toward complete strangers. With insecure-avoidant children, distress that would normally have been associated with the absence of the mother was associated more with simply being left alone than with the loss of the

parental figure (Mischel, 1999).

A fourth behavior pattern, later identified by Main and Solomon (1986), consists of disorganized or disoriented infants. The ability of these infants to cope with separation from their mothers appears inconsistent and disorganized. Their movements and goals during separation appear to be undirected and contradictory, and their behavior toward their mothers exemplifies confusion and apprehension. Children within this group also appear to be less confident in strange environments. These four attachment patterns, therefore, all seem to suggest that the more secure the parent-child attachment, the more independent the child. This independence is illustrated in unfamiliar environments by the competence of their behavior and their willingness to self-initiate detachment from the mother to explore their surroundings.

Understanding the Ainsworth Strange Situation assessment is crucial to the measurement of attachment because nearly all subsequent measures are based on the secure and insecure categories it established. However, this assessment can only be used with children under 2 years of age. This necessitated the development of additional measures for subsequent developmental stages.

As a result, The Cassidy-Marvin system of classification was designed for the 2 ½ to 4 ½ year age range (Cassidy & Marvin, 1987, 1990, 1991, 1992), after which Main and Cassidy (1988) went on to develop a measure of attachment for 6-year-olds, using groups of preschoolers previously classified by the Ainsworth method during infancy. Both of these assessments are based on an assumption of continuity of attachment as the child ages.

A third assessment developed for preschoolers is Crittenden's Preschool Assessment of Attachment (PAA; Crittenden, 1994). This assessment places additional emphasis on the motivation behind the child's behavior toward the parent, and identifies six categories of attachment: a) secure, b) defended, c) coercive, d) defended-coercive, e) anxious-depressed, and e) insecure/other. Interrater reliability for each of these four assessments was found to be within acceptable limits (Main & Weston, 1981; Cassidy & Marvin, 1987; Lyons-Ruth, Repacholi, McLeod, & Silver, 1991; Cohn, 1990).

While these systems of classification assess the frequency of attachment behaviors, the Attachment Q-Sort (AQS), allows the salience of the child's behavior to be distinguished from the frequency of the behavior, permitting a better characterization of the child with regard to attachment. However, there are a number of other advantages to the AQS. For example, the structure of this assessment prevents observer biases, and AQS data lends itself to a wider variety of both qualitative and quantitative analyses (Solomon & George, 1999). In addition, the AQS can be used with children as young as 2 years, and as old as 7 years. Because the AQS is sometimes conducted by the child's mother, many researchers question its reliability (Belsky & Rovine, 1990; Stevenson-Hinde & Shouldice, 1990). Despite this concern, research conducted by Waters and Deanne (1985) demonstrated that interrater agreement between mothers and independent observers fell well within the acceptable range.

Remarkably, there are no assessments available to measure attachment in children between the ages of 7 and 11 years. However, for adolescents aged 11

years and older, a measure known as the Relationship with Caregiver Assessment (RC; Institute of Research and Reform in Education, Inc., 1998) can be utilized. The RC consists of four subscales: Parent Emotional Security, Involvement, Autonomy Support, and Structure. This assessment is unique among child measures in that it is a self-report questionnaire and does not measure attachment behaviorally.

Five assessments have been developed for the purpose of measuring adult attachment. The Adult Attachment Interview (AAI; George, Kaplan, & Main, 1984) assesses attachment in individuals aged 12 years and older, and consists of an interview containing 18 questions that determine classifications correlated with the four categories used for younger children. The second measure used in adulthood is the Current Relationship Interview (CRI; Crowell & Owens, 1996), which explores the relationship between attachment in close adult relationships and patterns of past attachment during infancy. The CRI rates individuals in accordance with the participant's behavior and ideas pertaining to attachment-related issues, the partner's behavior, and the individual's style of discourse.

The Attachment History Questionnaire (AHQ; Pottharst, 1990), contains questions related to demographic variables, family history, patterns of family interactions, parental discipline techniques, and friends and support systems. It consists of 51 scaled items assessing four factors: Secure Attachment Base, Parental Discipline, Threats of Separation, and Peer Affectional Support. The AAI, CRI, and the AHQ assessments are all retrospective in that they measure attachment based on recollections of past experiences.

The fourth measure, known as the Reciprocal Attachment Questionnaire (West & Sheldon, 1988; West & Sheldon-Keller, 1992, 1994), is unique in that individuals are instructed to answer questions with respect to their own primary attachment figures, regardless of whether that figure is a sexual partner, a parent, or a friend. The fifth assessment, the Avoidant Attachment Questionnaire was developed by these same researchers for those individuals professing not to have a primary attachment figure.

Additional attachment measures, such as Hazan and Shaver's (1987) Attachment Style Questionnaire, focus exclusively on romantic attachment. Using Ainsworth's typology as a framework, these researchers developed three categories of romantic attachment styles to classify individual differences in the way adults think, behave, and feel about romantic relationships. Additional attempts to create multi-item scales produced a more elaborate conceptualization of romantic attachment styles and revealed the two major dimensions that underlie these self-report measures. These dimensions consist of anxiety about abandonment and avoidance of intimacy or emotional expression (Crowell et al., 1997). According to Bartholomew (1990), these dimensions can be reorganized and combined to yield four attachment styles similar to those attachment patterns first identified in infants. Following this realization, Bartholomew and Horowitz (1991) developed the Relationship Questionnaire (RQ), which offers four descriptions of romantic attachment based on the four original attachment patterns.

While the basis of attachment quantification remains tied to Ainsworth's original classifications, there are a number of distinct differences in these

assessments. For example, childhood measures of attachment are behaviorally based and rely on observation, while adult instruments are typically retrospective in nature and consist of paper/pencil assessments. In addition, child measures differ in that assessments such as the AQS focus strictly on the saliency and frequency of behaviors while others, including the PAA, emphasize the child's motivation for the behavior. The basis of adult measures can pertain to the relationship between the adult and his or her parent in childhood, or it can instead be limited to patterns evident in romantic partnerships.

Because attachment can apply to so many different types of relationships, and can be viewed as either a biological, emotional, or cognitive concept, validity of attachment measures remains a critical concern. Sroufe (2002) contends that, in addition to the Ainsworth Strange Situation, there are only two additional validated measures of attachment: the AAI and the AQS. According to Sroufe, child measures such as the Cassidy-Marvin system (Cassidy & Marvin, 1987, 1990, 1991, 1992), the Main-Cassidy attachment classification (1988), and Crittenden's PAA (Crittenden, 1992, 1994), as well as lesser-known measures based on symbolic representation and doll play (see Solomon & George, 1999), do not meet the stringent validation criterion necessary to maintain the integrity of attachment assessments. Sroufe (2002) maintains that the primary criteria for validation of child assessments is the balance between attachment and exploration, as well as secure-based behavior in the home setting, and that these criteria are lacking in the aforementioned assessments.

Attachment, therefore, is difficult to quantify for a number of reasons.

Disagreements persist among researchers regarding how it is defined, how it is expressed, and how it is interpreted. In addition, assessments of attachment must change in accordance with changes in developmental stages. Presently, however, there is no assessment designed to measure attachment patterns during the years that directly precede adolescence, and very few assessments that measure these patterns during adolescence. As a result, there are significant gaps in available research. This is detrimental to the study of this construct because it inhibits the measurement of attachment at specific points in an individual's life. As a result, it is difficult to establish the stability of this construct in relation to life experiences.

Stability of Attachment

Considering the powerful impact early attachment can have on development, and particularly social development, psychologists theorize that attachment patterns developed in infancy continue to affect socialization well into adulthood. For example, Bowlby (1991) emphasized the importance of an individual's first attachment in establishing developmental trajectories that influence the individual's behavior throughout life. According to Bowlby, an internal working model of attachment is created, based on an individual's first relationship patterns, which affects the way that individual views, behaves in, and forms subsequent attachments. As a result, attachment patterns should remain fairly consistent across time.

Longitudinal research tends to confirm that attachment patterns formed in early childhood remain consistent throughout the early school-age years and into adulthood (Hamilton, 1995; Waters, Merrick, Albersheim, & Treboux, 1995). For

example, research conducted by Belsky, Campbell, Cohn, and Moore (1996) indicated a correlation of .46-.55 in attachment classifications using Ainsworth's Strange Situation for two samples of children between the ages of 12 and 18 months. Attachment security in children between the ages of 18 and 30 months of age has been measured by modified versions of Ainsworth's Strange Situation (Fagot & Pears, 1996). These researchers collapsed their data into secure/insecure dichotomies at these two ages, and found that security classifications remained stable over this 12-month period. In research conducted by Symons et al. (1998), the AQS was utilized to assess stability of attachment between the ages of 2 and 5-6 years. After controlling for the age difference of the final assessment, AQS attachment security was found to be significantly consistent.

Stability of attachment patterns has also been found in adults across an 18-month period (Crowell et al., 1996), and a four-year period (Ammaniti et al., 1996). Additionally, Benoit and Parker (1994) found stability of attachment patterns in Canadian mothers over a one-year period during which they gave birth to their first infants.

Some studies have attempted to examine longer-term stability from childhood through adulthood. Two studies by Crowell and Feldman (1988, 1991), for example, examined how attachment patterns formed in infancy affect the way in which individuals bond with their own infants in adulthood. They found that mothers who displayed dismissing attachment styles with their preschoolers reported that their own parents had exhibited dismissive behaviors toward them as children. These mothers reported less affection from their parents, and indicated that they were

pushed to become more independent at an earlier age than mothers describing more secure attachments with their caregivers. As a result, the dismissing mothers were consistently more controlling, emotionally distant, and less affectionate with their own children. This provided evidence that attachment patterns resulting from dismissing relationships with their parents not only remained stable, but also affected the attachment relationships they formed with their own infants.

According to Roisman et al. (2002), however, retrospective designs that rely on subjects' recollections of attachment behavior in infancy is problematic in that adult recollections are subject to faulty memories and influences from subsequent experiences and relationships. Scientific validity mandates that examination both prior to and post the subject of study is by far the most accurate means of objective assessment.

In two of the rare longitudinal studies measuring attachment over a period of more than 20 years, the Bielefeld (Grossmann et al., 2002) and Regensburg (Stocker, 2003) longitudinal studies measured attachment in infancy (1 to 3 years of age), childhood (4 to 10 years of age), adolescence (16 to 18 years of age), and adulthood (18 to 22 years of age). Using a variety of assessments in conjunction with interviews and observational methods, both found significant stability in attachment classifications (Grossman et al., 2005). These studies are extremely important, not only because of the length of the studies and the significance of their findings, but also because they examined attachment prospectively.

Roisman et al. (2002), like the Bielefeld and Regensburg studies, also examined attachment over a significant period of time. However, Roisman and his

colleagues assessed attachment at intervening intervals as well. In addition, while the Bielefeld and Regensburg studies demonstrated stability of attachment patterns, Roisman et al. went a step farther by demonstrating that resilient individuals were actually capable of changing insecure attachment patterns to secure attachment patterns in adulthood.

However, it is important to note that out of Roisman's (2002) 267 original participants, the number of subjects exhibiting a negative to positive change in attachment was only 24. Therefore, such changes are relatively rare. In addition, Roisman found that these participants had all experienced a depressive episode in life, suggesting that this change may only occur following a life-altering mental illness.

Roisman's study is unique because it demonstrates that insecure attachment patterns can be altered. Other studies point to the fact that secure attachments patterns can become insecure under certain conditions. For example, according to De Wolfe and van IJzendoorn (1997), the break down of secure attachment patterns in childhood may be due to family factors affecting relationships, such as life stress, shifts in childcare, and parental sensitivity. In addition, Waters, Weinfield, and Hamilton (2000), analyzed longitudinal studies focusing on attachment stability and found that discontinuity in attachment is related to negative life events. These events, as defined by Bowlby (1953), include the death of a parent, parental divorce, chronic and severe illness of parent or child, drug and alcohol abuse, parental psychiatric disorder, child experience of physical or sexual abuse, and foster care.

In summary, attachment patterns tend to remain stable over time. However, there have been cases where a negative attachment in childhood has changed into a positive attachment pattern in adulthood. Likewise, attachment patterns that are originally positive can change into negative attachment patterns following stressful life events. Foster care presents a life-altering event for children in that it requires that the child form a new bond with a substitute parent. It is important to note that most studies examining the change in attachment over time have involved very young children, or retrospective studies in adults. Few studies have examined attachment in an adolescent population, and none have used assessments specifically designed for this population.

Attachment and Substitute Care

Foster care can be particularly detrimental to attachment, as the process of bonding to substitute caregivers is affected by a number of factors. First of all, many of the negative life events identified by Bowlby are already present within the foster child's family of origin. Alcoholism, drug abuse, sickness, child abuse, and neglect can all weaken the child's ability to trust and depend on their biological parents. This mistrust may carry over into subsequent relationships between the child and alternate caregivers (Newton, Litrownik, & Landsverk, 2000).

In other cases, children may form unhealthy attachments to their biological parents. These bonds can be as strong as secure, healthy attachments, primarily due to what some psychologists believe to be a biological component to attachment (Buss, 1999). While, under normal circumstances, this component serves to enhance the mother-child relationship and promote feelings of security, such

attachments become unhealthy when parents fail to protect and meet the needs of their children. These maladaptive attachments may result in behavior problems and psychopathology. Unhealthy attachments may also lead the child to form subsequent maladaptive attachments, based on this internal working model, throughout their lifetime (Newton, Litrownik, & Landsverk, 2000; Bowlby, 1969).

These children, when placed in foster care, often believe that they are to blame for their removal from the home (Smith & Howard, 1999). This translates into feelings of guilt and shame, leaving the child feeling deficient, inadequate, and worthless (Lazare, 1997). Because shame is associated with the child's sense of self, these experiences often destroy their self-trust, self-efficacy, connectedness, and sense of control (Stone, 1992). Consequently, how these children come to view themselves can impact how they come to view and trust others. For this reason, attachment patterns in these children can look much different from secure attachments in children living with their biological families.

Given that unhealthy attachments carry over to subsequent relationships with substitute caregivers, the question remains as to whether healthy, secure attachments may also carry over to subsequent relationships with substitute caregivers. This question was the focus of research conducted by Marcovich, Goldberg, Gold, Washington, Wasson, Krekewich, and Handley-Derry (1997) and Singer, Brodzinsky, Ramsay, Steir, and Waters (1985). These researchers confirmed that secure attachments were formed between infants aged 6 to 9 months and substitute caregivers. Research on attachment formation to subsequent figures in later developmental stages has yielded similar results. For example, a study of

attachment between toddlers and child care providers revealed that as children spent more time in day care, their Q-Sort security scores relative to these caregivers increased (Raikes, 1993). Dantas et al. (1985) found that orphans aged 7 to 9 months, who had been cared for in an orphanage by multiple care providers, were able to form attachments to their adoptive mothers prior to legal adoption.

Children's attachment to their primary caregiver, whether the bond itself is secure or maladaptive, is exceptionally strong in the preschool years, often to the point of being exclusive. According to Buss (1999), this is based on the needs of the child. Very young children depend more on their parents to meet basic needs for survival and, therefore, their attachment is stronger. As a result, the process of attaching to an alternate caregiver can be more difficult for these children. In many cases, these children maintain the belief that they will return to their biological families and, therefore, refuse to accept their new family. Children also have a tendency to idealize their biological parents, denying memories and the associated emotions of abuse and neglect. Consequently, the strength of their attachment to birth parents is not reduced by physical separation alone (Smith & Howard, 1999). Notably, there is no research available concerning whether older children or adolescents are capable of forming additional attachments.

Another factor which impacts the development of new attachments involves the attitude of the new caregiver. New caregivers are sometimes threatened by the child's attachment to birth parents, and feel uncomfortable discussing the child's biological family or their feelings with regard to the loss of that family (Smith & Howard, 1999). Foster care workers can inhibit the grieving process, as well, by

failing to allow sufficient time for mourning the biological family once parental rights are terminated (Smith & Howard, 1999).

As a result of these factors, children in substitute care are highly vulnerable to attachment difficulties. These problems can severely impact the quality of life for these children both on a temporary and long-term basis. Therefore, the ability to identify and understand how these problems are manifested is essential.

Attachment Problems and Behavior

Children with insecure attachments often display severe behavior problems. For some children, these problems may reach a pathological level. The form of psychopathology most directly associated with attachment problems is Reactive Attachment Disorder. As originally noted in the DSM-III-R, there are two subtypes of Reactive Attachment Disorder: inhibited and disinhibited. The inhibited subtype is characterized by hypervigilance and fear, resulting in withdrawal and ambivalence. The disinhibited subtype is characterized by the absence of selective attachment, resulting in indiscriminate bonding behaviors in both appropriate and inappropriate relationships. Children diagnosed with Reactive Attachment Disorder tend to be oppositional, impulsive, and disruptive, and typically demonstrate severe difficulty forming appropriate social relationships. Reactive Attachment Disorder can also produce serious behaviors associated with violence, suicidal ideation, fire-setting, and sexual aggression (Reeber, 1996).

According to Fonagy et al. (1997), the most frequently identified characteristic of Borderline Personality Disorder (BPD) is impairment of attachment relationships. While individuals with BPD easily form strong attachments to others, these

attachments are short-lived, disordered, chaotic, and destructive. Such maladaptive attachments are related to an interpersonal hypersensitivity that leads to dramatic changes within relationships, a fragmentation of personal identity, overwhelming affective responses, and mental disorganization.

Other research has related Dissociation to disorganized attachments (Bacon & Richardson, 2001). According to Blizard and Bluhm (1994) and Ross (1997), children with abusive caregivers develop dissociation as a means of resolving attachment problems. Because it is so difficult to maintain close proximity to a caregiver that is unpredictable and frightening, children often develop this form of pathology as a protective mechanism (Anderson & Alexander, 1996).

Oppositional Defiant Disorder (ODD) has also been associated with attachment problems. In research conducted by DeKlyen, Speltz, and Greenberg (1996) and Greenberg, Speltz, DeKlyen, and Endriga (1991) approximately 80% of children with ODD demonstrated insecure attachments. This is significant in that ODD is often viewed as a trajectory to antisocial behavior in adulthood.

Sexual aggression in adults, particularly in adults who become sexual offenders, is associated with interpersonal problems that begin in early childhood (Mulloy & Marshall, 1999). Blaske, Borduin, Henggeler, and Mann (1989), for example, found that 86% of rapists and 74% of child molesters had few or no friends as children. In addition, research conducted by Becker, Kaplan, and Kavaoussi (1988) found that 48% of adolescent sexual offenders were diagnosed with Conduct Disorder during childhood. This is significant in that children with avoidant

attachment patterns appear to be at the greatest risk of developing conduct problems (Greenberg, Speltz, & DeKlyen, 1993).

Anxiety and depression are related to the deep feelings of loss and rage that can be produced by maladaptive attachments (Bleiberg, 2001). Research conducted by Sund and Wichstrom (2002) supported this theory by indicating that insecure attachments were associated with depressive symptoms in adolescence.

Wollongong (2002) found that introjective depression, characterized by a preoccupation with achievement, self-criticism, and self evaluation, was predicted by avoidant attachment patterns. Warren, Huston, Egeland, and Sroufe (1997) found that ambivalent attachment patterns in infants were associated with anxiety disorders at age 17.

Substance abuse is often reported by adolescents seeking to cope with anxiety and depression, and can produce even greater interpersonal difficulties (Bleiberg, 2001). Substance abuse also increases the probability of antisocial and violent behaviors. Clinical symptoms are not necessary, however, for maladaptive attachments to lead to substance abuse. Maternal rejection, for example, has been directly linked to marijuana and alcohol use (Vicary & Lerner, 1986).

In conclusion, attachment problems have been linked to Dissociation, Reactive Attachment Disorder, disorders related to sexual deviance, substance abuse, Oppositional Defiant Disorder, depression, and anxiety. Because these problems often manifest themselves through difficult behaviors, they can be especially detrimental for foster children simultaneously attempting to integrate themselves into a new family and bond to new caregivers. Such behaviors typically

produce problems in school, negatively impact socialization, and cause undue stress within the home. As a result, it is not uncommon for foster parents to feel overwhelmed and ineffective and, in many cases, ask for the removal of the child.

Attachment, Behavioral Problems, and Placement Disruption: The Cycle

Placement disruption is a significant problem among foster children displaying behavior problems. Attachment difficulties and behavior problems are both the cause and effect of foster placement disruption, producing a cycle that becomes progressively more intense and deleterious with time. Prior research on placement changes has concluded that the more placements a child experiences, the greater the risk for future disruption (Walsh & Matule, 1984). In addition, children who have multiple or severe behavioral and emotional problems typically experience a greater number of placement breakdowns (Festinger, 1986; Smith & Howard, 1991). According to Smith and Howard (1999), parent-child attachment is significantly associated with severity of child behavioral problems. Penzerro and Lein (1995) found that children who are unable to form positive attachments to caregivers experience a greater number of placement disruptions. This research confirms the intricate relationship between behavior, attachment, and number of placements, suggesting that placement disruption increases difficult behavior. Difficult behavior, in turn, negatively affects attachment and increases the probability of placement disruption.

Placement disruption is not an uncommon occurrence. Pardeck (1984) found that 22% of children with an average of 2.5 years in foster care experienced at least three placements. According to Millham, Bullock, Hosie, and Haak (1986), as many

as 56% of children in care for a minimum of two years experienced three or more placements. The Millham study also found that 14% of children had five or more moves, while research by Kufeldt, Armstrong, and Dorosh (1989) indicated 18% had six or more placements.

Researchers focusing on the extent of conduct problems have found that foster children display a disproportionately large number of problems compared to children in biological families. Using the Child Behavior Check List (CBCL; Achenbach, 1994) to assess undesirable conduct, McIntyre and Keeler (1986) discovered that 50% of the foster children they studied exhibited behavioral difficulties. Also, Clausen, Landsverk, Granger, Chadwick, and Litrownik (1998) determined that 61% of foster children who were administered the CBCL in San Diego scored in the "at risk" range, suggesting the presence of a mental health problem.

A significant study performed by Newton, Litrownik, and Landsverk (2000) focused on the relationship between placement changes and conduct problems for a cohort of foster children over a 12-month period. This study involved 415 foster children remaining in care for at least 5 months. Using the CBCL to assess behavior problems, these researchers found that volatile placement histories contributed to negative internalizing and externalizing behavior. The strongest predictor of placement disruption in this study proved to be initial externalizing behavior. However, this research also concluded that children initially scoring within normal ranges on the CBCL developed increasingly problematic behavior in response to disruptions of primary relationships. In fact, for these 173 children who entered foster

care displaying no significantly difficult behaviors, number of placements proved to be a consistent predictor of increased CBCL scores at the 18-month reassessment. In addition, the multivariate analysis of children experiencing 5 or more placement changes between assessments indicated that number of placements was a stronger predictor of internalizing behavior at the 18-month evaluation than the children's internalizing behavior at the initial assessment. This important finding suggests that some children respond to multiple placements by becoming more withdrawn rather than by acting out in an aggressive or offensive manner. This population appears to have been neglected in previous studies examining externalizing behavior, indicating that the effect of multiple placements, and thus the effect of the attachment-behavior-disruption cycle, is far more widespread than previously suspected.

This study is also important in that it examines the relationship between placement disruption and behavior problems, and suggests that placement disruption is both the cause and effect of problem behaviors. The present study takes this research one step farther by evaluating the role of attachment in this relationship.

Present Study

Understanding what predicts attachment problems is necessary in order to implement appropriate interventions which might prevent attachment problems from developing. Based on the study conducted by Leathers (2002), it could be hypothesized that behavior problems contribute more to maladaptive attachment than placement disruption itself. However, it seems logical that each displacement might increase the chances of subsequent attachment problems.

While Newton, Litrownik, and Landsverk (2000) examined the placement disruption and problem behavior relationship in a foster care population, this is one of relatively few studies with this population, and they did not include attachment in their study. Attachment in general, and the role of attachment specifically in the behavior–disruption–attachment cycle, has not yet been empirically examined in the foster care population. This is disconcerting given the connection between foster children and attachment difficulties. The present study, therefore, is essential in order to close the gaps in research on attachment and provide even more essential information regarding this construct.

The present study was originally designed to examine the relationship among behavior problems, placement disruption, and attachment over time. This would have provided a means of understanding how attachment is affected by these variables. However, because the available data did not provide this capability, it was necessary to formulate new hypotheses. It was first hypothesized that behavior problems and attachment would be negatively correlated, so that as behavior problems increased, attachment would decrease. Secondly it was hypothesized that placement disruption and attachment would be negatively correlated, so that as placement disruption increased, attachment would decrease. Finally, the present study focused on whether placement disruption or behavior problems would be more associated with attachment. This information will promote a greater understanding of attachment, contribute to the ultimate goal of preventing and/or treating attachment problems in children.

CHAPTER II:

METHOD

Data Source

Data for the present study was archival data obtained in conjunction with the National Survey of Child and Adolescent Well-being (NSCAW). This survey is a longitudinal study authorized by *The Personal Responsibility and Work Opportunity Reconciliation Act* of 1996, and conducted by the Department of Health and Human Services (DHHS). The purpose of the NSCAW was to examine crucial programs, policies, and practices concerning federal, state, and local governments, as well as child welfare agencies. It is the first national study of child welfare to obtain information directly from children and families. It is also the first attempt to examine the relationship between child and family well-being and other factors, including child welfare system experiences, environment, and family characteristics.

The NSCAW provides a wealth of information relative to foster children and these factors, of which only a small portion is examined in the present study. The data utilized herein pertains primarily to two of the factors examined: relationship with caregiver and child behavior.

It should also be noted that the NSCAW was conducted in four Waves, with Wave one beginning when the child came into care and Wave 2 occurring 12 months after the close of the original investigation. Wave three began 18 months following the close of the abuse or neglect investigation, and Wave four pertained

only to children in long-term foster care, who entered care prior to the beginning of the survey. Because no relationship with caregiver assessment was conducted at Wave two, and no initial information was available for children in long-term foster care, data pertaining to Waves two and four were omitted from this study.

Participants

The Children

Participants of the present study include those children in the NSCAW survey between the ages of 11 and 17 years, who completed the Relationship to Caregiver (RC) assessment, and who had cases opened with their local Child and Family Service Agency between October 1999 and December 2000. Participants were randomly selected from a subject pool of 8,961 children referred by 110 county agencies in 40 states nationwide. All children had been referred to state agencies due to allegations of sexual abuse, physical abuse, and/or parental neglect. No children who were known perpetrators of abuse or siblings to other participants were included.

At Wave 3, there were 5,500 cases. Of these, 4,422 children were under 11 years of age and were, therefore, eliminated from the present study. Of the remaining 1,078 children, 882 were still residing with biological parents or relatives, making them ineligible for this study. Also, there were 7 cases with no information available relevant to number of foster home placements, and these were also eliminated. One additional case was eliminated as there was no available CBCL score, leaving a total of 188 cases for the present study. All of these children were in

foster home placements at Wave 3. Because the data collected for these children did not include the number of foster home placements until Wave 3, the information used in the present study was taken from Wave 3 data.

Of these 188 children, 70 were male and 118 were female. Fifty-three children were listed as Black, 105 were White, 9 were Native Indian/Alaskan, and 3 were listed as "other". In addition, 14 cases reported no race information, and 4 cases reported that the race was unknown. The mean age was 14.03 ($SD = 1.30$) with 12 being the youngest age and 16 being the oldest age of those children included in the study.

The child's current grade was recorded at Wave 1. Of the 188 children in this sample, 13 (6.9%) had some college credit, 8 (4.3%) were in a vocational or technical school, 27 (14.4%) were in the 12th grade or obtaining a GED, 20 (10.6%) were in the 9th to 11th grade, 8 (4.3%) were in or below the 8th grade level, 1 (.0%) refused to answer, and 111 (59.%) failed to report grade level at Wave 1.

Of the 188 children studied, 127 (67.6%) responded to the question regarding whether they had ever been in a residential treatment facility. Of these 127 children, 29 (22.8%) answered affirmatively. Of the 28 (15.1%) children who responded, 20 (71.4%) were placed in a residential treatment facility at Wave 3. The average number of days these children had spent in residential treatment was 24.15 ($SD = 89.81$) days at Wave 3, with a range of 0 – 574. Of the 94 (50.0%) children who responded, 89 (94.7%) were currently receiving some form of mental health treatment at Wave 3. Of the 130 (69.1%) who responded, 24 (14.4%) were receiving outpatient services from a private professional at Wave 3. Finally, of the 17 (9.0%)

who responded, 14 (82.4%) were receiving mental health treatment as an outpatient at Wave 3.

At some point in their lives, these children spent an average number of 10.01 days in an emergency shelter, and an average of 21.56 days in a group home placement. In addition, an average of 1.40 days had been spent in juvenile detention.

The Caregivers

At Wave 3, 53 primary caregivers labeled themselves as Black, 105 as White, 9 as Native Indian/Alaskan, 3 as "Other". Fourteen did not report their race, and 4 reported that they did not know their racial background. The majority of primary caregivers (55, 29.3%) were between the ages of 36 and 45 years, 25 (13.3%) were over age 55 years, 38 (20.2%) were 46 to 55 years, 37 (19.7%) were 26 to 35 years, and 4 (2.1%) were under 25 years of age. Nine (4.8%) primary caregivers reported "Don't Know" for their age, and 20 (10.6%) failed to provide this information.

At Wave 1, 26 (13.8%) of the primary caregivers had some college credit, 7 (3.7%) had received training from a vocational or technical school, and 39 (20.7%) had either graduated from high school or received their GED. Thirty-three (17.6%) primary caregivers reported a ninth grade to eleventh grade education, 72 (38.3%) reported no educational information, and 1 (.0%) reported "Don't Know". Total family income was recorded for caregivers at Wave 2, but not at Wave 3. At that time, 49 caregivers reported a yearly income of \$40,000. and greater. Twenty-one caregivers reported a yearly income of \$30,000. to \$39,999., 27 reported a yearly income of \$20,000 to \$29,999., and 31 reported an income of \$10,000. to \$29,999. Twelve

caregivers reported that their yearly income was in the \$0. to \$9,999. range, while 16 claimed not to know their range of income, 21 refused to respond, and 11 caregivers failed to respond.

While this data set reported information for a primary caregiver and a secondary caregiver, a significant amount of information was missing for the secondary caregiver. Therefore, the data for secondary caregivers was omitted from this study.

Measures

Child Behavior Checklist (CBCL)

The Child Behavior Checklist (Achenbach, 1994) was used to assess child behavioral problems. This assessment provides clinicians with a comprehensive description of behavior that allows for a discrimination between typical behavior and atypical behavioral disturbances. While the CBCL consists of both a youth and parental report, only the parental report was utilized. It was designed for children aged 2 to 18 years, and is comprised of a 100-item checklist for behavioral problems and a social interpreting scale. Only the behavior problem scale, which consists of three subscales: Internalizing, Externalizing, and the Total Problems scale, was utilized. Scores are T-scores, with a mean of 50 and standard deviation of 10. Scores of 70 and above are in the clinical range with scores of 60-70 falling in the "at risk" range. Higher scores indicate more severe behavior problems.

Inter-rater reliability is .96 for the 118 behavior problem items (Achenbach, 1994). Test re-test reliability of item scores was determined by testing 72 non-

referred children by a single interviewer twice with a 1-week interval between tests. Test re-test reliability was .95 for the 118 specific problem items.

Internal consistency of the Internalizing scale ranges from .88 to .92. Internal consistencies of the Externalizing and Total Problems scores range from .92 to .96 (Achenbach, 1994). Concurrent validity has been demonstrated by a moderate correlation between the CBCL and measures of parental stress due to negative child behaviors (PSI Child Domain, $r = .56$) and overall parental stress (PSI Parent Domain, $r = .40$).

Relationship to Caregiver Assessment (RC)

The Relationship to Caregiver Assessment (RC; Institute for Research and Reform in Education, Inc., 1998; see Appendix A) was originally section III of the Research Assessment Package for Schools (RAPS), and was designed to assess parent-child and teacher-child relationships. The NSCAW revised this measure by changing teacher-child questions to parent-child questions, by using questions from only two of the six subdomains within one of the two major domains assessed, and by deleting some questions from these subdomains. The major domain relevant to the revised measure is the Beliefs About Self Domain. The two relevant subdomains are the Perceived Relatedness Subdomain and the Experiences of Support from Parents Subdomain.

To score The Relatedness Subdomain in the original version, the mean scores for each section were used to obtain a mean score for the total subdomain. A

total mean score greater than or equal to 3.75 was considered an optimal score, while a total mean score below 3.00 was labeled "High Risk".

The Experiences of Support from Parents Subdomain was also scored by obtaining mean scores for each section, and then calculating a total mean from these mean scores. A total mean score greater than or equal to 3.25 was considered an optimal score for this subdomain, while a total mean score below 3.00 was labeled "High Risk".

The NSCAW's revision of the RC contains a total of 24 statements. The first 12 statements pertain to the primary caregiver, while the last 12 statements pertain to the secondary caregiver. In both its original and revised forms, statements are rated on a likert scale from 1 "Not At All True" to 4 "Very True". Of the 24 statements, 7 items for each caregiver are reverse-scored.

Interpretation of the revised RC is problematic for several reasons. For example, changing statements to apply to the parent-child relationship rather than the teacher-child relationship, and omitting a number of other statements altogether affects the cut-off scores used for the original interpretation. Therefore, it is not possible to interpret the revised RC based on mean scores. Furthermore, the NSCAW never interpreted the scores collected, and provided no information relevant to the interpretation of scores. Multiple attempts to obtain information on interpretation of the revised version from the Institute for Research and Reform in Education and the NSCAW were unsuccessful.

As no other method of interpretation was available, the scores for each item were totaled, resulting in a total range of 24 to 96, with 96 being the most favorable view of the parent-child relationship.

The standardization sample for the original RAPS consisted of 2,429 boys and girls, 10 to 14 years of age, from four middle schools in Rochester, N.Y. Three of the middle schools were located in an urban school district and one was located in an adjacent suburban school district. The sample was stratified by both ethnicity and gender.

Reliability of the RAPS was obtained for each construct. The constructs that are relevant to the RC assessment, as utilized by the NSCAW, are as follows:

Construct: Parental Emotional Security, $\alpha = .74$, Construct: Peer Emotional Security, $\alpha = .86$, Subdomain: Experiences of Support from Parents, $\alpha = .86$.

Internal consistency of the original measure was assessed at .88 overall. With regard to subscales, Cronbach's α for Parental Emotional Security and Involvement was .65 to .76; while Cronbach's α for Autonomy Support and Structure was .28 to .66.

Whether there was any attempt to standardize the revised RC is unknown. Again, multiple attempts to obtain standardization information from the NSCAW were unsuccessful.

It should be noted that Lynch (1992) and Lynch and Cicchetti (1997) used a measure similar to the RC in their research on attachment. Their self-report measure, called the Relatedness Questionnaire, consisted of 17 nearly identical

statements, rated on an identical scale. This measure was broken down into two subscales: emotional quality and psychological proximity seeking. Internal consistency was demonstrated by alphas ranging from .67 to .83 for emotional quality and .83 to .93 for psychological proximity seeking. Furthermore, the "patterns of relatedness" yielded by this measure were equated to secure and insecure patterns of attachment (Cicchetti et al., 1995).

Due to the lack of information available on the revised version of the RC, however, the reliability and validity of this measure, as it was used by the NSCAW, is unclear. For the present study, Cronbach's alpha was .4437 for the total scale, which included statements relevant to both caregivers.

Procedure

Instrument Selection

From October 1997 to December 1997, an Instrument Design Team (IDT), formed for the purpose of designing/selecting data collection instruments, met regularly to discuss instrument content. This team, lead by Ina Wallace, Ph.D., included researchers in child maltreatment, child development, social welfare services, psychometrics, survey interviewing, and administration of survey data collection operations. Measurement criteria were developed by the IDT, with criteria for child measures focusing on the following factors: a) relevance to the theoretical model, b) data source, c) measurement properties, d) age applicability, e) administration factors, f) cultural and linguistic considerations, and f) administration

by professional field interviewers. All measures selected were pre-tested prior to use.

All instruments were adapted for computer-assisted data collection. In order to do so, programming specifications were developed to a) number and sequence questions, b) develop routing instructions and customize wording for pre-loaded information about subjects, c) specify range checks, d) script consistency checks, e) script transition statements between modules and question series, f) develop on-screen interviewer instructions, and g) script mandatory reporting probes for responses requiring reports to authorities. Finally, audio files for the self-administered modules of child/caregiver instruments were recorded and tested. These audio files were recorded in both English and Spanish.

For all school-aged children, interview and assessment items produced a wide variety of information. In addition to the child behavior and relationship data discussed in the present study, items addressed social competence, exposure to violence, mental health, school engagement, socialization, achievement, and service experience and satisfaction. For children in the present study, who were age 11 to 17 years, the interview also included questions relative to physical health, mental health, and measures of cognitive development. However, these additional factors are not addressed in the present study.

Recruitment of Families

Following the recruitment of agencies and the identification of sample families, these families were contacted for recruitment purposes. There were four

options for obtaining informed consent for participation, including field representatives directly contacting sample families, sending a postcard with passive consent, sending a postcard with active consent, and direct contact by agency representatives.

Passive consent consisted of mailing families letters about the study and requesting that uninterested families return postcards indicating that they do not wish to participate. Active consent was similar in that letters were sent to all families with a request to return postcards, but only if the family was interested in participating.

Most of the participating agencies agreed to have field representatives contact sampled families. Nine sites, however, required advance consent by either the active or passive consent method for all families, followed by a visit from the field representative. Another five sites required advance consent for all families who had been investigated and whose complaints were found to be unsubstantiated. Of these 14 sites, one required the passive consent process, while families referred by the remaining 13 sites were contacted through the active consent method.

Pretest Activities and Pilot Tests

In January and February of 1978, pretest activities took place. These activities involved focus groups with biological caregivers, foster parents, caseworkers, and teachers. Each group was asked to review and comment on introduction materials to determine if these materials increased motivation to participate in the study. Additionally, groups examined the ability of materials to

explain the purpose of the study, participants' role in data collection efforts, and confidentiality concerns. Groups were also asked to comment on the personal burden of participation, especially with regard to the proposed compensation. Finally, participants were asked to comment on questions to be asked during the study to determine if questions were difficult to answer, sensitive in nature, or posed other problems for the test population. As a result of these pretest activities, a number of changes were made in data collection instruments and introduction materials, and materials were tailored to target specific populations.

Another round of pretesting activities took place in June 1998. This round focused on respondents' understanding of questions, and the ability of project-developed questions to obtain targeted information. The administration time required for assessments and overall interview length were also examined at this time.

In January, 1999, a small-scale pilot study of data collection procedures was conducted. Several data collection applications were tested for field readiness at this time. The results of the pilot study allowed for the identification and revision of a number of data collection procedures and field staff training techniques that proved to be problematic.

In the summer of 1999, a similar pilot test was conducted to examine the Spanish survey instruments and introduction materials. The accuracy of interview, instrument, and material translations were assessed following this test.

In September of 1999, a full-scale, multi-site pilot test was conducted to assess Wave 1 sampling and data collection procedures. This pilot test provided valuable information regarding the following problems: a) at some agency contact

sites, access to families was difficult to obtain, b) family contact information was not always accurate, and c) interview length proved to be a burden to both field representatives and participants due to time constraints.

To address these problems, alternative methods for obtaining family contact information were identified and implemented, and field supervisors promoted cooperation from agencies through monthly telephone contact and increasing site visits. In addition, the number of field representatives was increased. As a result, interviewers visited homes in pairs to allow for simultaneous interviews within the home. Traveling interviewers were also added to act as trouble-shooters in some areas.

Data Collection: Wave 1

Once sample families were identified and randomly selected, a personalized introductory letter and NSCAW brochure was mailed to each caregiver. These materials were mailed approximately eight weeks following the close of the investigation that resulted in the removal of the child from their biological family. Letters emphasized the importance of the study and the confidentiality of all data. In addition, these materials noted the study's sponsorship and non-affiliation with the local child protective agency. Approximately one week after the materials were mailed, the field representative contacted the family by phone to schedule an in-person interview.

Prior to the in-person interview, field representatives were given photo identification badges, a project authorization letter, a confidentiality agreement, and a copy of NSCAW's Federal Certificate of Confidentiality. Consent forms were also

provided. Two types of consent form were utilized. The first was to be signed by the foster parent, while the second was to be signed by the child's biological or original guardian. Child assent forms were also provided in order to obtain children's cooperation with the study.

For the purpose of calculating response rates, a key respondent was identified for each family. For those children aged 11 to 14 years of age, which is the age range for children participating in the present study, the child was the key respondent. For other parts of the NSCAW study involving younger children, the adult caregiver was identified as the key respondent.

During the in-person meeting, investigators answered questions regarding the study and conducted interviews with both the caregiver and the child. Information provided during these interviews was utilized for other portions of the NSCAW study unrelated to the present endeavor. In addition, appointments were scheduled for the completion of the CBCL and RC assessments. Upon completion, scores were recorded for these measures.

At the end of the initial interview with the key respondent and the caregiver, the caregiver received a \$25.00 cash incentive, which was later increased to \$50.00 with OMB and IRB approval. Children were given a \$10.00 gift certificate to a local music or video store. With OMB and IRB approval, the amount of the gift certificate was also increased during the data collection stage to \$20.00.

Because caseworker cooperation was required for referring cases and participating in interviews relevant to other information utilized in the NSCAW study, every effort was made to maintain a positive working relationship with child

protective workers. Meetings and presentations were held with agency personnel to explain the study, and their participation in data collection. Letters of appreciation and support were provided by the Federal Project Officer to agency directors and liaison. Holiday poinsettias and candy were offered to agency employees as tokens of appreciation. Agencies also received a small remuneration, ranging from \$100. to \$1,000. In some cases, these monies were given as contributions to special agency funds, or were used to purchase toys or other materials for the agency waiting area.

Data Collection: Wave 2

Twelve months after the close of the initial investigation, agencies provided follow-up data on the children assessed in Wave 1. These data included the number and type of placements each child in Wave 1 had experienced since last assessed. New caregivers were contacted by field workers, provided with information about the study, and asked to sign a consent form in a manner identical to that performed in Wave 1. Although additional interviews were conducted and additional testing was completed in Wave 2, this information is not included in the present study as no RC questionnaire was completed. However, the number of placements each child experienced was noted, as this number was added to the number of placements reported in Wave 3 for the total number of placements experienced between Waves 1 and 3.

Data Collection: Wave 3

Wave 3 commenced 18 months after the close of the initial investigation, or 6 months after Wave 2. New caregivers were contacted, given information relative to the study, and asked to sign a consent form identical to the manner in which this was conducted in Waves 1 and 2. All caregivers were interviewed and completed additional testing. Agencies provided information pertaining to the type and number of placements each child experienced between Wave 2 and Wave 3, and this number was added to the information obtained at Wave 2 to provide the total number of placement disruptions since Wave 1. In addition, RC and CBCL questionnaires were administered, scored, and recorded.

Data Control

Quality control checks were included in every major NSCAW activity. A multi-faceted approach was used to evaluate field staff performance in conducting child assessments and monitoring collected data.

Field supervisors conducted in home observations to evaluate each field representative's ability to conduct child assessments. In some sites, regional supervisors participated in this process. Respondent approval was required for each observation. Supervisors provided remedial training on procedures as required. Field observation reports were then filed with NSCAW staff.

A total of 177 field observations were performed during Wave 1. However, it is not known how many of these observations were made for adolescents participating in the present study. Evaluations included a variety of factors relative to a) preparedness, b) gaining cooperation, c) use of questionnaire administration

tools, d) probing techniques such as pausing and repeating questions when needed, e) administration of assessments, and f) the representative's rapport and comfort with the child.

The results of these quality control checks were generally positive, with only minor deficiencies noted. The most common areas of weakness included a) maintenance of eye contact, b) effective use of probing techniques, c) allowing the respondent to follow along as the consent form was read, and d) emphasizing key words or phrases in questions. Some field representatives received retraining on the proper set-up and coordination of child assessment materials.

Additionally, random telephone verification interviews were conducted with caregivers. These interviews included questions pertaining to the representative's behavior, mode of contact, and whether incentives were provided. All abnormalities reported in these conversations were investigated by regional and field supervisors, and corrective actions were taken as required. During this process, no cases of interview falsification or serious deviations from data collection protocol were noted. Retraining of field representatives was provided for all minor deficiencies.

To monitor the overall quality of data collected, project staff reviewed selected frequencies and cross tabulation of interview data on a monthly basis. Periodic distributions and frequencies were run for all standardized assessments and scales to identify patterns of responses that might signify potential data falsification. Data quality issues were addressed by the analysis team and field staff. Frequency reviews identified a number of data entry problems unrelated to the present study. These problems were recorded and corrected through staff retraining.

Similar quality control procedures were employed in Waves 2 and 3.

However, only current caregivers were contacted for phone verification, and new field representatives were selected for review at a higher rate than experienced representatives. One case of interviewer falsification was found during the Wave 2 verification process. It is not known whether this falsification occurred in connection with the adolescent cases examined herein. However, this representative was immediately terminated and all of her cases were reviewed and verified. The falsified interview was deleted.

Data Processing

During interviews, data were collected both in electronic and hard copy form. Child, caregiver, and caseworker data were recorded using Computer-Assisted Interview (CAI) instruments. Local agency and assessment data was collected in paper form. CAI instruments were programmed into the Computer-Assisted Survey Execution System (CASES) language. This language was developed by the Computer-Assisted Survey Methods Program at the University of California at Berkley.

Hardcopy instruments were forwarded to a central location for conversion to electronic form. Data from these instruments were entered using double-entry verification. Final data sets were constructed to prepare the data for release.

Once data files were constructed and finalized, they were put into the Data Delivery System (DDS) software and program. In order to do so, the data set was converted to the format required by DDS. Definition files were created for variables,

and the DDS and Source Viewer were packaged for delivery on CD-ROM discs. Data used to create the DDS was then archived for future reference.

Preparing the Data for Analysis

Upon receipt of the archived data, the variables were carefully examined to determine which would be pertinent to the present study. Descriptive variables for the foster children and their caregivers, data for the CBCL and RC, placement information, and other relevant variables were extracted from the data set to create a new data set relevant to the present study. The RC and CBCL were available at Waves 1 and 3, but not at 2. The reverse-scored items for the RC assessment were recoded, and a total RC score for Wave 3 was recorded for each participant.

The number of foster home placements since Wave 1 was a derived variable reported only at Wave 3. Therefore, it was impossible to know the number of foster home placements the child had experienced at the Wave 1 and Wave 2 interviews. Seven cases reported that the child had, at either Wave 1, Wave 2, or Wave 3, lived with a foster parent, but no number of foster home placements was recorded. These cases were also deleted from the new data set.

When available, descriptive variables reported at Wave 3 were extracted. However, as noted in the Participant section, some descriptive information was reported only at Wave 2. This Wave 2 information was included, and noted as such. As explained in the participant section, those under the age of 11 years were deleted from the data set, along with those who had never been placed in foster care. One additional case was then deleted from the data set, as there was no CBCL externalizing score available for that child.

Because there were no RC or CBCL scores available for Wave 2, and no number of foster home placements available for Waves 1 and 2, it was not possible to examine changes in these variables over time. Therefore, the research question was adjusted to examine the relative contribution of child behavior problems and placement disruption to quality of attachment.

CHAPTER III:

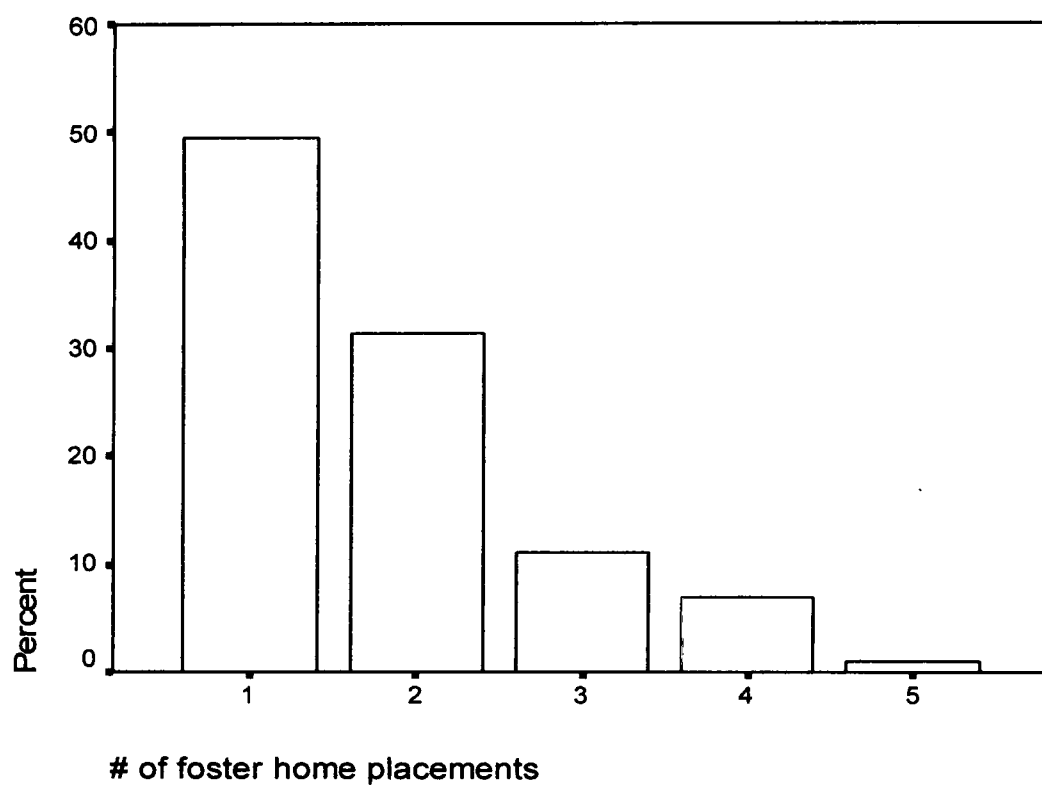
RESULTS

Descriptive Analyses

Descriptive analyses were conducted on the predictor and outcome variables for the subsequent multiple regression. Predictor variables included the number of foster home placements and CBCL Externalizing Behavior scores, indicating problem behavior, with an outcome variable of total RC scores, indicating attachment. Figure 1 presents the percentage of foster home placements for the 188 children included in the sample. The majority of these children had experienced only one foster home placement (49.5%), with no children experiencing over five foster home placements. The mean number of foster homes experienced by Wave 3 was 1.79 ($SD = .97$).

The CBCL Externalizing Behavior score served as the second predictor variable. The mean Externalizing Behavior score was 61.77 ($SD = 11.88$), with scores ranging from 32 to 88. This score falls approximately a standard deviation above the normative mean of 50, with a standard deviation which is only slightly higher than the expected value of 10. The total RC score served as the outcome variable, and was obtained by summing the item scores. The mean total RC score was 55.60 ($SD = 8.97$), with scores ranging from 17 to 69 out of a possible 96. As previously indicated, no clinical cutoff scores are available for this instrument.

Figure 1.
Percentage of Foster Home Placements Experienced By Wave 3 of the Study



Simple Correlations

Pearson correlations were conducted to examine the relationships between the predictor variables of the total number of foster placements and behavior problems and the outcome variable of attachment. Because the hypotheses were directional, an alpha value of .10 was utilized.

There was a significant negative correlation between the CBCL Externalizing Behavior scores and the total RC scores ($r = -.31, p < .001$). This means that as behavior problems increased, attachment decreased. There was no significant correlation found between the number of foster home placements and total RC scores ($r = .12, p = .11$) or CBCL externalizing standard scores ($r = .05, p = .54$).

Regression Analysis

A simultaneous multiple regression analysis was conducted, with the RC scores as the outcome variable, and CBCL externalizing scores and number of foster home placements as the predictor variables. Together, CBCL Externalizing Behavior scores and number of foster home placements explained a significant amount of the variance in attachment scores, ($R = .33, R^2 = .11$), $F(2, 185) = 11.44$, $p < .001$, accounting for 11% of the total variance. Semi-partial correlations revealed that the CBCL Externalizing Behavior score accounted for 10% of the variance, $p < .001$, while the number of foster home placements approached significance, accounting for 2% of the variance, $p = .062$.

Exploratory Correlational Analyses

To develop hypotheses about the limited results associated with placement disruption, additional correlational analyses were conducted. As 93 (49.5%) of the total sample of 188 had experienced only one foster home placement, it was hypothesized that these children may not have experienced enough placement disruption to affect CBCL and/or RC scores. As a result, the sample was adjusted to include only those children who had experienced two or more foster home placements. In this revised sample ($N = 95$), the mean number of foster home placements was 2.56 ($SD = .81$), with a range of 2 to 5. The mean CBCL score was 62.75 ($SD = 11.05$), with a range of 33 to 88. The mean RC score was 55.64 ($SD = 9.44$), with a range of 17 to 69 out of a possible 96.

In this sample ($N = 95$), there was a significant positive correlation between the adjusted number of placements and RC scores ($r = .25, p = .02$). In other words, as the number of placements increased, attachment improved. Additionally, there was a significant negative correlation between CBCL Externalizing scores and RC scores ($r = -.24, p = .02$). However, no significant correlation was found between the adjusted number of placements and CBCL Externalizing scores ($r = -.06, p = .59$).

Another exploratory analysis was conducted with the original sample ($N = 188$). A Pearson correlation was conducted to determine if the number of days spent in foster care, rather than the number of placements, was correlated with RC scores. The average number of days spent in foster home placements at Wave 3 was

170.51 days ($SD = 205.76$). Results indicated no significant correlation ($r = .04$, $p = .57$) between the number of days spent in foster care and attachment.

CHAPTER IV:

DISCUSSION

The attachment, placement disruption, and child behavior problem cycle among children in foster care is intricate and complex, and can have severe maladaptive developmental consequences (Clausen et al., 1998; Milhan et al., 1986). Despite its importance, most studies in this area have been limited to the study of the relationship between placement disruption and child behavior problems, and none have examined the association of those two factors with attachment during adolescence. The exploration of attachment is particularly important based on the research suggesting that unhealthy attachments are associated with a wide range of emotional and behavioral problems (Reber, 1996; Fonagy et al., 1997; Bacon & Richardson, 2001; Blizard & Blum, 1994; Ross, 1997; Anderson & Alexander, 1996; Greenberg, Speltz, DeKlyen, & Endriga, 1991; Mulloy & Marshall, 1999; Kavaoussi, Kaplan, & Becker, 1988; Greenberg, Speltz, & DeKlyen, 1993; Bleiberg, 2001; Sund & Wichstrom, 2002; Wollongong, 2002; Warren, Huston, Egeland, & Sroufe, 1997; Vicary & Lerner, 1986). This study was originally designed to explore which of the two factors, over time, might best predict subsequent attachment problems in adolescence. However, because of limitations in the archival data set, the author was limited to examining the correlations between attachment and the other two components of the cycle during the same time period.

The results of this study indicate that there is a stronger relationship between externalizing behavior problems and attachment, than between the number of foster

home placements and attachment. Results indicated that behavior problems accounted for 10% of the variance, while the number of displacements accounted for only 2% of the variance, in attachment. Results indicated that the better the parent-child attachment, the fewer behavior problems exhibited by adolescents aged 11 to 16 years. This seems logical in that children who are closer to their caregivers are more likely to respect them and strive for their approval. It would also make sense that children who behave better would have better attachments to their caregivers. This finding is in keeping with studies performed by DeKlyen, Speltz, and Greenberg (1996) and Greenberg et al. (1991), which indicate that a high percentage of children with behavior problems have insecure attachments.

Contrary to expectations, placement disruption was not significantly correlated with attachment in this adolescent sample. Furthermore, the contradictory finding in the exploratory analysis linking increased placements with improved attachment is difficult to interpret. These results contradict findings from previous research indicating that children with insecure attachments experience more placement disruption (Penzlerro & Lein, 1995). One possible explanation for this contradiction is relevant to the nature of the present sample. As illustrated in Figure 1, the majority of adolescents in the present study experienced only one foster home placement, with only a small number experiencing over 3 placements. Therefore, there was not sufficient statistical power to detect correlations with a sample in which nearly half the children had experienced only one placement.

A supplemental exploratory analysis was conducted with those adolescents who had experienced two or more foster home placements ($N = 95$). In contrast to

the hypothesis, this analysis revealed that there was, in fact, a significant positive correlation between the number of foster home placements and attachment scores ($r = .25, p = .01$), meaning that the more foster home placements experienced, the greater the caregiver-child attachment. This unexpected finding suggests that there may be other factors affecting RC scores. One such factor may be the attitude of the participants. For example, if adolescents desire a stable home, this may lead them to view their attachment in a more favorable, yet unrealistic, manner.

Another unexpected finding was that placement disruption was not significantly associated with child behavior problems. This finding contradicts those of Barth and Berry (1988) and Festinger (1986), who found that children with multiple and/or severe behavior problems experience more placement disruption. Again, the nature of the present sample may provide an explanation. In addition to the large number of participants experiencing very little placement disruption, the behavior problems experienced by these participants as a whole were not considered severe. The finding that these foster children exhibited more behavior problems than the general population is in keeping with those of Clausen et al. (1998) and McIntyre and Keeler (1986), who found that at least 50% of their samples scored in the "at risk" range or higher on the CBCL. However, participants of the present study generally did not exceed the "at risk" range. As a result, future studies utilizing adolescents with more severe behavior problems may, in fact, find a correlation between behavior problems and placement disruption.

Limitations

One of the most important limitations of this study involves the limitations of the archival data set. The dataset did not have vital variables readily available. For example, some variables of interest at the outset of the study were not included in the dataset received by the author. Upon consultation with Cornell University, it was discovered that these variables were only available from Cornell at the cost of several thousand dollars. These variables included the length of time spent in each foster home placement, whether there were intervening placements with relatives, and data on children placed in long-term foster care. Therefore, several variables that would have helped clarify the results were not able to be included, or could not be derived from the data available.

In a related issue, some of the data was not collected at all waves, limiting this study's ability to measure changes in attachment and placement disruption trends over time. For example, RC scores and CBCL scores were not recorded at Wave 2, and the number of foster homes experienced was not available until Wave 3. Relating changes in attachment to changes in behavior problems or to changes in the number of foster homes experienced may have provided additional insight into the nature of the attachment-behavior-placement disruption cycle.

A second limitation involved the nature of the sample. In examining the differences between results from prior studies and the results cited herein, it is important to consider the differences between the children sampled. Previous research, for example, generally focused on children who had spent years in the foster care system (Pardeck, 1984; Milhan, 1986), while the present study focuses

on children just entering foster care. For this reason, children in the present sample experienced far fewer placement disruptions, and the amount of time spent in each placement could not be comparatively examined. Approximately 90% of the children had experienced only one to two foster homes, with the average child spending less than 6 months in care. As a result, it is highly likely that adolescents in this study who currently exhibit no history of placement disruption may well experience disruption in the future, with those children exhibiting the most severe behavior being the least likely to maintain placements over an extended period of time.

In addition to these limitations, the construct validity of the attachment measure was questionable. Attachment, in general, is a very difficult concept to measure and, as a result, there are very few attachment assessments available to researchers. In fact, the RC questionnaire is the only measure that examines the nature of the caregiver-child relationship during adolescence. It should also be noted that the NSCAW altered the original assessment, without making attempts to standardize or interpret the revision. This made interpretation of the measure for the present study impossible. As there were no clinical cutoffs to aid in interpretation, the item scores were combined to yield a total score for research purposes.

Future Research

Because this study was unable to examine the development of attachment in a sample of foster care children, it is recommended that future studies determine the number of placements experienced, attachment, and behavior problems in a prospective longitudinal study. Changes in these variables will be more apparent and correlations will be better defined by data collected over a more extended length

of time. In addition, the data collected regarding the foster care placement experienced should be more specific, including factors such as the sex of the primary caregiver and the length of time spent in each separate placement.

Future research should also focus on obtaining a sample of children who have spent a significantly greater amount of time in foster care. The longer children remain in foster care, the more likely they are to experience placement disruption, creating a broader range of data regarding the number of placements experienced and the length of time spent in each. The length of time spent in placements is an important consideration, given that children able to maintain placements for only brief periods of time are less likely to form attachments in that time.

Additionally, a sample that more definitively demonstrates behavior problems, as opposed to the present sample comprised mostly of adolescents falling in the "at risk" range, may provide a more accurate assessment of the impact of behavior problems on attachment. This may be possible given that the present study, from which this data was derived, is ongoing, with data now available for Wave 4. This data is much more likely to yield the results hypothesized herein. Eventually, it may be possible to track these adolescents to adulthood, potentially revealing interactions between behavior, attachment, and placement disruption that are not understood at present.

Finally, while the present study identifies a relationship between externalizing behavior problems and attachment, it does not address the reason for the relationship. Therefore, it is unknown whether adolescents exhibit behavior problems because they have an insecure attachment to their caregivers, or if behavior

problems inhibit parental responsiveness, weakening attachment. Causality of maladaptive attachments should be explored in future research to further clarify the attachment, behavior, placement disruption cycle.

Conclusions

In summary, attachment is a relatively recent psychological concept that is not uniformly defined among psychologists. In addition, relatively few attachment assessments are available, and this is particularly problematic when studying adolescents. Empirical studies to date have provided clear evidence that attachment has a profound impact on behavior, development, psychological health, and social adjustment. For this reason, it is crucial that research continue to expand our understanding of attachment in order to develop appropriate interventions for attachment-related problems.

Quite possibly, there is no population more affected by attachment difficulties than children in foster care. Research has already linked attachment to child behavior problems (Barth & Berry, 1988), and to placement disruption (Penzerro & Lein, 1995). The present study takes our understanding of attachment one step further by determining that externalized, maladaptive behavior is a stronger predictor of attachment problems than multiple foster home placements. This knowledge can provide a valuable contribution to the development of intervention strategies addressing attachment problems. In addition, the limitations of this study provide a framework for the development of more specific, concise, and fruitful research in the future.

APPENDIX A

RELATIONSHIP WITH CAREGIVER (RC)

Now I want to ask you about your relationship with your (fill Caregiver A). I am going to read a list of different statements and for each one I want you to tell me how true the statement is about you. Remember that your answers are private. Please tell me what you really feel or think.

1. When I'm with my (fill Caregiver A), I feel good. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

2. When I'm with (fill Caregiver A), I feel mad. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

3. When I'm with my (fill Caregiver A), I feel unhappy. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

4. My (fill Caregiver A) enjoys spending time with me. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

5. My (fill Caregiver A) does a lot to help me. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

6. My (fill Caregiver A) doesn't seem to have enough time for me. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

7. My (fill Caregiver A) doesn't seem to know how I feel about things. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

8. My (fill Caregiver A) trusts me. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

9. My (fill Caregiver A) doesn't let me make any of my own decisions. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

10. My (fill Caregiver A) is fair with me. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

11. My (fill Caregiver A) doesn't think I can do very much. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

12. I don't know what my (fill Caregiver A) wants from me. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

Now I want to ask you about your relationship with your (fill Caregiver B). I am going to read a list of different statements and for each one I want you to tell me how true the statement is about you. Remember that your answers are private. Please tell me what you really feel or think.

1. When I'm with my (fill Caregiver B), I feel good. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

2. When I'm with (fill Caregiver B), I feel mad. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

3. When I'm with my (fill Caregiver B), I feel unhappy. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

4. My (fill Caregiver B) enjoys spending time with me. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

5. My (fill Caregiver B) does a lot to help me. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

6. My (fill Caregiver B) doesn't seem to have enough time for me. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

7. My (fill Caregiver B) doesn't seem to know how I feel about things. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

8. My (fill Caregiver B) trusts me. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

9. My (fill Caregiver B) doesn't let me make any of my own decisions. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

10. My (fill Caregiver B) is fair with me. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

11. My (fill Caregiver B) doesn't think I can do very much. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

12. I don't know what my (fill Caregiver B) wants from me. How true is this?

- 1 = not at all true
- 2 = not very true
- 3 = sort of true, or
- 4 = very true?

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