

ABSTRACT

Title of Document: **AMBIGUOUS LOSS, NUMBER OF FOSTER CARE PLACEMENTS, CHILD AGE AND CHILD SEX AS PREDICTORS OF THE BEHAVIOR PROBLEMS AND POSTTRAUMATIC STRESS SYMPTOMS OF CHILDREN IN FOSTER CARE.**

Lisa JoAnn Benson, Master of Science, 2006

Directed By: Associate Professor Jacqueline Wallen,
Department of Family Studies

This study examined four factors that may predict the behavior problems and posttraumatic stress symptomatology of children in foster care: ambiguous loss, number of foster care placements, child age, and child sex. Participants included 74 predominantly African American 6 to 15 year old children in foster care and their foster caregivers. Foster caregivers completed the Child Behavior Checklist and Parent Report of Posttraumatic Stress Symptoms, and children completed the Psychological Presence Questionnaire. Regression analyses revealed that number of foster placements was a significant predictor of posttraumatic stress, with more placements linked to more stress symptoms. Child age, child sex, and ambiguous loss were not significant predictors of internalizing problems, externalizing problems, or posttraumatic stress symptoms. Implications of the findings for child welfare professionals and policy makers are discussed.

AMBIGUOUS LOSS, NUMBER OF FOSTER CARE PLACEMENTS, CHILD
AGE AND CHILD SEX AS THE PREDICTORS OF THE BEHAVIOR
PROBLEMS AND POSTTRAUMATIC STRESS SYMPTOMS OF CHILDREN IN
FOSTER CARE

By

Lisa JoAnn Benson

Thesis submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of
Master of Science
2006

Advisory Committee:
Associate Professor Jacqueline Wallen, Chair
Professor Elaine A. Anderson
Professor Sally A. Koblinsky

© Copyright by
Lisa JoAnn Benson
2006

DEDICATION

To Lavdie for sparking my interest in posttraumatic stress and the special needs of children in foster care.

ACKNOWLEDGEMENTS

First and foremost, I would like to thank my dedicated committee members. I could not ask for a more capable and supportive group of mentors. My research abilities and competence have been greatly expanded through my association with each of these talented professionals. I would like to acknowledge the efforts of my thesis chair, Dr. Jacqueline Wallen. She has spent long hours proof-reading and offering guidance throughout the course of this project. Dr. Sally Koblinsky has kept me motivated and on schedule and her attention to detail has been essential in the polishing of this thesis. I am grateful to Dr. Elaine Anderson for her sense of humor and patience with the frequent “presents” I have deposited in her mailbox for revision over the course of the semester.

I would also like to thank Dr. Glenn Schiraldi for taking time out of his busy schedule to discuss this project and for sharing his expertise on posttraumatic stress with me.

Finally, I would feel remiss if I did not thank my parents for their tremendous support. They have been a constant source of encouragement to me in the pursuit of my educational goals.

TABLE OF CONTENTS

Dedication	ii
Acknowledgements	iii
Table of Contents	iv
List of Tables	vi
List of Figures	vii
Chapter I: Introduction.....	1
Chapter II: Review of Literature.....	7
Theoretical Framework.....	7
Well-Being of Children Prior to Foster Care.....	11
Behavioral Consequences of Foster Care for Children.....	12
Internalizing Problem Behaviors	13
Externalizing Problem Behaviors	13
Posttraumatic Stress Symptomatology	14
Ambiguous Loss	16
Number of Foster Care Placements	18
Child Age.....	19
Child Sex.....	20
Purpose of Study.....	21
Definition of Variables	22
Independent Variables	22
Dependent Variables.....	22
Hypotheses	23
Chapter III: Method	24
Sample.....	24
Constructs and Measures	25
Dependent Variables.....	25
Independent Variables	28
Procedure	30
Data Analyses	30
Chapter IV: Results.....	32
Demographic Characteristics.....	32
Reliability Scores for Study Measures.....	32
Children’s Mean Scores on Independent Variable Measures.....	32
Children’s Mean Scores on Dependent Variable Measures	33
Correlation Coefficients for Predictor and Outcome Variables.....	35
Regression Models.....	37

Chapter V: Discussion	41
Psychological Presence	42
Number of Foster Placements	43
Child Age	44
Child Sex.....	45
Limitations and Directions of Future Research	47
Clinical and Policy Implications	48
Conclusions.....	50
Appendices.....	52
Appendix A: Parent Report of Post-traumatic Symptoms (PROPS).....	52
Appendix B: Demographic Questionnaire.....	53
Appendix C: Psychological Presence Questionnaire	54
Appendix D: Consent Form	55
References.....	56

LIST OF TABLES

1. Demographic Characteristics of the Sample.....	32
2. Reliability Scores for Study Measures	33
3. Children’s Mean Scores on Independent Variable Measures	34
4. Children’s Mean Scores on Dependent Variable Measures	35
5. Correlation Coefficients for Predictors and Outcome Variables	36
6. Regression Analysis for Predictors of Internalizing Behavior Problems	38
7. Regression Analysis for Predictors of Externalizing Behavior Problems	39
8. Regression Analysis for Predictors of Posttraumatic Stress Symptomatology ..	40

LIST OF FIGURES

1. Bronfenbrenner's Ecological Model of Child Development	8
2. Conceptual Model for the Study	29

CHAPTER I: INTRODUCTION

The foster care social service system provides temporary out-of-home placement for children living in families unable to provide adequate safety and nurturance. Foster care intervention is designed to mitigate the negative effects of adverse family and environmental conditions on child development (Lawrence, Carlson, & Egeland, 2006). The primary goals of the foster care system are to support families in crisis and ensure that children are reared in a home environment free of abuse and neglect. When family reunification is not deemed a viable option, permanent placement in a suitable adoptive home is pursued (Committee on Early Childhood, Adoption and Dependent Care, 2002).

It has been consistently reported in the current literature that children in foster care are at elevated risk for developing internalizing and externalizing behavior disorders (Clausen et al., 1998; Kates et al., 1991; Milan & Pinderhughes, 2000). Recent estimates also indicate that more than half of all children in foster care will experience at least one placement disruption while in foster care (AFCARS, 2006). Given that family instability is the single most predictive factor for posttraumatic stress in children, children in foster care are also predisposed to developing traumatic stress symptomatology (DeBellis & Van Dillen, 2005; Green et al., 1991).

Despite the numerous sources of trauma and stress faced by children prior to and following foster care placement, not all foster children develop behavioral and psychological disorders. Relatively little is known about the individual level characteristics that may give rise to the internalizing and externalizing behavioral problems and posttraumatic stress symptomatology observed among some children residing in foster care.

Until the 1970s, participation in foster care was primarily a voluntary arrangement associated with parental unwillingness or inability to provide for a child's emotional, educational, or physical needs (Racusin, Maerlender, Sengupta, Isquith, & Straus, 2005; Rosenfeld, Altman, Alfaro, & Pilowsky, 1994). Prior to the past few decades parental illness, poverty or death were among the most common precipitating circumstances in foster care placement (Racusin et al., 2005). Since the passage of the Child Abuse Prevention and Treatment Act of 1974 (PL 93-247), however, foster care shifted to a system in which the vast majority of participating children have been removed involuntarily from parental custody due to severe abuse or neglect (Arad, 2001). From the 1970s to the present, neglect and abuse, especially in the context of parental substance abuse and mental illness, have become the most prevalent reasons for foster care placement due to mandatory reporting laws (Committee on Early Childhood, Adoption and Dependent Care, 1994; Schor, 1982).

The growing trend toward pre-placement abuse and neglect has been widely documented in the foster care literature (Hussey & Guo, 2005; Lawrence et al., 2006; Racusin et al., 2005; Shin, 2005). While criteria for foster care placement are not well defined, abuse and neglect are increasingly common pre-placement experiences. Most children entering substitute care have a history of child maltreatment perpetrated by the primary caregiver, parental chemical addiction, poor quality parent-child relationships, and parental abandonment (Arad, 2001). Thus, this changing explanation for children's placement into substitute care has given rise to a growing population of children in foster care who suffer from behavioral and psychological difficulties associated with a history of maltreatment (dosReis, Zito, Safer, & Soeken, 2001; Shin, 2005).

In addition to the maltreatment history frequently experienced prior to placement, foster care children are also exposed to ambiguous loss upon entry into the child welfare system. The ambiguity lies in the fact that foster children essentially lose someone that is still alive (i. e. the birthparent). Unlike foster care placements preceded by parental death, children in foster care due to parental abuse or neglect are not typically given the opportunity to mourn the loss of their relationship with their birthparent (Powell & Afifi, 2005). Placement into foster care, which is transitory by definition, further contributes to the ambiguity experienced by foster children. Boundary maintenance, including clear perceptions about who is in or out of the family (Boss, 2004), is particularly fluid in a foster family. The timeline for reunification, adoption, or even removal to a different foster placement is uncertain for foster children. The tentative nature of foster care may significantly exacerbate the ambiguity felt by children who are physically separated from the birthparent who is more often than not still present psychologically.

Two situations have been identified in the literature as having the potential to induce feelings of ambiguous loss. They include the physical presence of someone who is psychologically absent (as with Alzheimer's disease) and the psychological presence of someone who is physically absent, as is the case with the birthparents of foster care children (Boss, 2004). Experience of ambiguous loss has been identified in the literature as a risk factor for diminished resilience and increased feelings of stress (Boss, 2002). The impact of ambiguous loss, as measured by the psychological presence of birthparents, on children in foster care has not been adequately addressed in the current literature.

In addition to ambiguous losses, multiple foster care placements may also be traumatic experiences for children residing in foster care. However the role of frequent changes in foster placement in the etiology of posttraumatic stress symptomatology has not been adequately explored. Given that traumatic exposure is becoming increasingly commonplace among children in foster care, this gap in the existing literature deserves further attention (Gabbay, Oatis, Silva, & Hirsch, 2004; Rosenfeld et al., 1994).

Although long-term and disrupted foster care have been associated with adverse long-term outcomes for children, adoption from foster care may mitigate some of the psychological and behavioral symptoms observed among abused and displaced children. Research has shown that placement into a stable, supportive family is associated with a reduction in distress and overall symptoms associated with maltreatment history (Conte & Schuerman, 1987; Luthar & Zigler, 1991). In the past it had been reported that the majority of adoptions of children from foster care remain stable over time, however, termination rates are substantially higher for children designated as having “special needs” due to severe neglect, physical or sexual abuse, or physical and emotional disabilities (Mullin & Johnson, 1999).

Research suggests that disruption and dissolution, defined as occurring before legal finalization or after legal adoption, respectively, are approximately twice as likely to occur among special needs foster care children (Boyne et al., 1984). Children that experience the most severe abuse and neglect prior to foster care placement are at greatest risk for developing emotional and behavioral problems and are ultimately more likely to experience failed adoption (Schweiger & O’Brien, 2005). Behavioral problems, psychological disorders, and aggression toward adults have all been associated with

adoption failures (Rosenthal & Groze, 1992). Given the pervasive long-term negative consequences for children experiencing multiple disruptions in foster care placement, it is important to understand the relationship between childhood losses and the related behavioral and psychological disorders that may impede successful permanent placement options for children in foster care.

Two additional individual level factors that may influence the development of behavioral and psychological disorders among children in foster care are child age and child sex. Chronological age has been found to be a vulnerability factor for posttraumatic stress reactions in children (Carlson, 1997). The higher incidence of these symptoms among the younger age group may be due to a lack of experience dealing with traumatic situations. Schwarz and Kowalski (1991) found that following a school shooting 27% of children exposed to the violence developed PTSD, whereas only 19% of the adults present developed posttraumatic symptoms. Younger individuals may be more dependent on external sources of support and may lack the emotional development needed to cope with difficult problems (Brock, 2002). For example, King, King, Foy and Gudonowski (1996) found that younger combat victims were more likely to experience posttraumatic stress symptoms than older soldiers, suggesting that lack of crisis experience and emotional immaturity may serve as vulnerability factors in the development of PTSD.

Biological sex has also been associated with gender related patterns of internalizing and externalizing behavior problems, with females experiencing greater internalizing disorders and males more frequently experiencing externalizing disorders (Athenstaedt, 2003; Sternberg, 2006). Previous research on prevalence rates of

posttraumatic stress in the general adult population has indicated that females are more likely than males to develop posttraumatic stress symptomatology (Breslau, Davis, Andreski, Peterson, & Schultz, 1997). However Gabbay and colleagues (2004) report that no large scale epidemiological studies on posttraumatic stress among children have been conducted. Further research is needed to better understand the role of biological sex in the development of posttraumatic stress symptomatology among children in foster care.

The purpose of this study is to examine how ambiguous loss, the number of previous foster care placements, child age, and child sex are related to the development of behavioral problems and posttraumatic stress symptoms among children residing in foster care. Many studies have noted that elevated risk of traumatic reactions and problem behaviors exists among foster children which may jeopardize successful permanent placement (Dube et al., 2003; Mullin & Johnson, 1999; Rosenthal & Groze, 1992; Schweiger & O'Brien, 2005). More research is needed to determine which individual level factors significantly contribute to the posttraumatic symptomatology and internalizing and externalizing behavior problems experienced by some foster children.

The present study employs a secondary analysis of the baseline data collection obtained through the Center for Adoption Support and Education (C.A.S.E.) Lifelines for Kids Project (Grant # C90-CO-0923). These cross-sectional data are used to examine the role of child characteristics, psychological presence of birthparent, and placement history as predictors of posttraumatic stress symptomatology and internalizing and externalizing disorders among children in foster care.

CHAPTER II: REVIEW OF LITERATURE

Theoretical Framework

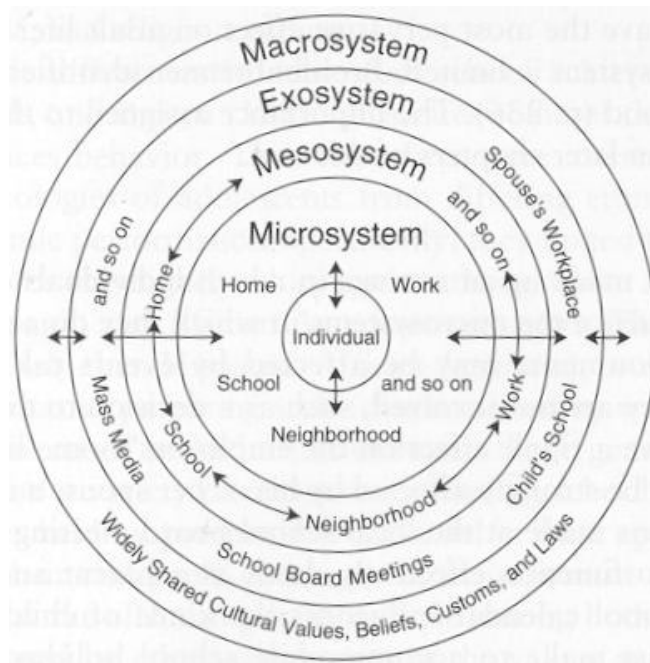
This study employs ecological systems theory (Bronfenbrenner, 1988) to describe the relationship between the foster care setting and observed behavioral outcomes among the foster care children participating in the current sample. Ecological systems theory is used to study human development and the interaction between individuals and their social environment (Bronfenbrenner, 1988). In the ecological model, the interactions between individuals and their environment is depicted as a series of nested circles, each of which is proposed to impact the child's development (Bronfenbrenner, 1979).

The innermost sphere is referred to as the microsystem and is composed of the child's immediate physical structures and family relationships. An ecological approach emphasizes that proximal influences, especially bidirectional parent-child relationships, are critical to child development (Schweiger & O'Brien, 2005). In the context of studying children in foster care it is important to consider not only the transactional parent-child relationship, but also the child's experiences in the family of origin. More than half of the children in foster care are reported to have experienced some form of child abuse or neglect (Finch & Fanshel, 1985). From an ecological systems viewpoint the prevalence of maltreatment among children removed from their families of origin would be expected to have long-term developmental implications for foster care children.

The mesosystem involves interactions between two or more microsystems and may occur in the context of school, work, church, or other community settings such as the interaction between social services and the child's biological or foster parents.

The exosystem is a setting which may not be directly experienced by the child, but nonetheless has an impact on development. Examples of exosystems that may affect foster child include a parent's workplace, the local PTA, and the mass media.

Figure 1



Bronfenbrenner, (1979)

The final, all-encompassing sphere in Bronfenbrenner's model is referred to as the macrosystem. The macrosystem refers to the larger political, physical and social contexts in which all the other systems are embedded (Magnusson & Stattin, 1998). An example of a macrosystem change that exerted an influence on both meso- and microsystem processes was the passage of the Adoption and Safe Families Act of 1997. This legislation shortened the timeline for permanent placements and, in many areas, resulted in concurrent planning, or the simultaneous exploration of both reunification and adoption for children in foster care. While priority was given to family reunification, adoption was pursued more aggressively when reunification was unlikely (McGlone, Santos, Kazama, Fong, & Mueller, 2002). This macrosystem policy change was intended

to reduce the amount of time children spend in foster care and make it less likely that children will be returned to unsafe family situations (Karroll & Poertner, 2003).

It has been noted in the literature that the family microsystem is directly impacted by health and social policies. Activities occurring in spheres external to the immediate family, such as the implementation of public laws affecting adoption and reunification, alter the environmental context of the family (Schweiger & O'Brien, 2005). Due to the ability of ecological theory to describe the interplay between individuals, families and their environmental context, ecological theory has been widely applied to address the multiple developmental contexts and relationships affecting foster care children (Kressierer & Bryant, 1996; Mullin & Johnson, 1999; Schweiger & O'Brien, 2005). The ecological model has for the most part been used to study the influence of environmental factors on child development. In principle, however, it is an interactive model. Children have an effect on their microsystem just as their microsystem has an effect on them. Additionally, the effects of a child's ecological environment are further influenced by the individual characteristics of the child.

This relationship is especially important in the case of children in foster care because the consequences of events in previous microsystems (their family of origin, other out of home placements) can affect their relationship to their current microsystem (present foster care placement). Previous studies have reported that family instability is the single most predictive factor for PTSD in children across age groups (DeBellis & Van Dillen, 2005; Green et al., 1991). Separation from biological parents often produces feelings of grief, anxiety, and ambiguous loss in children (Boss, 1999). The experience of foster care for children is typically characterized by multiple separations and

displacements. The unstable nature of substitute care places foster care children at greater risk for psychological stress related to adapting to unfamiliar caregivers and environments. Therefore, ecological theory would predict that foster children who have experienced multiple displacements and losses would be a greater risk for developing behavior problems and posttraumatic stress symptomatology.

The present study examines the role of ambiguous loss and repeated microsystem disruptions, measured by the number of foster care placements experienced by the child, as well as other individual level factors in the development of internalizing and externalizing problem behaviors and posttraumatic stress in foster care children. Additional individual level factors that may impact the outcome variables of the current study include child age and sex. Ecological theory would predict that younger children who are more dependent on their family microsystem for safety and support would be at greater risk for developing internalizing and externalizing behavior disorders and posttraumatic stress symptoms subsequent to abuse, neglect, or family disruption than older children. Consistent with this assumption, it has been reported in the literature that dependency on caretakers and the immediate environment has been associated with greater sensitivity to stressors within the microsystem (Luthar & Zigler, 1991).

Ecological theory would also predict sex differences in internalizing and externalizing problem behavior patterns based on macrosystem-level expectations about socially acceptable gender roles. The greater emphasis placed on instrumental behaviors for males would logically give rise to more aggressive and defiant behaviors in response to severe stressors (Athenstaedt, 2003). Females, on the other hand, who are encouraged to place greater value on expressive behaviors, would be more vulnerable to internalized

stress reactions following abuse perpetrated by a close family member or trusted caregiver (Athenstaedt, 2003). Consistent with ecological theory, it has been reported in the literature that school-age and teenage boys typically exhibit more externalizing behavior problems than their female peers who report higher levels of internalizing behaviors (Achenbach, Howell, Quay, & Conners, 1991). Thus, in the current study, child age and sex is examined along with ambiguous loss and number of placements to determine the extent to which each of these variables contributes to the development of behavior problems and posttraumatic stress symptomatology among foster care children.

Well-being of Children in Foster Care

Although foster care placement is intended to be a temporary living arrangement while the goals of reunification or adoption are pursued, the average stay for a child residing in foster care is approximately two and a half years (AFCARS, 2006). During an episode of foster care more than half of all children (56%) will experience at least one placement disruption. Of these displaced foster children, 11% will experience three placements, 6% will live in four different foster homes, and 10% will experience five or more different foster placements (AFCARS, 2006). Such repeated placement disruptions have been identified in the literature as having a negative impact on the well-being of children in foster care (Kenrick, 2000).

Recent legislation is aimed at reducing the numerous placements experienced during long term foster care by accelerating the permanent placement of foster care children. The Adoption and Safe Families Act of 1997 (PL 105-89) called for more timely development of a permanency plan and termination of parental rights, where appropriate. Many child welfare departments have elected to use concurrent planning as

a means for moving through the process of foster care and permanency more quickly. Concurrent planning involves the simultaneous pursuit of multiple permanency plans in order to minimize the length and number of placements in the foster care system. While family reunification is the primary goal, alternative solutions such as adoption or permanent placement within the extended family are also explored as early as possible.

Despite the fact that reunification is the preferred outcome for children in foster care, situations involving intractable intrafamilial abuse and neglect often preclude the realization of this objective (Arad, 2001). Of the 517,000 children residing in foster care as of 2004, fewer than half maintained the case goal of family reunification (AFCARS, 2006). It has been demonstrated that children who experience the greatest amount of abuse and neglect prior to foster care placement are also least likely to be reunified with their biological families (Schweiger & O'Brien, 2005). Thus further research is needed to determine how multiple placement disruptions may contribute to posttraumatic stress reactions among children residing in foster care.

Behavioral Consequences of Foster Care for Children

Behavior problems among foster children have been observed at a rate of two and a half times that observed in the general population Clausen, Landsverk, Ganger, Chadwick, & Litrownik, 1998; Zima, 2000). Consistent with previous studies, this paper will make a distinction between internalizing and externalizing child problem behaviors (Achenbach, 1978). The construct of internalizing, or overcontrolled behavior disorders are characterized by problems such as depression, anxiety, and somaticizing complaints. Externalizing behavior is also referred to as being undercontrolled and is manifested in aggressive, antisocial, and disruptive behaviors. (Eisenberg et al., 2001).

Internalizing Behavior Problems

Internalizing behavior problems are often referred to in the literature as overcontrolled or neurotic disorders (Eisenberg et al., 2001). In contrast to externalizing disorders, children suffering from internalizing behavior problems are more likely to turn distress and negative emotions inward. Internalizing disorders frequently manifest themselves in symptoms such as anxiety, depression, and suicidal ideation. It has been documented in the literature that females are more likely than males to experience internalizing behavior problems (Sternberg, 2006).

Externalizing Behavior Problems

The cluster of behavior problems associated with externalizing disorders includes aggression, hyperactivity, impulsivity, and delinquency (Eisenberg et al., 2001). Children and adolescents with externalizing problems are also referred to in the literature as undercontrolled or antisocial. Previous research suggests that undercontrolled children frequently lack parental monitoring and as a result have an underdeveloped ability to self-monitor their own behaviors and cognitive processes (Barber, Olsen & Shagle, 1995). Children with externalizing problems are prone to direct their negative emotions such as anger, frustration, and hostility toward their outward environment. It has been hypothesized that irritability due to anger and frustration is an important predictor of externalizing problem behaviors among children (Eisenberg et al., 2001).

Externalizing behavior problems such as fighting, substance abuse, risky sexual behavior, and delinquency have been associated with later participation in adult criminal activity (Moffit, 1993). Perhaps the most salient trend in the research on externalizing behaviors is that males are more likely than females to experience this type of behavior

problem and its associated negative consequences (Sternberg, 2006). Given that externalizing behaviors problems have been identified as a risk factor for adult violence and crime, research on externalizing problems behaviors among children is receiving increased attention (Hahn, 2002).

Posttraumatic Stress Symptomatology

Trauma is defined as any extreme stressor that is outside the normal range of human experience (*DSM-IV-TR*; American Psychiatric Association, 2000). Examples of childhood traumas include chronic maltreatment, community violence, family disruption, motor vehicle accidents, life-threatening illnesses, and natural or manmade disasters (Mulvihill, 2005). Symptoms associated with child trauma include impulsivity and attention problems, aggressive play, emotional numbing, dissociation, depression, delayed development, eating disorders, and drug abuse (Dube et al., 2003). It has been suggested by some researchers that posttraumatic stress symptomatology may lessen a child's ability to control aggressive and angry impulses (Perrin, Smith, & Yule, 2000). Given the preponderance of abuse and neglect experienced by children entering the foster care system, this study can contribute to the current literature by addressing the role of foster care placement history on posttraumatic stress symptomatology and the development of the negative behavioral outcomes observed among children in foster care.

Posttraumatic stress is a relatively new psychiatric diagnosis. Posttraumatic stress disorder did not appear in the [*Diagnostic and Statistical Manual of Mental Disorders*](#) (*DSM-IV*) until 1980, primarily in response to numerous observed cases of psychiatric illness resulting from the Vietnam War. Most of the initial studies surrounding PTSD focused on the aftermath of war, combat exposure, and rape. While the vast majority of

extant literature regarding posttraumatic stress involves adults, attention has recently been devoted to the impact of terrorism, war, and natural disasters on young children (Hoven et al., 2005; Kaplow, 2005; Meiser-Stedman, Yule, Dalgleish, Smith, & Glucksman, 2006; Pfefferbaum, 2006; Stoppelbein, Greening, & Elkin, 2006). Despite the recent focus on the implications for children of natural and manmade disasters, it is widely accepted that research on the diagnosis and treatment of pediatric PTSD lags behind adult PTSD research (Alder-Nevo & Manassis, 2005).

Several characteristics have been found to contribute to the severity of posttraumatic symptoms among traumatized populations including the intensity and nature of the stressors involved. Severity of traumatic experiences has been positively associated with more pronounced posttraumatic symptomatology in studies involving combat veterans (Sutker, Allain, Albert, & Winstead, 1993), crime victims (Kilpatrick et al., 1989), refugees (Carlson & Rosser-Hogan, 1991), and sexually abused children (Wolfe, 1989). While specific information was not available regarding the type of the pre-placement abuse and neglect experienced by the foster children in this sample, it is important to note that the frequency and severity of child abuse prior to intervention by Child Protective Services appears to be on the rise (Rosenfeld et al., 1994). According to a 2003 estimate by the Department of Health and Human Services nearly one million children in this country experience some form of serious maltreatment each year (HHS, 2005).

Although little is known about the maltreatment histories of participants in the current sample, ecological theory posits that proximal processes tend to exert the greatest influence on development. Consistent with that assertion, it has been found that abuse

and violence perpetrated within the family microsystem are most likely to produce symptoms of posttraumatic stress in children (Boney-McCoy & Finkelhor, 1995; Saunders, Kilpatrick, Hanson, Resnick, & Walker, 1999). Janoff-Bulman (1992) reported that physical or sexual abuse perpetrated by a parent is frequently perceived as more severe than abuse by a stranger because the parent is expected to be a source of safety for the child.

Although there continues to be debate as to whether or not sex differences exist in the rate of exposure to traumatic events among children, it is generally reported that girls tend to exhibit more PTSD symptoms following trauma exposure and are diagnosed with PTSD more frequently than boys (Green et al., 1991; Lonigan, Shannon, Taylor, Finch, & Sallee, 1994; Wolfe, 1989). It has been suggested therefore, that girls may be at a greater risk of experiencing posttraumatic stress symptoms than boys (Green et al., 1991).

The picture regarding the impact of age on PTSD symptoms is less clear. Some researchers have reported young children as being more symptomatic following a traumatic stress (Lonigan et al., 1994; Wolfe, 1989), whereas others have suggested that adolescents are more likely to suffer from PTSD symptoms and receive a clinical diagnosis (DeBellis & Van Dillen, 2005). More research is needed to determine the impact that a foster child's age may have on the development of PTSD symptoms.

Ambiguous Loss

In her research on ambiguous loss, Pauline Boss (1999, 2002, 2004) has identified two common sources of incomplete or uncertain losses. Ambiguous loss occurs most frequently when a family member is present physically, but psychologically unavailable due to dementia, chronic mental illness, depression or addictions (Boss, 2004).

Ambiguous loss is also experienced when a family member is absent physically, but present psychologically. Examples of this loss include soldiers missing in action, a kidnapped child, divorce, and separation due to foster placement. These ambiguous losses are oftentimes more stressful than clear-cut losses because they tend to be ongoing and are often unacknowledged (Abrams, 2001). Ambiguous losses defy resolution and are typically not afforded the same mourning rights and rituals associated with more clearly defined losses (Boss, 2004).

Overall, ambiguous loss is defined as a situation involving confusion as to whether a loved one is alive or dead, present or absent (Boss, 2004). It is not the precipitating event itself, but the perceived ambiguity of the situation that causes the most stress for individuals experiencing ambiguous loss (Boss & Greenberg, 1984; Powell & Afifi, 2005).

Ambiguous loss frequently results in unresolved grief. A lack of definitive information about the loss causes coping and grieving process to become frozen (Boss 1999, 2002, 2004). Ambiguous loss has been identified as a risk factor for personal and relational well-being, stress, and loss of resilience (Boss, 2002). Such ambiguous situations are often perceived as beyond the individual's control and may contribute to experiences of posttraumatic stress (Carlson, 1997). Given that both the outcome and duration of substitute care are tenuous, ambiguity is likely a prevalent experience among children in foster care. Whether reunification, adoption, or long-term foster care are experienced, foster children face a constant threat of the permanent loss of their birthparent, foster parent, or both.

In the current study, feelings of ambiguous loss, as measured by psychological presence questionnaire, is predicted to be associated with more pronounced feelings of ambiguous loss among foster children. It is therefore expected that foster children who experience the psychological presence of their birthparent most frequently will be at greatest risk for developing internalizing and externalizing problems such as sadness, withdrawal, and anger as well as posttraumatic stress symptoms. Attachment theory (Bowlby, 1969) would also suggest that children who frequently experience the psychological presence of their birthparents would feel conflicted about forming attachments with foster parents (Leathers, 2003). These foster children would experience conflicted allegiances and would be most likely to employ behavioral strategies such as rejection or alienation of the foster parent in order to maintain loyalty to their birthparent (Leathers, 2003; Schofield & Beek, 2005). Consequently, it is anticipated that higher levels of psychological presence of the birthparent will be associated with caregiver reports of higher behavior disorders among foster children.

Number of Foster Placements

The most salient factor in the development of posttraumatic stress among children is family disruption (DeBellis & Van Dillen, 2005; Green et al., 1991). Beyond the initial removal from the family of origin, the majority of children in foster care will experience additional displacements and disruptions while residing in foster care (AFCARS, 2006). Such numerous placement disruptions have been associated with a loss of resilience and the development of internalizing and externalizing behavior disorders (Leathers, 2005; Luthar & Zigler, 1991).

It has been noted in the literature that following an initial traumatic event subsequent stressors may reactivate earlier catastrophic anxieties (Kenrick, 2000). The cumulative stress of multiple placements, removal from one's birthparents and family of origin, and probable pre-placement maltreatment would likely contribute to pronounced stress reactions among children in foster care, with the most severe symptomatology among foster children experiencing the greatest number of placement disruptions while in substitute care.

Child Age

As was mentioned previously, young children may be more susceptible to environmental stressors than older children due to greater dependency on external sources of safety and support (Brock, 2002; Luthar & Zigler, 1991). When other variables are held constant, younger crisis survivors tend to experience greater internalizing symptomatology and traumatization than older trauma victims (Carlson, 1997). One possible explanation for this observed difference is the limited control young children have over their immediate environment. Older trauma victims more readily employ behavioral avoidance strategies in response to trauma, whereas young children more frequently rely on cognitive and emotional avoidance mechanisms such as dissociation (Carlson, 1997). This tendency to rely on internal coping strategies is predicted to give rise to greater behavior disorders and posttraumatic stress among young children in foster care.

An additional age related risk factor for behavioral and psychological disorders is the egocentricity associated with certain stages of childhood development. Younger children with a more egocentric perspective may view themselves as responsible for the

traumas they experience (DeHart, Sroufe, & Cooper, 2004). Ascribing personal responsibility for highly negative life events places younger children at greater risk for guilt, shame, depression, internalizing disorders and posttraumatic stress (Rojas & Lee, 2004). Thus, younger children are more likely than adolescents to develop behavior disorders and posttraumatic stress symptomatology subsequent to maltreatment and family disruption.

Child Sex

Numerous studies have documented sex differences in the observed rates of internalizing and externalizing behavior problems (Athenstaedt, 2003; Sternberg, 2006). Consistent with previous studies it is predicted that female children in foster care will exhibit higher rates of internalizing behavior problems and male children in foster care will display more externalizing behaviors than their opposite-sex peers. Physical abuse, which is more common among males, tends to give rise to violent and aggressive behaviors later in life (Widom, 1989). Sexual abuse, which is more common among females, has been associated with higher rates of depression, anxiety, and suicidality (Briere, 1988; Browne & Finkelhor, 1986). Thus, it is anticipated that among this sample, boys in foster care will exhibit greater tendency toward externalizing behaviors and girls will present more internalizing behavior problems.

In terms of posttraumatic stress symptomatology sex differences may also shape the coping styles foster children employ in response to trauma. Among the adult population, lifetime prevalence of posttraumatic stress among women has been reported at twice the rate observed among men (Breslau et al., 1997). It has been asserted that males are more likely to direct their stress and anxiety outwards through aggressive

behaviors, whereas females tend to direct their anxiety inward by affective reexperiencing of the trauma (Carlson, 1997). Additionally, sex differences in perceived locus of control may also give rise to gender related patterns of posttraumatic stress symptomatology. March and colleagues (1997) reported that women tend to have a more externalized locus of control and are more likely to feel helpless and overwhelmed in response to trauma. Men, who typically have a higher internal locus of control, are less susceptible to the perceived lack of controllability that defines trauma (Carlson, 1997; Simmons & Granvold, 2005). Thus, consistent with the adult literature, it is anticipated that girls in foster care will have a greater predilection for developing posttraumatic stress symptoms.

Purpose of Study

The purpose of this study is to contribute to the literature addressing the consequences of multiple foster care placements for children in foster care. Child age, child sex, and psychological presence of the birthmother will also be examined as potential predictors of posttraumatic stress symptomatology and internalizing and externalizing behavior problems of children in foster care. In light of the prevalent trauma and neglect faced by children who are removed from their homes of origin and placed in the foster care system, it is important to identify possible risk and resilience factors associated with further trauma and the development of negative behavioral outcomes among this underserved population. Because this study employs a cross-sectional rather than a longitudinal study design, it does not answer the question of whether or not multiple placements cause posttraumatic stress or behavior problems, but it tests if there are associations among the sets of variables.

Definition of Variables

Independent Variables

Psychological Presence of Birthparent

Child reported frequency of feeling their birthmother in their mind and in their heart over the course of the previous 12 months.

Number of Foster Care Placements

The number of placements experienced by the target foster child during the current episode of foster care.

Child Age

Chronological age of child as reported by foster parent.

Child Sex

Biological sex of child as reported by foster parent.

Dependent Variables

Child Behavior Problems

Internalizing problems. Internalizing problems include anxiety, withdrawal, depression, or somaticizing behaviors.

Externalizing problems. Externalizing problems include aggressive, defiant, or delinquent behaviors.

Posttraumatic Stress Symptomatology

Foster parent report of number of trauma-related distress and symptoms characteristic of posttraumatic stress experienced by the foster child during the previous 7 days.

Hypotheses

1. Ambiguous loss will be a significant predictor of internalizing and externalizing behavior problems and posttraumatic stress symptoms, with higher levels of ambiguous loss related to more
 - 1.1 internalizing behavior problems.
 - 1.2 externalizing behavior problems.
 - 1.3 posttraumatic stress symptoms.
2. Number of foster care placements will be a significant predictor of behavior problems, with a higher number of placements related to more
 - 2.1 internalizing behavior problems.
 - 2.2 externalizing behavior problems.
 - 2.3 posttraumatic stress symptoms.
3. Age in both boys and girls will be a significant predictor of posttraumatic stress symptoms, with younger age associated with more stress symptoms.
4. Sex of child will be a significant predictor of behavior problems and posttraumatic stress symptoms, with
 - 4.1 internalizing behavior problems expected to be more common among girls.
 - 4.2 externalizing behavior problems expected to be more common among boys.
 - 4.3 posttraumatic stress symptoms expected to be more common among girls.

CHAPTER III: METHOD

Sample

This study utilizes an existing database collected to evaluate the Lifelines for Kids demonstration project which was conducted between 2000 and 2004. The project was funded by an Adoptions Opportunities grant from the Children's Bureau of the Administration for Children and Families, U.S. Department of Health and Human Services. Lifelines for Kids is a therapeutic intervention developed specifically to address the grief, loss, and attachment issues associated with foster care placement. The Center for Adoption Support and Education (C.A.S.E.) provided both psychotherapy and support services to foster children receiving concurrent planning services. Foster care children referred for the Lifelines for Kids demonstration project were between 6 and 15 years of age and had been in foster care during the previous 6-12 months.

Participants in this study were referred by the Prince George's County Department of Social Services or the Montgomery County Department of Health and Human Services (Wallen, 2004). During the first wave of the Lifelines for Kids interviews, seventy-one (71) caregivers and seventy-four (74) children completed the initial questionnaire. Following this baseline measure, follow-up assessments were administered at approximately 3 month intervals up to nine months. For the purposes of this study only the baseline data are analyzed because the greatest number of children completed the baseline interviews. It was important to examine the influence of the target variables prior to therapeutic intervention.

Constructs and Measures

The Lifelines for Kids measurement instruments included a demographic questionnaire, five parent measures, and four child measures. Children completed measures of depression, social competence, psychological presence of birth parents, and posttraumatic stress symptomatology. Parents also completed measures of children's stress symptoms, positive and negative attachment, and internalizing and externalizing behavioral problems. The measures that will be examined in the present study include:

1. Psychological Presence of Birthparent as measured by the child's response to an item in the Psychological Presence questionnaire
2. Number of foster care placements as indicated on the child's referral form by the child's county caseworker
3. Child age as reported in the foster parent interview
4. Child sex as reported in the foster parent interview
5. Internalizing behavior problems as measured by the corresponding scale of the Child Behavior Checklist (CBCL) completed by the foster parent
6. Externalizing behavior problems as measured by the corresponding scale of the Child Behavior Checklist (CBCL) completed by the foster parent
7. Posttraumatic Stress Symptomatology as measured by Parent Report of Post-traumatic Symptoms (PROPS) completed by the foster parent

Dependent Variables

Internalizing and externalizing child behavior problems were assessed using the Child Behavior Checklist (CBCL; Achenbach et al., 1991). The CBCL/4-18 is a 113-item test administered to a parent or close caregiver. The CBCL questionnaire items measure child behavior over the previous six months and rate behaviors on a three point scale, with 0 = “not true (as far as I know),” 1= “somewhat or sometimes true,” 2 = “very true or often true.” The total internalizing and externalizing scores are continuous variables that form two separate scales. The internalizing scale encompasses anxiety/depression, somatic complaints, and withdrawal tendency. The externalizing scale consists of two subscales: aggressiveness and delinquency. Due to copyright laws, the CBCL is not included in the appendices.

The Child Behavior Checklist is one of the most widely used assessments of child behavior. Reliability for this instrument has been established by Achenbach et al. (1991). The CBLC/4-18 has been shown to be both valid and reliable for children aged 4 through adolescents. Cronbach’s alpha for internalizing problem behaviors for boys and girls in the normative sample was measured at .89 and .90, respectively. The reported alpha coefficient for externalizing problem behaviors was .93 for both boys and girls (Achenbach et al., 1991).

The Parent Report of Posttraumatic Symptoms (PROPS) is a measure designed to assess the symptoms characteristic of posttraumatic stress as identified by the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (*DSM-IV-TR*; American Psychiatric Association, 2000) and current child trauma literature. On the 30-item questionnaire respondents rate child symptoms on a 3-point Likert scale, with 0 = "none,"

1 = "some," and 2 = "lots." Examples of items measuring posttraumatic symptoms include "Thinks of bad memories", "Repeats the same game or activity" and "Startles easily." Posttraumatic stress is an interval variable with possible scores that range from 0 to 60, with higher scores reflecting greater posttraumatic stress symptomatology. Cutoff scores have been developed to identify areas of clinical concern (Soberman, Greenwald, & Rule, 2002).

Administration of the PROPS may be either written or oral and takes approximately 5 minutes to complete. In this study, foster parents completed the written form. The self-report measure was designed specifically to address the fact that parents tend to be accurate reporters of child behavior (Greenwald & Rubin, 1999).

Adequate reliability and validity have been demonstrated for the Parent Report of Posttraumatic Symptoms questionnaire. Greenwald and Rubin (1999) found a test-retest correlation of .79 ($p < .001$). Cronbach's alpha reliability coefficient was measured at .93 in their original study of the instrument. Concurrent validity, was also established through significant correlations between total and individual item scores on the posttraumatic stress measure and the estimated level of trauma exposure represented by the Lifetime Incidence of Traumatic Events (LITE) checklist (Greenwald & Rubin, 1999).

Although there is considerable overlap between the CBCL and the PROPS it was thought useful to include both of them in the original study. While the Child Behavior Checklist has the advantage of having been widely used and reported on, it is less precise than the PROPS in that it includes a wide range of behavioral issues without any attempt to relate them to diagnostic categories. The PROPS, on the other hand, is a clinically

valuable tool and, although it is not a diagnostic instrument, it is a more precise measure of behaviors indicative of posttraumatic stress disorder.

Independent Variables

The independent variables under study are foster child report of psychological presence of birthparent during the past year, number of foster care placements, sex of the child, and age of the child.

The Psychological Presence Measure is a 13-item measure grounded in Boss's (1999) theory of ambiguous loss that assesses the foster child's psychological attachment to his/her birth parents (Kohler, Fravel, Wallen, Falconier & Riley, 2002). Of the 13 items, number one and two have the greatest amount of face validity. The remaining items on the Psychological Presence Measure are not easily scaled. For the purposes of the current study only information from the first two items of the measure were included.

Psychological presence of the birthparent was measured by foster child report of the frequency with which the child felt the birthmother was in his/her mind and heart over the previous 12 months. The response format is a five-point scale including the following response categories: 1 = "a few times during the year (1-5)," 2 = "several times during the year (6 or more, but less than monthly)," 3 = "at least once a month," 4 = "at least once a week," and 5 = "every day." Because this question was asked only of those children who had answered yes to the previous question ("During the past year, have there been times you felt your birthmother in your mind and in your heart?"), an extra response category was added: "never." Children who answered no to the previous question about whether they ever felt their birthmother was in their mind and heart were

coded as 0 on this question, adding the response category 0 = “never.” Thus we have a six point scale ranging from 0 to 5.

Number of foster care placements is ordinal data obtained from the form submitted by the child’s caseworker at the time the child was referred to the Lifelines for Kids program. It is important to note that estimate data for the number of foster care placements experienced by the target foster child was only available for this episode of out of home placement. Information regarding previous episodes of foster care placement followed by reunification with the child’s biological parents was not available.

Child sex is a categorical variable (0=female; 1=male). Child age (in years) is a continuous variable. The expected relationships between child age, child sex, ambiguous loss, and number of placements with the outcome variables are presented in Figure 2.

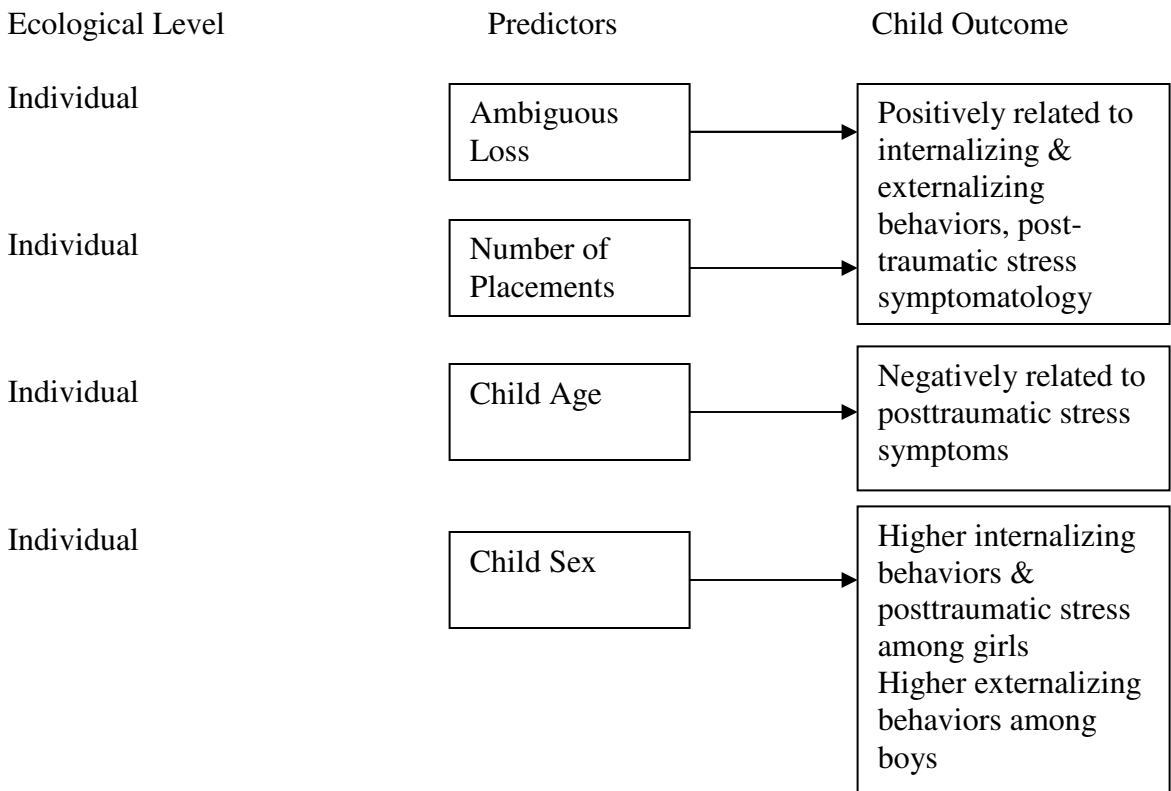


Figure 2. Conceptual Model

Procedure

The University of Maryland Internal Review Board (IRB) approved this study. Data collection was conducted at the Center for Adoption Support and Education (C.A.S.E.) under the supervision of Dr. Jacqueline Wallen at the University of Maryland. C.A.S.E. collaborated with social services staff to develop eligibility requirements, referral forms, and protocols for the project. Eligible foster families participating in concurrent planning were referred to C.A.S.E. by caseworkers employed by the Montgomery County Department of Health and Human Services and the Prince George's County Department of Social Services.

Informed consent was obtained from each of the foster parents participating in this study upon entry into the Lifelines program. The written consent form utilized in this study is presented in Appendix C.

Participation in the Lifelines program was expected for a period of one year. Children and foster parents were administered standardized assessment instruments during the initial visit and at three month intervals for the duration of their treatment. During quarterly visits to C.A.S.E., completed between October 2000 and March 2004, foster parents provided an assessment of the foster child's behavior. Only data obtained during the initial assessment were used in this analysis.

Data Analysis

The present study is based on the secondary analysis of data from the baseline data collection of the Lifelines for Kids study. Statistical analyses were performed using SPSS on a secondary data file with no identifying information other than participant code numbers.

Descriptive statistics including ranges, means, frequencies, and standard deviations were used to summarize the demographic characteristics of the participants in the sample. Participant means, standard deviations, and ranges on the Psychological Presence Questionnaire, the number of foster care placements, the Child Behavior Checklist (CBCL) and the Parents' Report of Posttraumatic Symptoms (PROPS) were also reported. The internal consistency of the PROPS and the CBCL for this sample was computed using Cronbach's coefficient alphas. A correlation matrix of all independent and dependent variables was generated to examine all possible relationships between the variables. No causal inferences were made due to the cross sectional nature of the baseline data.

Multiple linear regression analyses were used to test the research hypotheses and to determine the strength of the relationship between the predictor variables (parental psychological presence, number of foster placements, child age, and child sex) and the dependent variables (internalizing and externalizing behavior problems and posttraumatic stress symptomatology). Separate regression models were tested for internalizing and externalizing behavior problem subscales of the CBCL.

CHAPTER IV: RESULTS

Demographic Characteristics

The demographic characteristics of the sample are presented in Table 1. At the time of the baseline data collection of the Lifelines for Kids project, the average child age was 9.9 years (SD = 2.20 years). Children ranged in age from 6 to 15 years, with a median child age of 10 years. The gender distribution of this sample was approximately equal, consisting of 36 (49.3%) males and 37 (50.7%) females. In terms of race, the sample consisted of 57 African American (81.4%), 5 Caucasian (7.1%), and 2 Latino (2.9%) children in foster care. The remaining 6 (8.6%) children were identified by their foster parent as belonging to more than one racial group.

Table 1

Demographic Characteristics of the Sample

Demographic Characteristic	Mean (Standard Deviation)	Range
Age of Child in Years	9.9 (2.20)	6-15
Child Gender (N=73)	Number (Percentage)	
Male	36 (49.3)	
Female	37 (50.7)	
Child Race (N=70)		
African American/Black	57 (81.4)	
Caucasian/White	5 (7.1)	
Latino/Hispanic	2 (2.9)	
Multi-Racial	6 (8.6)	

Reliability of Dependent Variable Measures

Internal consistency of the dependent variable measures was computed using Cronbach's coefficient alphas. Behavior problems were measured using the internalizing and externalizing subscales of the Child Behavior Checklist (CBCL) and posttraumatic

stress symptomatology was measured using the Parent Report of Posttraumatic Symptoms (PROPS). The reliability coefficients for these measures are presented in Table 2. Using the generally agreed upon lower limit for acceptable reliability of .70, all three study measures fell within the acceptable range. Reliability analyses for the internalizing and externalizing subscales of the CBCL produced Cronbach's alpha coefficients of .99 and .98, respectively. A high level of internal consistency was also found for the PROPS study measure, which had a Cronbach's alpha coefficient of .90.

Table 2

Reliability Scores for Dependent Variable Measures

Measure	Number of Items	Cronbach's alpha
Child Behavior Checklist		
Internalizing	31	.99
Externalizing	33	.98
Parent Report of Posttraumatic Symptoms	30	.90

Children's Mean Scores on Independent Variable Measures

Table 3 presents the range, means, and standard deviations for child scores on the Psychological Presence Questionnaire, as well as the number of placements during the current episode of foster care. The average frequency for experiencing the psychological presence of the birthparent in one's mind and in one's heart was approximately once per week, with the most commonly reported experience of feeling the presence of the birthparent being everyday (59.6%). The average number of foster care placements that had been experienced at time of the baseline data collection was 3.00 (SD = 2.22). The number of foster care placements ranged from one to 10 with a median of two placements during the current episode of foster care.

Table 3

Children's Mean Scores on Independent Variable Measures

Measure	Sample Range	Subscale Mean	SD
Psychological Presence of Birthparent	0-5	3.63	(1.83)
Number of Foster Care Placements	1-10	3.00	(2.22)

Children's Mean Scores on Dependent Variable Measures

Table 4 shows the range, mean scores and standard deviations for the dependent variables of child behavior problems and posttraumatic stress symptomatology. The behavior problems of children in the sample were measured using the CBCL's subscales for internalizing and externalizing behavior problems. For each of the subscales, higher scores are indicative of more behavior problems. The average internalizing behavior problem score for children in this sample was 52.5, with a standard deviation of 15.2. Sample scores on the internalizing subscale of the CBCL ranged from 34 to 77. On the externalizing subscale of the CBCL, sample scores ranged from 37 to 88. The mean externalizing behavior problem score for this sample was 58.0 (SD = 17.4). This average is more than one standard deviation above the normal range, indicating that our sample of children in foster care exhibit higher levels overall externalizing behavior disorders than has been observed in other community samples (Achenbach & Edelbrock, 1991).

The Parent Report of Posttraumatic Symptoms (PROPS) measured the level of posttraumatic stress symptomatology displayed by the foster child over the previous 7 days as given by caretaker report. Possible scores ranged from 0 to 60, with higher scores indicating greater posttraumatic stress symptomatology. The observed range of

posttraumatic stress scores among children in this sample ranged from 4 to 45. The mean score for the PROPS subscale was 18.8 (SD = 10.7).

Table 4

Children's Mean Scores on Dependent Variable Measures

Measure	Number of Items	Sample Range	Subscale Mean	SD
Child Behavior Checklist				
Internalizing Score	31	34-77	52.5	15.2
Externalizing Score	33	37-88	58.0	17.4
Posttraumatic Symptoms	30	4-45	18.8	10.7

Correlations among Variables

Table 5 presents a correlation matrix depicting the interrelationships among all the independent and dependent variables in this study. For each continuous variable, Pearson's product-moment correlation coefficients were computed to examine the relationships between the variables. In the case of child sex, which is a dichotomous variable, point biserial correlations were calculated. Point biserial correlation is mathematically equivalent to the Pearson's product-moment correlation formula, but point biserial correlation provides a measure of association between a continuous and a binary variable. Like Pearson's correlation coefficients, point biserial correlations are constrained to fall between -1 and +1. The interpretation of point biserial correlations is similar to Pearson's correlations coefficients. Both measures of association are reported in the correlation matrix.

The number of foster care placements, as shown in Table 5, experienced before the time of the baseline data collection, was positively correlated with posttraumatic

stress symptomatology among the children in this sample ($r = .27, p < .05$). Table 5 also shows significant positive correlations between each of the behavior problem measures, on the one hand, and posttraumatic stress symptomatology, on the other. Internalizing and externalizing behavior problems were significantly positively correlated with one another ($r = .80, p < .01$). Internalizing behavior problems were also significantly positively correlated with posttraumatic stress symptomatology ($r = .61, p < .01$), as were externalizing behavior problems ($r = .64, p < .01$).

Table 5

Correlation Coefficients for All Variables

Variable	1	2	3	4	5	6	7
Predictors							
1. Psychological Presence of Birthparent	--						
2. Number of Foster Care Placements	-.01	--					
3 Child Age	-.12	-.03	--				
4. Child Sex	-.01	.11	.05	--			
Outcomes							
5. Internalizing Behavior Problems	.01	.02	-.12	.00	--		
6. Externalizing Behavior Problems	-.08	.17	-.18	-.01	.80**	--	
7. Posttraumatic Stress Symptomatology	-.05	.27*	-.08	-.04	.61**	.64**	--

* $p < .05$, ** $p < .01$

Regression Models

The primary objective of this study was to identify specific factors that may predict higher levels of internalizing and externalizing problem behaviors (as reported by

the scales of the Child Behavior Checklist) and greater posttraumatic stress symptomatology (as reported by the PROPS) among children in foster care. Factors under study include psychological presence of the birthparent, number of foster care placements, child age, and child sex. Multiple linear regressions were used to determine the association of each independent variable with each dependent variable (child internalizing and externalizing behavior problems and posttraumatic stress symptoms) controlling for the other independent variables. Three separate regression analyses were conducted, one for each subscale of the Child Behavior Checklist (CBCL) as well as the Parent Report of Posttraumatic Symptoms (PROPS) scale.

Table 6 presents the results of the regression model for the Child Behavior Checklist (CBCL) subscale of internalizing problem behavior. The overall model was not significant with an adjusted R^2 of -.022, meaning that the independent variables accounted for only 2.2 percent of the variance in the dependent variable. Contrary to the study's hypothesis, psychological presence of birthparent, number of foster care placements, chronological age, and biological sex were not significant predictors of the internalizing behavior problems of children in this sample.

Table 6

Internalizing Behavior Problems Regressed on Psychological Presence, Number of Foster Care Placements, Age, and Sex

Predictor Variables	B	SE	Beta	<i>p</i>
Psychological Presence of Birthparent	-.434	1.409	-.044	.759
Number of Foster Care Placements	.120	.965	.018	.902
Age	-1.85	1.108	-.238	.101
Sex	-.935	4.659	-.029	.842

N = 52

$R^2 = .058$

Adjusted $R^2 = -.022$

Table 7 presents the results of the regression model for the Child Behavior Checklist (CBCL) externalizing problem behavior subscale. The overall model was not significant with an adjusted R^2 of .024, meaning that the independent variables accounted for 2.4 percent of the variance in the dependent variable. Contrary to the study's hypothesis, psychological presence of birthparent, number of foster care placements, child age, and biological sex were not significant predictors of the externalizing behavior problems in this sample of children in foster care. Table 7 reports, however, that a trend was observed suggesting that older age was predictive of fewer externalizing behavior problems among the children in this sample ($p < .10$).

Table 7

Externalizing Behavior Problems Regressed on Psychological Presence, Number of Foster Care Placements, Age, and Sex

Predictor Variables	B	SE	Beta	<i>p</i>
Psychological Presence of Birthparent	-1.591	1.671	-.137	.346
Number of Foster Care Placements	1.472	1.122	.187	.196
Age	-2.312	1.359	-.244	.096
Sex	-1.306	5.544	-.034	.815

N = 49
 $R^2 = .105$
Adjusted $R^2 = .024$

Table 8 presents the results of the regression model for the Parent Report of Posttraumatic Symptoms (PROPS). The overall model was not significant with an adjusted R^2 of .070, meaning that the independent variables accounted for seven percent of the variance in the dependent variable.

Contrary to three of the study's hypotheses psychological presence of birthparent, child age and sex were not significant predictors of the posttraumatic stress symptoms of children in this sample. In this model it was observed, however, that number of foster care placements is a significant predictor of posttraumatic stress symptoms ($p < .05$). Thus the hypothesis regarding a positive relationship between number of foster care placements and posttraumatic stress symptomatology among children in foster was supported by the data.

Table 8

Posttraumatic Stress Symptomatology Regressed on Psychological Presence, Number of Foster Care Placements, Age and Sex

Predictor Variables	B	SE	Beta	<i>p</i>
Psychological Presence of Birthparent	-.568	.904	-.089	.533
Number of Foster Care Placements	1.305	.634	.287	.046*
Age	-.1.23	.767	-.224	.116
Sex	-2.384	3.216	-.105	.462

N = 49
 $R^2 = .148$
Adjusted $R^2 = .070$

CHAPTER V: DISCUSSION

The current study employed an ecological model to examine predictors of behavior problems and one psychological disorder among children in foster care. Given the numerous adjustments, challenges, and traumas that are faced by children who are removed from their families of origin, it is important to understand the individual level factors that may contribute to the risk or resilience of children in foster care.

In an effort to understand the child characteristics that may predict internalizing and externalizing behavior problems and posttraumatic stress, this study examined four individual level factors that may predict negative outcomes among children in foster care. The first potential risk factor was psychological presence of birthparent. The second potential risk factor was number of foster care placements experienced by the child. A third risk factor was younger age, which ecological theory might suggest would relate to greater environmental dependency for nurturance and support. The final individual factor examined in this study was child sex. Previous research has suggested that males have a higher prevalence of externalizing behavior disorders, whereas females exhibit more internalizing behaviors and greater posttraumatic stress symptomatology than their opposite-sex peers (Sternberg, 2006).

Although previous studies have addressed the elevated rates of behavior problems observed among children in foster care, few have looked at the individual level factors that may contribute to posttraumatic stress symptoms among children in foster care. The issue of how ambiguous loss may affect behavior problems and posttraumatic stress has not been explored among this underserved population. The purpose of this study was to determine the individual factors that may be linked to behavior problems and stress

symptomatology among school-age and adolescent children in foster care. Specifically, this study examined the role of ambiguous loss, number of placements, child age, and child sex as predictors of internalizing and externalizing behavior problems and posttraumatic stress symptomatology among children in foster care.

Psychological Presence

It was anticipated that greater reported psychological presence of the birth parent would be associated with an increase in behavior problems among children in foster care. It was hypothesized that experiencing an ongoing attachment with one's birth parents would cause loyalty conflicts and increase the likelihood that foster children would resist forming attachments with foster parents. However, contrary to predictions, psychological presence was not a significant predictor of internalizing or externalizing behavior problems among this sample of children in foster care.

It was also expected that children in foster care who have experienced the presence of their birthparent more frequently would be more prone to posttraumatic stress symptomatology. Greater ambiguous loss, as would be expected with frequent psychological presence of the birthparent, is thought to exacerbate stress (Boss, 1999). Although it was hypothesized that psychological presence of the birthparent might contribute to traumatic stress reactions among children in foster care, there was no significant relationship between psychological presence of the parent and posttraumatic stress symptoms. This finding may be due, in part, to a shortcoming of the Psychological Presence Questionnaire. The questionnaire does not address whether the experience of feeling one's birthparent in one's mind and heart is pleasant or unpleasant for the child. Measuring only the frequency of the parental presence, without taking into account the

positive or negative valence of that experience, makes it difficult to interpret the overall impact of parental presence.

In future research it would be helpful to generate separate scales for the positive and negative experience of the psychological presence of the birthparent in order to determine whether or not the nature and extent of the relationship with the birthparent affects the impact of parental presence on children in foster care. Replication of this study with a more comprehensive measure of psychological presence may reveal the effects of children's sense of the birthparents' psychological presence on both the behavior and posttraumatic stress symptoms of children in foster care.

Number of Foster Placements

In 2006 it was reported that more than half of all foster children can expect at least one placement disruption during an episode of foster care (AFCARS, 2006). The current sample was no exception to that trend, with children having experienced an average number of three placement disruptions at the time of baseline data collection.

It was hypothesized that the number of foster care placements would be positively related to internalizing and externalizing behavior problems. It has been reported in the current literature that placement disruptions are associated with caseworker reports of problem behaviors (Leathers, 2005; Newton, Litrownik, & Landsverk, 2000). Contrary to the hypotheses, there was no significant relationship between the number of foster care placements and children's internalizing and externalizing behaviors. A possible explanation for the lack of statistical support is the missing information about previous episodes of foster care placement. There were no data available to indicate whether or not a child had been placed in substitute care previously and subsequently reunited with

his/her biological family. The baseline data set only contains information on the number of placements for the current episode of foster care. The number of placements for many children in the sample may be an underestimate if the children have experienced previous episodes of foster care participation. It is possible that children exhibiting serious behavior problems are not experiencing their initial episode of foster care placement.

It was also expected that more placement disruptions would be related to more posttraumatic stress symptoms among children in foster care. The anticipated relationship between number of foster care placements and posttraumatic stress symptoms was found to be significant for this sample of children. Previous research has found that subsequent traumas may reactivate earlier catastrophic anxieties producing a snowball effect (Kenrick, 2000). The additive stresses of separation from one's biological family and multiple placement disruptions while in foster care may weaken a child's resilience and contribute to posttraumatic stress symptomatology. Thus, it was not surprising that children in foster care who experienced the greatest number of placement disruptions exhibited higher levels of traumatic stress.

Child Age

It was hypothesized that younger age would be associated with greater posttraumatic stress symptoms in both boys and girls. Ecological theory posits that young children are more dependent on their immediate family microsystem for social, cognitive, and emotional support (Brock, 2002; Luthar & Zigler, 1991). It has also been suggested that younger children exposed to trauma frequently turn to emotional and cognitive avoidance strategies, such as numbing and dissociation (Carlson, 1997).

However, the expected relationship between younger age and posttraumatic stress

symptomatology was not found to be significant. Several factors may have contributed to this finding. For example, it is possible that some older children in foster care may have suffered more maltreatment and neglect than younger children, making them more vulnerable to posttraumatic stress. Although younger children in this study may have had less access to external supports than older children, they may have also experienced a more nurturing environment. Thus, when examining the role of age in predicting posttraumatic stress symptoms it is also important to look at the quality of foster care placements, children's exposure to neglect and abuse in foster care homes, and children's access to external social support. Replicating the study using a larger sample size and collecting more information on the nature of the foster care experience may help to clarify the relationship between age and posttraumatic stress symptomatology.

Child Sex

Consistent with observed trends in gender patterns of internalizing and externalizing behavior problems among the general population, it was anticipated that girls in this sample would exhibit more internalizing problems and boys in the sample would display greater externalizing problems than their opposite-sex peers. The expected relationship between male gender and externalizing behavior problems was not significant. The relationship between female gender and internalizing behavior problems among foster care children was also not significant. Current data did reveal that the children in foster care in this sample had higher externalizing behavior problems than children of comparable ages in the general population.

Although the hypotheses regarding the relationship between gender and behavior problems were not supported, the findings are consistent with recent research suggesting

that young African American girls may be at heightened risk for developing externalizing behavior problems. Randolph, Koblinsky, Brenner, Roberts, & Letiecq (2000) reported that young African American females may be undercontrolled by parents who place higher expectations for independence on female children than male children. These expectations may contribute to aggressive behavior and impulsiveness among some female children, particularly in higher risk environments where children feel they need to assert themselves to avoid victimization. In these situations, girls may also exhibit externalizing behaviors to compete for adult attention and support.

Interestingly, Randolph et al. (2000) also found that preschool African American boys in high risk communities had higher rates of internalizing behavior problems than girls. Current findings were not consistent with the latter study's outcomes, but it was found that there were no differences in the internalizing behavior problems of boys and girls. These findings may be influenced by the nature of the foster care experience and the environments in which some of these children were initially raised. Both boys and girls may have experienced stressors in their homes and communities. Living in substitute care, where children do not have the support of their biological parents, may reduce sex differences in the internalizing and externalizing behavior problems of school-age and adolescent girls and boys.

Based on adult prevalence rates, it was also hypothesized that girls in foster care would experience more pronounced posttraumatic stress symptomatology than boys in substitute care. Significant gender differences in traumatic stress symptoms, however, were not observed in this sample. Again, a possible explanation for the lack of support for this hypothesis is the absence of information about the extent and type of pre-

placement abuse. A review of the current literature reveals that the nature and severity of a traumatic experience, such as child abuse or neglect, may impact the strength of posttraumatic stress reactions (Sternberg, 2006). Because no information was available about the pre-placement experiences of children in this sample it cannot be determined if sex-related differences in child maltreatment history may be influencing the results. Further research, which includes more detailed information about pre-placement histories, is needed to determine whether or not the sex-related differences in posttraumatic symptomatology rates observed among the general adult population hold true for children in foster care settings.

Limitations and Directions for Future Research

There are a number of methodological improvements that would enhance current knowledge of the behavior problems and posttraumatic stress exhibited by children residing in foster care. First, a larger sample size would provide more accurate estimates of the rates of clinical problems and would also ensure adequate statistical power.

Second, more information is needed about the pre-placement experiences of children in foster care. For this sample, data about number of placement disruptions were only available for the current episode of foster care. No information was provided about previous episodes of foster placement that may have occurred for some children in this sample. It would also be helpful to know the reasons for removal from the child's family of origin. More detailed information about the type and duration of pre-placement abuse may contribute to a better understanding of the etiology of behavior disorders and posttraumatic stress among children in foster care. Accurate and detailed reporting of previous foster care placements and the conditions experienced within the family of

origin would help researchers to better understand which risk and protective factors are most predictive of behavior problems and posttraumatic stress among children in foster care.

Third, more longitudinal research is needed in this area. Longitudinal data on a large number of cases would allow researchers to determine which aspects of foster care may be exacerbating or ameliorating the psychological and behavioral problems that result from traumas experienced prior to foster care placement.

Finally, as noted previously, future research into ambiguous loss among children in foster care should include separate scales for the positive and negative experience of psychological presence of the birthparent. It may also be helpful to restrict the range of child ages used in studies of the behavior problems of children in foster care in order to avoid confounding developmental differences with other predictor variables such as number of foster care placements.

Clinical and Policy Implications

The finding that numerous foster care placements are associated with increased posttraumatic stress symptomatology among this sample of children in foster care contributes to the knowledge available to foster parents, mental health professionals, and policy makers. Based on the results of this study, it would appear that children experiencing repeated stress due to numerous placement disruptions deserve the attention of policy makers and foster care advocates because these children may be at particular risk for long-term negative stress reactions. The findings of this study indicate that priority needs to be placed on reducing the number of placement disruptions experienced by children in foster care. Although recent legislation has addressed the need to reduce

length of time in foster care, further attention needs to be given to developing strategies and incentives to reduce the disruptions faced by at-risk youth in substitute care settings. One of the primary objectives of foster care is to protect children from the negative developmental impacts associated with adverse family and environmental conditions (Lawrence, Carlson, & Egeland, 2006). The present study suggests that placement stability should be highlighted as a necessary component of nurturing and supportive foster care.

One of the previous strategies used to increase placement stability was the promotion of kinship care. However, over the past eight years there has been a steady decrease in the percentage of foster children residing in kinship foster care (AFCARS, 2006). This is unfortunate given that kinship care has been associated with a lower disruption rate (Chamberlain, Reid, Landsverk, Fisher, & Stoolmiller, 2006). Living with relatives may serve as a protective factor for children experiencing traumatic stress reactions by fostering greater maintenance of extended family ties despite removal from the child's immediate family. Some researchers have attributed the decline in kinship care to caseworker perceptions that kinship care may be more difficult to manage than other foster care arrangements. One study of 261 social workers conducted by Beeman and Boisen (1999) found that although child welfare professionals were positive about the benefits of kinship foster care, they also reported it was more difficult to help children's relatives understand their role as foster care providers than other foster care providers.

It has been reported that kinship care in the United States is most frequently employed by African American families in an effort to preserve family and community

(Scannapieco & Jackson, 1996). Current findings suggest that more incentives and resources need to be provided to kinship care providers in order to increase the likelihood that children will be placed in stable foster care arrangements.

The current study found that a higher number of foster care placements was linked to greater posttraumatic stress symptomatology among children in foster care. Further research is needed to identify how other factors, including psychological presence of the birthparent, chronological age, and biological sex, may affect the vulnerability of children to developing the internalizing and externalizing behavior problems and posttraumatic stress symptomatology frequently observed among children in foster care. Understanding the impact of these variables will help ensure that the foster children experiencing the greatest number of risk factors will be given the highest treatment priority.

Conclusions

The purpose of this study was to identify individual level factors that predict the elevated rates of behavior disorders and posttraumatic stress observed among children in foster care. Despite the small sample size, the number of foster care placements experienced was found to be predictive of the posttraumatic stress symptomatology exhibited by this sample of children in foster care. This finding supports the notion that ecological stressors tend to be cumulative for children in foster care and that multiple placement disruptions should be a source of concern for policy makers, case workers, and the primary caregivers of children in foster care. Greater attention needs to be paid to securing stable substitute care for children in order to minimize the number of times at-risk foster youth must reestablish family relationships and readjust to new environments.

Current findings suggest that practitioners and policymakers should give priority to securing more stable placement options, such as encouraging greater use of kinship care, when it is deemed necessary that children be removed from their biological parents. Greater attempts should be made to recruit and support kinship foster care providers with the goal of providing children with a stable, nurturing home environment during their time in foster care.

APPENDIX A: PARENT REPORT OF POSTTRAUMATIC STRESS (PROPS)

PARENT FORM

Child's Name _____ Date _____

Your Name _____

Mark how well each item describes your child **in the past week**. (circle the number)
Don't skip any, even if you're not sure.

Not True or Rarely True	Somewhat or Sometimes True	Very True or Often True	
0	1	2	Difficulty concentrating
0	1	2	Mood swings
0	1	2	Thinks of bad memories
0	1	2	Spaces out
0	1	2	Feels too guilty
0	1	2	Anxious
0	1	2	Irrational fears
0	1	2	Repeats the same game or activity
0	1	2	Clings to adults
0	1	2	Avoids former interests
0	1	2	Fights
0	1	2	Bossy with peers
0	1	2	Sad or depressed
0	1	2	Hyper-alert
0	1	2	Feels picked on
0	1	2	Gets in trouble
0	1	2	Worries
0	1	2	Fearful
0	1	2	Withdrawn
0	1	2	Nervous
0	1	2	Startles easily
0	1	2	Irritable
0	1	2	Quick temper
0	1	2	Argues
0	1	2	Secretive
0	1	2	Doesn't care anymore
0	1	2	Difficulty sleeping
0	1	2	Nightmares or bad dreams
0	1	2	Wets bed
0	1	2	Eating problems
0	1	2	Stomach aches
0	1	2	Headaches

PROPS 1.2xr © Ricky Greenwald, 1997

APPENDIX B: DEMOGRAPHIC QUESTIONNAIRE

ID Number: _____

Date: ____/____/____

Instructions: Please answer all of the following questions.

1. Date of Birth: _____ / _____ / _____

month
day
year
2. Gender (please circle): M / F
3. Marital Status:
 - a. Single/never married
 - c. Divorced
 - b. Married
 - d. Widowed
4. Ethnicity (please circle):
 - a. African American/Black
 - e. Native American/American Indian
 - b. Asian/Pacific Islander
 - f. Multi-Racial
 - c. Caucasian/White
 - g. Other (please identify) _____
 - d. Latino/Hispanic
5. Highest Level of Education completed:
 - a. 8th grade or less
 - e. College degree (e.g., B.A., B.S.)
 - b. Some high school
 - f. Some graduate school
 - c. High School
 - g. Graduate degree (e.g., M.A., PhD)
 - d. Some college
6. Annual Family Income:
 - a. under \$15,000
 - e. \$60,000-\$74,999
 - b. \$15,00-\$29,999
 - f. \$75,000-\$89,999
 - c. \$30,000-\$44,999
 - g. over \$90,000
 - d. \$45,000-\$59,999
7. For how long have you been a foster parent? _____
8. Children currently parenting:

Child's First Name	Date of Birth Month/day/year	Gender M/F	Nature of Relationship Foster/Adopted/Biological

APPENDIX C: PSYCHOLOGICAL PRESENCE QUESTIONNAIRE

1. During the past year, have there been times when you felt your birthmother in your mind or your heart?

No
 Yes (continue to question 2)

2. During the past year, how often would you say you felt your birthmother in your mind or your heart?

Every day
 At least once a week
 At least once a month
 Several times during the year (6 or more, but less than monthly)
 A few times during the year (1-5)

APPENDIX D: PARTICIPANT CONSENT FORM

I state that I am over 18 years of age, in good physical health, and wish to participate in the Lifelines for Kids Demonstration Project conducted by the Center for Adoption Support and Education (C.A.S.E.). I understand that the Department of Family Studies at the University of Maryland, College Park, Maryland 20742, is conducting an evaluation of the Lifelines for Kids Demonstration Project in order to learn how the program was implemented and whether it was helpful to participants. I also understand that information I provide to the program may be used by the Department of Family Studies to conduct evaluation research.

The purpose of the Lifelines for Kids Demonstration Project is to provide a comprehensive system of support for children who are experiencing the ambiguities of concurrent planning (the simultaneous exploration of family reunification and permanent placement for the child) in the child welfare system. The program will help children address the issues of grief, loss, attachment, and loyalty that arise in the process of moving from foster care to a permanent home. It will also provide training and educational sessions for foster/adoptive parents and social workers concerning the needs of children in concurrent planning.

For the purposes of evaluating education and training sessions I will be asked to complete assessment forms before and after sessions.

All information collected for the purposes of evaluation Lifelines for Kids Demonstration Project will be confidential and my name will not be used at any time. An identification number will be used on my forms in order to link the before and after assessments by this number. This number will not be linked to my name in any of the program records. The data I provide will be grouped with data provided by others for the purpose of any papers, reports, or presentations so that no one person's responses can be identified.

There are no known risks associated with participation in the Lifelines for Kids Program.

I understand the completion of the assessment forms is voluntary and that I can withdraw from responding to these forms at any time and still participate in the sessions. There is no penalty for not completing forms.

Printed signature of participant: _____

Signature of participant: _____

Date: _____

REFERENCES

- Abrams, M.S. (2001). Resilience in ambiguous loss. *American Journal of Psychotherapy*, 55(2), 283-291.
- Achenbach, T.M. (1978). The child behavior profile: I. Boys aged 6-11. *Journal of Consulting and Clinical Psychology*, 46, 478-488.
- Achenbach, T.M., & Edelbrock, C.S. (1983). *Manual for the Child Behavior Checklist and Revised Child Behavior Profile*. Burlington, VT: University Association of Psychiatry.
- Achenbach, T.M., Howell, C.T., Quay, H.C., & Conners, C.K. (1991). National survey of problems and competencies among four- to sixteen-year-olds: Parents' reports for normative and clinical samples. *Monographs of the Society for Research in Child Development*, 56, 1-125.
- Ackerman, P.T., Newton, J.E., McPherson, W.B., Jones, J.G. & Dykman, R.A. (1998). Prevalence of post traumatic stress disorder and other psychiatric diagnoses in three groups of abused children (sexual, physical, and both). *Child Abuse & Neglect*, 22, 759-774.
- Adam, B.S., Everett, B.L., & O'Neal, E. (1992). PTSD in physically and sexually abused psychiatrically hospitalized children. *Child Psychiatry and Human Development*, 23, 3-8.
- Adoption and Safe Families Act of 1997, 42 U.S.C. §1305 et seq.
- Agaibi, C.E., & Wilson, J.P. (2005). Trauma, PTSD, and resilience: A review of the literature. *Trauma, Violence, & Abuse*, 6(3), 195-216.

- Alder-Nevo, G. & Manassis, K. (2005). Psychosocial treatment of pediatric posttraumatic stress disorder: The neglected field of single-incident trauma. *Depression and Anxiety, 22*, 177-189.
- American Psychiatric Association. (1994). *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.). Washington, DC: Author.
- Arad, B.D. (2001). Parental features and quality of life in the decision to remove children at risk from home. *Child Abuse & Neglect, 25*, 47-64.
- Athenstaedt, U. (2003). On the content and structure of the gender role self-concept: Including gender-stereotypical behaviors besides traits. *Psychology of Women Quarterly, 27*, 309-318.
- Barber, B.K., Olsen, J.E. & Shagle, S.C. (1995). Associations between parental psychological and behavioral control and youth internalized and externalized behaviors. *Child Development, 65*, 1120-36.
- Beeman, S., & Boisen, L. (1999). Child welfare professionals' attitudes toward kinship foster care. *Child Welfare 78*, 315-330.
- Boney-McCoy, S. & Finkelhor, D. (1995). Prior victimization: A risk factor for child sexual abuse and for PTSD-related symptomatology among sexually abused youth. *Child Abuse & Neglect, 19*, 1401-1421.
- Boss, P. (1999). *Ambiguous loss*. Cambridge, MA: Harvard University Press.
- Boss, P. (2002). *Family stress and management* (2nd ed.). Newbury Park, CA: Sage.
- Boss, P. (2004). Ambiguous loss research, theory, and practice: Reflections after 9/11. *Journal of Marriage and Family, 66*, 551-566.

- Boss, P. & Greenberg, J. (1984). Family boundary ambiguity: A new variable in family stress theory. *Family Process*, 23, 535-547.
- Bowlby, J. (1969). *Attachment and loss: Vol. I Attachment*. New York: Basic Books.
- Boyne, J., Denby, L., Kettenring, J.R., and Wheeler, W. (1984). *The shadow of success: A statistical analysis of outcomes of adoptions of hard-to-place children*. Westfield, NJ: Spaulding for Children.
- Breslau, N., Davis, G., Andreski, P., Peterson, E.L., & Schultz, L.R. (1997). Sex differences in posttraumatic stress disorder. *Archives of General Psychiatry*, 54(11), 1044-1048.
- Briere, J. (1988). The long-term clinical correlates of childhood sexual victimization. *Annals of the New York Academy of Sciences*, 528, 327-334.
- Brock, S.E. (2002). Identifying individuals at risk for psychological trauma. In Brock, S.E., Lazarus, P.J., & Jimerson, S.R. (Eds.), *Best practices in school crisis prevention and intervention* (pp.367-383). Bethesda, MD: National Association of School Psychologists.
- Bronfenbrenner, U. (1979). Contexts of child-rearing: Problems and prospects. *American Psychologist*, 34, 844-850.
- Bronfenbrenner, U. (1988). *Interacting systems in human development: Research paradigms: Present and future*. New York: Cambridge University Press.
- Browne, A., & Finkelhor, D. (1986). Impact of child sexual abuse: A review of the research. *Psychological Bulletin*, 99, 66-77.
- Carlson, E.B. (1997). *Trauma assessments: A clinician's guide*. New York: Guilford Press.

- Carlson, E.B., & Rosser-Hogan, R. (1994). Cross-cultural response to trauma: A study of the traumatic experiences and posttraumatic stress symptoms in Cambodian refugees. *Journal of Traumatic Stress, 7*, 43-58.
- Chamberlain, P., Reid, J.B., Landsverk, J. Fisher, P.A., & Stoolmiller, M. (2006). Who disrupts from placement in foster and kinship care? *Child Abuse & Neglect, 30* (4), 409-424.
- Child Abuse Prevention and Treatment Act of 1974. 42 U.S.C. §5101 et seq.
- Clausen, J. M., Landsverk, J., Ganger, W., Chadwick, D. & Litrownik, A. (1998). Mental health problems of children in foster care. *Journal of Child and Family Studies, 7*, 283-296.
- Committee on Early Childhood, Adoption and Dependent Care (2002). Health care of young children in foster care, *Pediatrics, 109*, 536-549.
- Committee on Early Childhood, Adoption and Dependent Care (1994). Health care of young children in foster care, *Pediatrics, 93*, 335-338.
- Conte, J., & Schuerman, J. R. (1987). Factors associated with an increased impact of child sexual abuse. *Child Abuse and Neglect, 11*, 201-211.
- Cuffe, S., Garrison, C. et al. (1998). Prevalence of PTSD in a community sample of older adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 37*, 147-154.
- DeBellis, M. & Van Dillen, T. (2005). Childhood post-traumatic stress disorder: An overview. *Child and Adolescent Psychiatric Clinics of North America 14*, 745-772.

- DeHart, G. B., Sroufe, L. A., & Cooper, R. G. (2004). *Child development: It's nature and course* (5th edition). New York: McGraw Hill.
- dosReis, S., Zito, J.M., Safer, D.J., & Soeken, K.L. (2001). Mental health services for youths in foster care and disabled youths. *American Journal of Public Health, 91*, 1094-1099.
- Dube, S.R., Felitti, V., Dong, M., Chapman, D., Giles, W., & Anda, R. (2003). Childhood abuse, neglect, and household dysfunction and the risk of illicit drug use: The adverse childhood experiences study. *Pediatrics, 111*(3), 564-572.
- Eisenberg, N., Cumberland, A., Spinrad, T.L., Fabes, R.A., Shepard, S.A., Reiser, M., Murphy, B., Losoya, S. H., & Guthrie, I. K. (2001). The relations of regulation and emotionality to children's externalizing and internalizing problem behavior. *Child Development, 72*, 1112-1134.
- Finch, S. J., & Fanshel, D. (1985). Testing the equality of discharge patterns in foster care. *Social Work Research and Abstracts, 21*(3), 3-10.
- Gabbay, V., Oatis, M.D., Silva, R.R., & Hirsch, G.S. (2004). Epidemiological aspects of PTSD in children and adolescents. In R. Silva, (Ed.), *Posttraumatic stress disorders in children & adolescents* (pp. 1-17). New York: Norton.
- Giacona, R., Reinherz, H., Silverman, A., Pakiz, B., Frost, A., & Cohen, E. (1995). Traumas and posttraumatic stress disorder in a community population of older adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 34*, 1369-1380.

- Green, B.L., Korol, M., Grace, M. C., Vary, M. G., Leonard, A. C., Glesser, G. C. & Smithson-Cohen, S. (1991). Children and disaster: Age, gender, and parental effects on PTSD symptoms. *Journal of the American Academy of Child and Adolescent Psychiatry, 30*, 945-951.
- Greenwald, R. & Rubin, A. (1999). Brief assessment of post-traumatic symptoms in children: Development and preliminary validation of parent and child scales. *Research and Social Work Practice, 9*(1), 61-75.
- Hahn, D.M. (2002). *Taking stock of risk factors for child/youth externalizing behavior problems*. Bethesda, MD: National Institute of Mental Health.
- Hoven, C.W., Duarte, C.S., Christopher P. Lucas, C.P., Wu, P.; Mandell, D.J., et al. (2005). Psychopathology among New York City public school children 6 months after September 11. *Archives of General Psychiatry, 62*, 545-551.
- Hussey, D.L., & Guo, S. (2005). Characteristic trajectories of treatment foster care youth. *Child Welfare, 84*(4), 485-506.
- Janoff-Bulman, R. (1992). *Toward a new psychology of trauma*. New York: Free Press.
- Kaplow, J.B. (2005). Pathways to PTSD, part II: Sexually abused children. *American Journal of Psychiatry, 162*, 1305-1322.
- Karroll, B., & Poertner, J. (2003). Indicators for safe family reunification: How professionals differ. *Journal of Sociology and Social Welfare, 30*, 139–160.
- Kenrick, J. (2000). “Be a kid’: The traumatic impact of repeated separations on children who are fostered and adopted. *Journal of Child Psychotherapy, 26* (3), 393-412.
- Kilpatrick, D.G., Saunders, B.E., Amick-McMullan, A., Best, C.L., Veronen, L.J., & Resnick, H.S. (1989). Victim and crime factors associated with the development

- of crime-related post-traumatic stress disorder. *Behavior Therapy*, 20, 199-214.
- King, D.W., King, L.A., Foy, B.W., & Gudanowski, D.M. (1996). Prewar factors in combat-related posttraumatic stress disorder: Structural equation modeling with a national sample of female and male Vietnam veterans. *Journal of Consulting and Clinical Psychology*, 64, 520-531
- Kohler, J.K., Fravel, D.L., Wallen, J., Falconier, M. & Riley, D.B. (2002). The psychological presence of birth parents for children in foster care: Implications for concurrent planning. Minneapolis: National Council on Family Relations Annual Conference.
- Kressierer, D.K., & Bryant, C.D. (1996). Adoption as deviance: Socially constructed parent-child kinship as a stigmatized and legally burdened relationship. *Deviant Behavior*, 17, 391-415.
- Lawrence, C.R., Carlson, E.A., & Egeland, B. (2006). The impact of foster care on development. *Development and Psychopathology*, 18, 57-76.
- Leathers, S.J. (2003). Parental visiting, conflicting allegiances, and emotional and behavioral problems among children in foster care. *Family Relations*, 52(1), 53-63.
- Leathers, S.J. (2005). Placement disruption and negative placement outcomes among adolescents in long-term foster care: The role of behavior problems. *Child Abuse & Neglect*, 30, 301-324.

- Lipschitz, D., Grilo, C., Fehon, D., McGlashan, T., & Southwick, S. (2000). Gender differences in the associations between posttraumatic stress symptoms and problematic substance use in psychiatric inpatient adolescents. *Journal of Nervous and Mental Disease, 188*, 349-356.
- Lonigan, C.J., Shannon, M.P., Taylor, C.M., Finch, A.J., & Sallee, F.R. (1994). Children exposed to disaster. II. Risk-factors for the development of posttraumatic symptomatology. *Journal of the American Academy of Child and Adolescent Psychiatry, 33*, 94-105.
- Luthar, S., & Zigler, E. (1991). Vulnerability and competence: A review of research on resilience in childhood. *American Journal of Orthopsychiatry, 61*, 6-22.
- Magnusson, D., & Stattin, H. (1998). Person-context interaction theories. In W. Damon. (Series Ed.) & R.M. Lerner (Vol. Ed.), *Handbook of Child Psychology: Vol. 1. Theoretical models of human development* (5th ed., pp. 685-759). New York; Wiley.
- Milan, S., Pinderhughes, E.E., & the Conduct Problems Prevention Research Group. (2006). Family instability and child maladjustment trajectories during elementary school. *Journal of Abnormal Child Psychology, 34*, 43-56.
- McGlone, K., Santos, L., Kazama, L., Fong, R., & Mueller, C. (2002). Psychological stress in adoptive parents of special-needs children. *Child Welfare, 81*, 151-171.
- Meiser-Stedman, Yule, W., Dalgleish, T., Smith, P. & Glucksman, E. (2006). The role of the family in child and adolescent posttraumatic stress following attendance at an emergency room department. *Journal of Pediatric Psychology, 31*, 397-402.

- Mullin, E.S., & Johnson, L. (1999). The role of birth/previously adopted children in families choosing to adopt children with special needs. *Child Welfare, 78*, 579-591.
- Mulvihill, D. (2005). The health impact of childhood trauma: An interdisciplinary review, 1997-2003. *Issues in Comprehensive Pediatric Nursing, 28*(2), 115-136.
- Newton, R.R., Litrownik, A.J., & Landsverk, J. (2000). Children and youth in foster care: Disentangling the relationship between behaviors and number of placements. *Child Abuse & Neglect, 24*(10), 1363-1374.
- Orme, J.G., & Buehler, C. (2001). Foster family characteristics and behavioral and emotional problems of foster children: A narrative review. *Family Relations, 50*, 3-15.
- Perrin, S., Smith, P., & Yule, W. (2000). The assessment and treatment of post-traumatic stress disorder in children and adolescents. *Journal of Child Psychology and Psychiatry, 41*, 277-289.
- Pfefferbaum, B. (2006). Comparing stress responses to terrorism in residents of two communities over time. *Brief Treatment and Crisis Intervention, 6*, 137-143.
- Powell, K.A., & Afifi, T.D. (2005). Uncertainty management and adoptees' ambiguous loss of the birth parents. *Journal of Social and Personal Relationships, 22*(1), 129-151.
- Racusin, R., Maerlender, A.C., Sengupta, A., Isquith, P.K., & Straus, M.B. (2005). Psychosocial treatment of children in foster care: A review. *Community Mental Health Journal, 41*(2), 199-221.

- Randolph, S.M., Koblinsky, S.A., Beemer, M.A., Roberts, D.D., & Letiecq, B.L. (2000). Behavior problems of African American boys and girls attending Head Start programs in violent neighborhoods. *Early Education and Development, 11*, 339-356.
- Rojas, V.M. & Lee, T.N. (2004). Childhood vs. adult PTSD. In R. Silva, (Ed.), *Posttraumatic stress disorders in children & adolescents*.(pp. 237-256). New York: Norton.
- Rosenfeld, A.A., Altman, R., Alfaro, J., & Pilowsky, D.J. (1994). Foster care, child abuse and neglect, and termination of parental rights. *Child Abuse, 3*(4), 877-893.
- Saunders, B.E., Kilpatrick, D.G., Hanson, R.F., Resnick, H.S. & Walker, M.E. (1999). Prevalence, case characteristics, and long-term psychological correlates of child rape among women: A national survey. *Child Maltreatment: Journal of the American Professional Society on the Abuse of Children, 4*, 187-200.
- Scannapieco, M., & Jackson, S. (1996). Kinship care: The African American response to family preservation. *Social Work, 41*(2), 190-196.
- Schofield, G. & Beek, M. (2005). Providing a secure base: Parenting children in long-term foster care. *Attachment & Human Development, 7*(1), 3-25.
- Schor, E.L. (1982). The foster care system and health status of foster children. *Pediatrics, 69*(5), 521-528.
- Schwab-Stone, M., Chen, C., Greenberger, E., Silver, D., Lichtman, J., & Voyce, C. (1999). No safe haven III: The effects of violence exposure on urban youth. *Journal of the American Academy of Child & Adolescent Psychiatry, 38*, 359-367.

- Schwarz, E.D., & Kowalski, J.M. (1991). Malignant memories: PTSD in children and adults after a school shooting. *Journal of the Academy of Child & Adolescent Psychiatry, 30*, 936-944.
- Schweiger, W.K., & O'Brien, M. (2005). Special needs adoption: An ecological systems approach. *Family Relations, 54*, 512-522.
- Silva, R., & Kessler, L. (2004). Resiliency and vulnerability factors in childhood PTSD. In R. Silva, (Ed.), *Posttraumatic stress disorders in children & adolescents* (pp. 18-37). New York: Norton.
- Simmons, C.A. & Granvold, D.K. (2005). A cognitive model to explain gender differences in rate of PTSD diagnosis. *Brief Treatment and Crisis Intervention, 5*(3), 290-299.
- Shin, S. (2005). Need for and actual use of mental health service by adolescents in the child welfare system. *Children and Youth Services Review, 27*, 1071-1083.
- Soberman, G. B., Greenwald, R., & Rule, D. L. (2002). A controlled study of eye movement desensitization and reprocessing (EMDR) for boys with conduct problems. *Journal of Aggression, Maltreatment, and Trauma, 6*, 217-236.
- Sternberg, K.J. (2006). Type of violence, age, and gender differences in the effect of family violence on children's behavior problems: A mega-analysis. *Developmental Review, 26*, 89-112.
- Stoppelbein, L.A., Greening, L. & Elkin, T. D. (2006). Risk of posttraumatic stress symptoms: A comparison of child survivors of pediatric cancer and parental bereavement. *Journal of Pediatric Psychology, 31*, 367-376.

- Sutker, P.B., Allain, J., Albert, N., & Winstead, D.L. (1993). Psychopathology and psychiatric diagnoses of World War II Pacific theater prisoner of war survivors and combat veterans. *American Journal of Psychiatry*, *150*(2), 240-245.
- U.S. Department of Health and Human Services, Children's Bureau, Administration for Children, Youth and Families. (2006). The AFCARS report: Current estimates as of June 2006. Retrieved June 27, 2006, from http://www.acf.hhs.gov/programs/cb/stats_research/afcars/tar/report11.htm
- Wallen, J. (2004). *Final Evaluation Report: The Lifelines for Kids Project*. College Park, MD: University of Maryland Department of Family Studies.
- Widom, C.S. (1989). Does violence beget violence? A critical examination of the literature. *Psychological Bulletin*, *106*, 3-28.
- Wolfe, V.V. (1989). The impact of sexual abuse on children: A PTSD formulation. *Behavior Therapy*, *20*, 215-228.
- Wolfe, D.A., Sas, L., & Wekerle, C. (1993). Factors associated with the development of posttraumatic stress disorder among child victims of sexual abuse. *Child Abuse & Neglect*, *18*, 37-50.
- Zima, B.T. (2000). Behavior problems, academic skill delays and school failure among school-aged children in foster care: Their relationship to placement characteristics. *Journal of Child and Family Studies*, *9*, 87-103.