

PREDICTORS OF FAVORABLE OUTCOMES AMONG CHILDREN IN FOSTER
CARE: AN ANALYSIS OF EARLY CHILDHOOD VARIABLES AND THEIR
RELATIONSHIP TO THE DEVELOPMENT OF ASSETS

by

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A DISSERTATION

Presented to the Department of Special Education
and Clinical Sciences
and the Graduate School of the University of Oregon
in partial fulfillment of the requirements
for the degree of
Doctor of Philosophy

June 2009

University of Oregon Graduate School

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"Predictors of Favorable Outcomes Among Children in Foster Care: An Analysis of Early Childhood Variables and Their Relationship to the Development of Assets"

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An Abstract of the Dissertation of
Cynthia Valentine Heywood for the degree of Doctor of Philosophy
in the Department of Special Education and Clinical Sciences
to be taken June 2009

Title: PREDICTORS OF FAVORABLE OUTCOMES AMONG CHILDREN IN
FOSTER CARE: AN ANALYSIS OF EARLY CHILDHOOD VARIABLES AND
THEIR RELATIONSHIP TO THE DEVELOPMENT OF ASSETS

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Young children in foster care have been exposed to a variety of risks that are strongly linked to long-term deficits in functioning across multiple developmental domains. Some children, however, demonstrate more favorable outcomes and exhibit adaptation and the development of assets in spite of risks. The present study examined variables from early childhood during foster care which contributed to the development of favorable outcomes; specifically, emotion regulation and school adjustment in later childhood. Specifically, maltreatment history, placement history, parenting practices, environmental stress, developmental status, and attachment behaviors among a sample of young foster children were examined. Data were taken from an existing data set from the Multidimensional Treatment Foster Care - Preschool study implemented through the

Oregon Social Learning Center. From the original n of 60 children in regular foster care, 34 remained in the sample during middle childhood assessments; this comprised the sample used for this study. In terms of predicting emotion regulation in middle childhood, lack of environmental stress and attention and executive function in early childhood revealed significant relationships. In regards to predicting school adjustment in middle childhood, sensorimotor function and history of neglect during early childhood revealed significant relationships.

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Education*, 28(2), 125-126.

ACKNOWLEDGMENTS

My deepest appreciation goes to Professor Kenneth Merrell for his assistance over my graduate career in advising me as well as his support in preparing this manuscript. His availability, thoughtfulness, and guidance in regards to both academic and professional pursuits have been invaluable. I also wish to express my sincere gratitude to Dr. Phil Fisher who has served as a professional mentor and guide. Dr. Fisher made this study possible as it was his data set that he so generously shared, but more importantly his project that he allowed me to be a part of. Dr. Fisher has taught me an endless amount in regards to integrity of both scholarly and clinical pursuits.

Many thanks to Dr. Hyoun Kim, Dr. Katherine Pears, and Deborah Soul who provided me with methodological and statistical consultation and support in preparing the data for this study. They were ever patient and generous with their time and expertise and I would not have been able to accomplish this study without them.

I would also like to thank the children and families I have been given the opportunity to work with. I have had the great good fortune of working with so many young children in foster care, their foster parents, and their families. They have taught me about patience, compassion, and generosity to a measure I could not have imagined. I am endlessly inspired by their struggles and triumphs and I sincerely hope that my previous and future work will serve as a benefit to their lives.

For my family and my friends.
Your loving support, encouragement, and faith have made me who I am.

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CHAPTER I

STATEMENT OF THE PROBLEM

The occurrence of child maltreatment presents a national public health concern. The deleterious consequences of abuse and neglect are well-documented in the literature and are observed not only during childhood but across the lifespan. Adding to the overall concern is the fact that prevalence rates are consistently on the rise. According to the Third National Incidence Study of Child Abuse and Neglect (NIS-III) published in 1996 there were an estimated 1,553,800 children who were abused or neglected in the United States in 1993 using the *Harm Standard* which specifies demonstration of harm at the hands of a parent or caregiver. This finding reflected a 67% increase since the NIS-II published in 1986. The estimated incidence of abuse or neglect when applying the *Endangerment Standard*, maltreatment that puts children at risk of demonstrable harm, was 2,815,600 reflecting a 98-percent increase over the NIS-II figure. Under both definitional standards, the NIS-III reported that maltreatment rates are highest among children age 6 to 11 (Sedlak & Broadhurst, 1996). While many of these cases go unreported, there are a significant number of substantiated incidents of maltreatment which result in the court mandated removal of children from their caregivers for subsequent placement into the foster care system.

The Administration for Children and Families, an agency within the Department of Health and Human Services, directs the state-based coordination of services for approximately four million people nationally, three million of whom are children (U.S.

Department of Health and Human Services, 2007a). This is an overall reduction of one million fewer children served from the previous year although the number of children needing assistance has not decreased (U.S. Department of Health and Human Services, 2006b). Over the past 20 years, the foster care population has grown considerably. Increases in the foster care population are attributable to numerous factors including changes in child abuse and neglect reporting requirements, higher foster care entrance vs. exit rates, and the impact of poverty, homelessness, adolescent parenthood, family violence, mental illness, and substance abuse. These issues become exacerbated by flat or decreasing budgets for social services (Barbell, 1997; Barbell & Freundlich, 2001). In a national survey, states reported that funding for family support services has not kept pace with need resulting in foster children languishing in care (U.S. General Accounting Office, 2007). Currently, there are more than ½ million foster care children in the U.S. 303,000 children entered foster care in 2006 with patterns indicating this population is growing by an average of 10% or greater annually. Rates have remained stable, however, across 2005 and 2006 (U.S. Department of Health & Human Services, 2007b). Frequently, it takes multiple reports from community members before that state branch of DHHS becomes involved and/or removes a child from their home. By this point, the child has often experienced a host of adversities which cumulatively have a profound and lasting impact on his or her health and well-being.

The young foster child often enters out-of-home care demonstrating a high level of neurobiological vulnerability because of previous adversity and stress. Specifically, cortisol levels associated with HPA axis functioning have been observed as having

atypical patterns in young foster children (Bruce, Fisher, Pears, & Levine, 2008; Fisher, Stoolmiller, Gunnar, & Burraston, 2007). Glucocorticoids (e.g. cortisol in humans) activated by the HPA axis assist in the individual's response to stress by limiting the impact of competing biological stress responses and facilitating a return to an arousal state comparable to that before the stressful event (Fisher, Gunnar, Dozier, Bruce, & Pears, 2006). Dysregulation of these systems, as commonly evidenced in foster children, makes them increasingly vulnerable to stress as their ability to adequately regulate their responses to stressors is compromised.

The emergence of volitional emotion regulation is evident beginning in the preschool years among typically developing children (Kopp, 1992). Recent research has begun to conceptualize emotion regulation as being grounded in the more basic skill of executive or effortful control (Posner & Rothbart, 2000). Volitional emotion regulation by skillful means is fundamentally influenced by effortful control and response inhibition originating in the prefrontal cortex (PFC; Lewis, Granic, & Lamm, 2006). Studies examining neurocognitive performance have revealed that while low levels of stimulation enhance functioning in the PFC, excessive stimulation or higher levels of arousal that activate the excessive release of catecholamines (the hormone related to "fight or flight" response) impair PFC functioning (Arnsten, 1998). This level of arousal would be considered consistent with the type of chronic stress and adversity experienced during childhood maltreatment.

Without swift and effective intervention for these children, a firm and problematic trajectory of development is put in place. Research indicates that if left uninterrupted

early developmental, behavioral, and academic deficits can ultimately result in long-term dysfunction, underachievement, and loss of productivity and these trajectories can be seen beginning in early childhood (Eddy, Reid, & Curry, 2002; Good, Gruba, & Kaminski, 2002). Compared to the general population, foster children are in much greater need of intervention as a result of significantly higher rates of mental health problems (Pilowsky, 1995). In 1990, Dubowitz (1990) found that emotional, behavioral, and developmental difficulties among children in foster care were *three to six times greater* than those demonstrated among children within the general population. One study found that 72% of child welfare children in their sample were not statistically unique from children participating in intensive mental health treatment programs (Trupin, Tarico, Low, Jennelka, & McClellan, 1993). Landsverk and Garland (1999) estimate that between one-half and two-thirds of all children entering the foster care system demonstrate emotional or behavioral problem significant enough to warrant mental health treatment. Clausen, Landsverk, Ganger, Chadwick, and Litrownik (1998) reported that 61% of their sample of foster children demonstrated clinically significant mental health problems as per the Child Behavior Checklist (Achenbach, 1991). Furthermore, the number of children coming into care that demonstrate these problems has increased significantly over time highlighting the need for more comprehensive and effectiveness service provision to address these concerns (U.S. General Accounting Office, 1998).

The link between mental health, good behavior, and academic success is well-established in the literature (Greenburg, et al., 2003; Horner, Sugai, Todd, & Lewis-Palmer, 2005; Roeser & Eccles, 2000; Sprague & Horner, 2006; Walker & Shinn, 2002).

Deficits in school functioning are extensive among children in foster care and severe academic skill delays are disproportionately higher among foster children than their same-age peers (Brooks & Barth, 1998; Colton, Heath, & Aldgate, 1995; Stein, 1997; Zima, Bussing, Freeman, Yang, Belin, & Forness, 2000). Children with maltreatment histories have been shown to demonstrate significantly more deficits in academic engagement, social competence, and ego resiliency resulting in overall academic maladjustment (Shonk & Cicchetti, 2001).

Without early identification and intervention social-emotional and behavioral problems tend to remain relatively stable for many children over long periods of time. A review of nine studies examining the prevalence and duration of psychiatric disorders in a sample of 8,000 children indicated that between 40% and 60% of children with a psychiatric disorder at one point of measurement also had one when assessed a second time two to five years later (Costello & Angold, 1995). One longitudinal study found that children who experienced an early onset of depression had a cumulative probability of .72 for a recurrent episode of major depression over the course of five years after the initial onset (Kovacs, Feinburg, Crouse-Novak, Paulauskas, Pollock, & Finkelstein, 1984). Over time, the chronic inability to shift attention from stressful cues or inhibit aggressive responses (behaviors central to emotion regulation) can lead to clinically significant anxiety and aggression problems (Bradley, 2000; Rothbart, Ahadi, Hershey, 1994). In fact, it has been noted that as children mature they become increasingly resistant to interventions targeting to emotion regulation and its correlates implying there may be a critical developmental window after which these patterns become more

entrenched (Lewis, Granic, & Lamm, 2006). Another study indicated that achievement in the 8th grade could be predicted by the level of a child's social competence five years earlier (Elias, Zins, Gracyk, & Weissburg, 2003). Kessler, Foster, Saunders, and Stang (1995) found a correlation between early-onset psychiatric disorders, specifically conduct disorders for males and anxiety disorders in females, and diminished educational attainment for approximately 7.2 million Americans. The importance of early successes in buffering these outcomes is paramount and efforts toward this end can have similar long-term effects. In one longitudinal study, the authors determined that critical psychosocial competencies obtained during the first three years of life predicted academic achievement across childhood and adolescence even after IQ and prior achievement were controlled for (Teo, Carlson, & Mathieu, 1996).

These risks and difficulties exhibited in childhood extend well into adulthood if left unremediated. As skills continue to decline, behavior patterns become entrenched and ontogenic patterns become increasingly complex. In a study of 900 victims of childhood abuse and neglect, Widom (2000) examined the effects on intellectual, behavioral, social, and psychological development into adulthood. Data revealed that, compared to a control group, the abused group scored significantly lower on measures of intellectual performance, completed fewer years of school, held more menial and semiskilled jobs, experienced higher rates of un(der) employment, experienced higher rates of divorce and separation, engaged in higher rates of criminal behavior, and were more likely to demonstrate suicidality and personality disorders. The context of victimization: parental

criminality and substance abuse coupled w/ childhood victimization increased the likelihood of later disorders.

It is abundantly clear, given the information that has been reviewed, that many of the risks for children in foster care have been well-documented and explicated. The individual and contextual variables that protect and buffer these risks for foster children, however, have not been well-documented. The afore mentioned studies represent a long held approach to examining populations at risk; the scrutinization of deficits and risks which, while valuable, have resulted in inherent limitations to intervention development as it represents a one-sided story. The focus on pathology has been a constant within the “medical model” approach to addressing adversity. Indeed this has informed interested researchers and clinicians of the need for intervention, but it has done little to illustrate the opportunities available for strengthening protective factors that buffer risk.

An alternative approach to inquiry has been represented by the fields of risk prevention and resilience research. It has been asserted that risk prevention practices must be engaged for three primary reasons: (1) there will never be enough service providers to adequately address mental health concerns; (2) prevention is a more cost effective approach than remediating problems after they occur; and (3) it is our moral responsibility to alleviate suffering and prevent problems from occurring (Coie, Miller-Jackson, & Bagwell, 2000). This approach represents a fundamental transition from traditional research and intervention that has focused on an examination of and response to demonstrated problems. Reschly and Ysseldyke (2002) called for a paradigm shift within both scholarly and helping professions in which we would shift from a search for

pathology and an “admiration of the problem” to an examination of alterable variables on which to intervene for the purpose of improving outcomes for children at risk. Similarly, the work of positive psychology has begged the question of how we can cultivate individual strengths and virtues that increase quality of life and well-being among individuals and well as care and responsibility within communities. Seligman and Csikszentmihalyi (2000) write, “Treatment is not just fixing what is broken; it is nurturing what is best” (p. 7). In so doing, we facilitate the fortification of factors that mediate the effect of risks. Efforts made to increase protective factors and developmental assets serve to (1) decrease dysfunction, (2) interact with risk to buffer its effect, (3) disrupt the mediational chain that leads to pathology, and (4) prevent initial occurrences of problem behaviors and mental health needs (Greenburg, Domitrovich, & Bumbarger, 2001). This is represented by the development of resilience and is thereby the focus of this study.

The construct of resilience has a number of scholarly definitions. Doll and Lyon defined resilience as the process by which individuals effectively cope with adversity or develop competencies in the face of stress and hardship (1998). Luthar, Cicchetti, and Becker (2000) framed resilience “a dynamic process encompassing positive adaptation within the context of significant adversity” (p. 543). Resilience research also extends from the *protective* and *risk* factors approach in that it moves the focus away from external variables to the dynamic and process of how those variables interact with the individual (Rutter, 2006). As a research target, resilience represents a fundamental shift away from treatment after pathology has developed toward prevention, risk reduction,

and development of competencies (Luthar & Cicchetti, 2000). Additionally, the study of resilience differs from traditional pursuits in that it entails an examination of individual variations relative to comparable experiences (Rutter, 2006); in this case, the contrast in outcomes for children in foster care.

Given the extreme risks present among young children in foster care, the exploration of how to facilitate the development of favorable outcomes (e.g. resilience) is a noteworthy pursuit. Furthermore, there are important variables specific to children in foster care that warrant further exploration to facilitate advancement of knowledge within this field. First, resilience has largely been treated as a global construct until recently. It is more accurate, however, to view positive adaptation as context-specific in that certain risks predicate unique responses (Luthar & Cicchetti, 2000; Luthar, Cicchetti, & Becker, 2000). Such is the case with foster care and the processes by which children stabilize while in care (e.g. development and application of attachment behaviors, responsiveness to behavior management, decreases in problem behavior, etc.), thereby providing a foundation for successfully permanency. Second, given the chronicity of negative sequelae associated with maltreatment, fostering the development of favorable outcomes will result in not only the reduction of negative outcomes but the promotion of adaptation over time. Given the scope of comorbid risks correlated with maltreated populations (low socioeconomic status, restricted access to medical and mental health care, chaotic and unstable living conditions, insufficient access to quality education, etc.) it is even more imperative to strengthen assets in order to compete with extant demands resulting from environments rife with adversity. Coupled with this issue, is the notion that favorable

outcomes among foster children should not entail advanced competence, but more realistically resilience would be exemplified by adequate functioning in spite of the odds (Luthar, Cicchetti, & Becker, 2000). Third, understanding influencing factors, either protective or harmful, from an ecological framework (Bronfenbrenner, 1977) will lay a foundation for answering questions regarding the mechanistic process of specific strengths as they interact with changing environments and are affected by subsequent ontogenic variables.

In spite of seemingly insurmountable odds, there are children who ultimately overcome these obstacles and exhibit healthy functioning. Ruff, Blank, and Barnett (1990) posited that our conceptualization of the purpose of foster care should emphasize care as an intervention instead of maintenance as a means of changing the typical trajectory of development for children in out of home care. The factors that contribute to favorable outcomes warrant more comprehensive examination for the purpose of targeted and meaningful intervention that focuses on the development of assets and protective factors. This study lays the foundation for an iterative inquiry into the multiphasic developmental processes for a population at significant risk. This study and its findings hold the potential of becoming a meaningful basis for policy and intervention development to that end. Both scientific promulgation and a direction for public health outreach are facilitated outcomes.

This study examined a number of hypothesized relationships between individual and contextual variables for children in foster care during early childhood and later outcomes during middle childhood. It was hypothesized that all independent variables

(e.g. maltreatment, placement history, parenting practices, family stress, developmental status, attachment behaviors) would have significant associations with the dependent variables (e.g. emotion regulation and school adjustment); specifically, that maltreatment, increased number of placement transitions in early childhood, negative parenting practices, and family stress would all be negatively associated with emotion regulation and school adjustment in middle childhood. Similarly, it was hypothesized that higher levels of developmental functioning and secure attachment behaviors in early childhood would be positively associated with emotion regulation and school adjustment in middle childhood. Moreover, developmental functioning was hypothesized to make a unique contribution to the overall prediction of emotion regulation and school adjustment above and beyond other independent variables.

In order to further this area of inquiry the following research questions will be addressed in the present investigation.

For a sample of children who were in foster care during early childhood:

1. What proportion of children demonstrate favorable outcomes during middle childhood with favorable outcomes defined as (1) an ability to successfully regulate emotions and behavior in response to age-appropriate task demands, stress, or novel circumstances and (2) successful school adjustment?
2. What is the degree of association between maltreatment, placement history, parenting practices, family stress, developmental status, attachment behaviors, emotion regulation, and school adjustment?

3. What is the relative influence that maltreatment, placement history, parenting practices, family stress, developmental status, attachment behaviors, and gender, have on the development of emotion regulation during middle childhood?
4. What is the relative influence that maltreatment, placement history, parenting practices, family stress, developmental status, attachment behaviors, and gender, have on the development of school adjustment during middle childhood?

CHAPTER II

LITERATURE REVIEW

Ecological and developmental factors interact to determine outcomes for children and families in the sequelae of childhood maltreatment and time in foster care. From a developmental psychopathology perspective, ecological and developmental factors must be examined to determine the etiology of psychopathology and school adjustment. In a conceptual model inspired by the work of Bronfenbrenner (1977), Belsky (1980), and Cicchetti and Rizley (1981), Cicchetti and Lynch (1993) describe the transactional process of multiple systems of influence and the process by which transient and enduring events or factors work to increase (*potentiate*) or decrease (*compensate*) the likelihood of maltreatment and its sequelae. These interact in a constant exchange of influence that buffer the effects of risk and serve as protective factors or increase a child's vulnerability to negative outcomes (Cicchetti, Toth, & Maughan, 2000). For the purpose of this study, the independent variables were selected due to the strong body of research suggesting their influence on outcomes for foster children and are presented within an adaptation of Cicchetti and Lynch's (1999) ecological-transactional model (see Figure 1). Proximal variables within the microsystem (e.g. maltreatment profile, placement history, parenting practices, family stress) and ontogenic development domain (e.g. developmental status, attachment behaviors, behavior regulation) are hypothesized as having the strongest effect on the prevalence of psychopathology and school adjustment and are therefore the focus of this study.

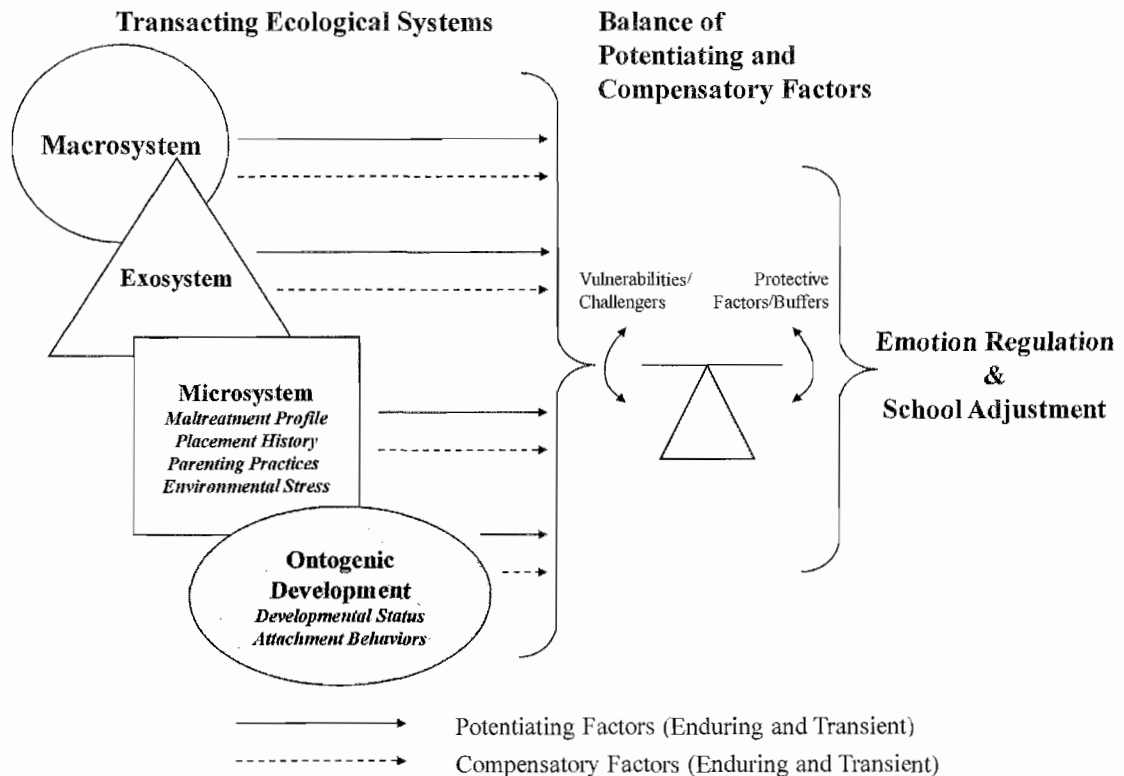


Figure 1. Conceptual Model: Adapted from Cicchetti & Lynch's (1993) *Ecological-Transactional Model of Childhood Maltreatment*.

The literature review that follows, while not exhaustive, encompasses a number of seminal works relative to resilience, maltreatment, and foster care and was accomplished by examining works included in the PsycINFO (a.k.a. PsycNET) and Psychology and Behavioral Sciences (EBSCO) databases using the following search terms: *resilience, prevention, maltreatment, child abuse, emotional abuse, physical abuse, sexual abuse, neglect, early childhood/experience, adaptation, foster care, transitions, placement history, developmental delays, attachment, behavior regulation, emotion regulation, temperament, emotional trauma, adjustment, academic achievement, stress, and school adjustment.*

Outcomes

Emotion Regulation

Over the last two decades, research in self-regulation (behavioral and emotional) has peaked. As constructs emerge and their definitions refined research regarding their contributions to overall adaptation and healthy functioning have proliferated. In their review of the development of emotion regulation, Morris and colleagues argue that emotion regulation is central to overall adjustment (Morris, Silk, Steinberg, Myers, & Robinson, 2007). Emotion regulation is a fundamental component of emotional competence (Barrett & Campos, 1987) as it prepares children to respond to emotionally arousing situations in a manner that facilitates adaptation to the social environment (Shipman, Edwards, Brown, Swisher, & Jennings, 2005). In fact, being able to modulate emotions in response to typical and novel stressors so as to respond in socially appropriate ways is integral not only to psychological adaptation but to the development of healthy relationships (Cicchetti, Ackerman, & Izard, 1995; Denham et al., 2003). Additionally, many have argued that effortful control, as a component of emotion-related regulation, is an essential function of healthy emotional expression for minimizing lability and negativity (Eisenberg & Spinrad, 2006; Spinrad et al., 2006; Valiente, Lemery-Chalfant, Swanson, & Reiser, 2008). The ability for a child to modulate emotional responses, behavior, and control impulses appropriately is a vital competency in the development of relationships and school adjustment as novel stressors and demands are consistently emerging throughout childhood and adolescence (Birch & Ladd, 1998; Garon, Bryson, & Smith, 2008; Ladd, Birch, & Buhs, 1999; McLelland,

Morrison, & Holmes, 2000). Dysregulation, therefore, places children at increased risk of exaggerated reactions to stressful events (Bruce, Davis, & Gunnar, 2002).

Children with poor emotion regulation consistently demonstrate school difficulties as transition and adjustment to school require adaptation across multiple domains. Studies have indicated that young children exhibiting aggression, lability, and poor effortful control demonstrate strained relationships with teachers and peers and poor academic performance (Birch & Ladd, 1998; Valiente, Lemery-Chalfant, Swanson, & Reiser, 2008; Wentzel & Asher, 1995). Early deficits have been shown to have enduring effects. One study found that relational negativity between teachers and students in kindergarten was related to behavioral and academic outcomes through eighth grade (Hamre & Pianta, 2001). Similarly, teacher-student quality of relationship, as influenced by early behavioral presentation, bears influence on overall achievement and participation during the early schooling years (Ladd, Birch, & Buhs, 1999).

The development of self-regulation processes, specifically emotion regulation, is influenced by a number of environmental and biological factors. Initially, the quality of the parent-child relationship, style of attachment, and subsequent interactions play key roles in the development of regulatory processes in early childhood. Responsiveness, warmth, and nurturance, or lack thereof, from the parent provide the foundation for physiological and homeostatic regulation; in essence, the ability to effectively manage tension and arousal (Cole, Martin, & Dennis, 2004; Sroufe, 1979). During periods of rapid neurological and physiological development, therefore, caregiver influences can exact a major impact on the development of the central nervous system (Cicchetti, Toth,

& Maughan, 2000; DeBellis, 2001; Pears & Fisher, 2005). As consistent caregiving is less common for maltreated children, it is no wonder that many children in out-of-home care demonstrate deficits in regulatory processes.

Several studies found that children exposed to early adversity demonstrate abnormal noradrenergic activity (believed to be associated with attention and inhibition) dopaminergic activity (associated with mood) and glucocorticoid functioning (associated with the hypothalamic-pituitary-adrenal [HPA] axis functioning which governs stress response and regulates numerous body functions; Fisher, Stoolmiller, Gunnar, & Burraston, 2007; Gunnar, Fisher, & The Early Experience, Stress, and Prevention Network, 2006; Hart, Gunnar, & Cicchetti, 1995; Rogness, 1991). These physiological processes play a key role in self-regulation and inhibitory control as children are equipped accordingly with the ability to adapt to family stressors and demands (DeBellis, 2001; Glaser, 2000; Gunnar et al., 2006).

School Adjustment

The importance of adequate school functioning is integral to long-term success. School adjustment as a construct includes not only academic achievement, but social and behavioral functioning as well. Foster children and victims of childhood maltreatment have disproportionate levels of risk when making the transition to school and in their overall school adjustment (Benbenishty & Oyserman, 1995; Eckenrode, Laird, & Doris, 1993; Fantuzzo & Perlman, 2007; Kurtz, Gaudin, Wodarski, & Howing, 1993; Leve, Fisher, & DeGarmo, 2007; Shonk & Cicchetti, 2001). Teachers consistently rate foster children as performing lower on social, behavioral, and academic domains (Stein, 1997).

A multitude of factors contribute to poorer school-related outcomes for foster children. Due to the multifaceted and diverse contribution of variables that play a role in school adjustment unique contributions will be discussed more thoroughly in the following sections.

Microsystem

The course of events prior to entry into foster care has an enduring interaction with a child's development and subsequent presentation of strengths and needs. The following review details four categories of life events that have a particularly salient impact on children in foster care and their ultimate outcomes: maltreatment, placement history, parenting practices, and family stress.

Maltreatment Profile

By and large, most foster children have experienced maltreatment in some form precipitating their placement into out-of-home care (Dozier, Albus, Fisher, & Sepulveda, 2002). Thusly, foster care and maltreatment go hand in hand. Early childhood maltreatment takes many forms and the resulting sequelae of abuse can have lasting effects across the lifespan. Age of onset, severity and duration of abuse, and relationship to the perpetrator are all mediating factors in the sequelae for childhood abuse. In general, repeated abuse, greater degrees of intrusiveness, intrafamilial abuse as opposed to extrafamilial abuse, greater level of force, and coercion to maintain secrecy all result in increased levels of psychopathology (Ackerman, Newton, McPherson, Jones, & Dykman, 1998; Mian, Marton, & LeBaron, 1996; Weaver & Clum, 1993; Widom & Ames, 1994). Different types of abuse (e.g. physical, sexual, emotional, neglect) have varying impacts

on the development of psychopathology and overall adjustment. The dimensions of maltreatment including age of onset, relationships to the perpetrator, frequency of events, and duration of abuse all interact with the subtypes of abuse incurred to result in diverse sequelae and a multidimensional view of maltreatment (Pears, Kim, & Fisher, in press). For example, age of onset has been identified as a key factor in overall development. Several studies have reported that children abused earlier in life are more likely to develop insecure attachments with their primary caregivers which can ultimately result in deficits in emotion regulation and problem-solving (Belsky, Rovine, & Taylor, 1984; Cicchetti & Barnett, 1991; Egeland & Sroufe, 1981).

There is strong empirical evidence that many victims of childhood abuse demonstrate significant mental and emotional difficulties warranting intervention. Specifically, these include internalizing problems (e.g. anxiety disorders, depressive symptomology, dissociative disorders, somatic complaints, eating disorders, suicidal ideation) externalizing behavior disorders (e.g. aggression, delinquency, antisocial behavior), attachment disorders, personality disorders, deficits in self-regulation, deficits in executive functioning, sexual reactivity, deficits in social competence, and difficulty forming healthy relationships with peers and adults (Ackerman et al., 1998; Bendixen, Muus, & Schei, 1994; Bolger & Patterson, 2003; Cicchetti & Toth, 1995; Erickson & Egeland, 1996; Hernandez, 1992; Kinard, 1999; Liem et al., 1999; Mian et al., 1996; Trickett & McBride-Chang, 1995; Weaver & Clum, 1993; Welch & Fairburn, 1996).

Various maltreatment subtypes have been found to be differentially influencing on outcomes. For example, it can be expected that children who have been physically or

sexually abused are more likely to demonstrate psychopathology than children who have been neglected (Garland, Landsverk, Hough, & Ellis-MacLeod, 1996). Additionally, in one study physically abused children demonstrated higher rates of depression and suicidality than their neglected same-age peers and non-abused peers (Finzi, Ram, Shnit, Har-Even, Tyano, & Weizman, 2001). Another study found that compared to their nonmaltreated peers and peers with other maltreatment profiles (sexual abuse and neglect), physically abused children demonstrate higher levels of emotion dysregulation which was found to make unique contributions to peer nominations of aggressive and disruptive behavior (Teisl & Cicchetti, 2008). Neglect, however, has been reported as having a particularly enduring and pervasive impact on outcomes. This is important because neglect has been found to be the most common form of childhood maltreatment (U.S. Department of Health and Human Services, 2006a). In a recent study examining the impact of early childhood neglect researchers found that profundity of neglect was positively related to insecure attachments and dysregulated neuroendocrine functioning (Wisner Fries, Shirtcliff, & Pollak, 2008). Furthermore, it has been suggested that due to a lack of emotional interactions and modeling within the parent-child relationship, neglected children are at greater risk for long-term emotion dysregulation (Gaudin, Polansky, & Kilpatrick, 1996; Lee & Hoaken, 2007; Shipman, Edwards, Brown, Swisher, & Jennings, 2005). This can lead to neural networks that become differently patterned due to early stimulation and teaching, or lack thereof, and inhibit effective emotion regulation at a neurobiological level (Lee & Hoaken, 2007). Similarly, children who have experienced neglect in early childhood have been found to demonstrate dysregulated

hormonal balances associated with the hypothalamic pituitary adrenal (HPA) axis (Bruce, Fisher, Pears, Levine, 2008). Specifically, depressed or blunted morning cortisol levels have been observed among neglected children, which is significant in that the HPA axis plays a critical role in overall adaptive functioning (Gunnar, Fisher, & The Early Experience, Stress, and Prevention Network, 2006). These low morning cortisol levels have been speculated to impact children's ability to activate energy resources necessary to engage in learning and relational adaptation (Gunnar & Vasquez, 2001).

The risk for school problems is also greater among maltreated children as the caregiving environment provide the foundation for psychosocial adjustment and development across the lifespan. Children with histories of maltreatment demonstrate higher rates of academic underachievement, grade retention, poor social competence, dropout, and utilization of special education services than among their same-age peers (Rowe & Eckenrode, 1999; Trickett & McBride-Chang, 1995; Wodarski, Kurtz, Gaudin, & Howing, 1990). For example, one review of the literature on maltreatment and school adjustment noted that between 10% and 58% of children who have been sexually abused show adjustment difficulties at school (Daignault & Herbert, 2004). In a study of 840 children, Eckenrode, Laird, and Doris (1993) found that children who had been maltreated were significantly more likely to repeat a grade, have lower standardized test scores and grades, and receive higher rates of office discipline referrals and suspensions. Rogosch and Cicchetti (1994) examined teachers' perceptions of maltreated children and found that these students were seen as less socially competent than their peers and perceived to exhibit greater behavioral disturbances in the classroom. The effect of early

childhood maltreatment on critical competencies and functioning partially explains the prevalence of school failure. In a study on the effects of maltreatment, competency deficits, and risk for academic and behavior maladjustment maltreated children evidenced lower levels of academic engagement, greater deficits in social skills, and lower ego resiliency than their nonmaltreated same-age peers. Overall, maltreated children demonstrated multiple forms of academic risk (e.g. grade retention, attendance of less than 80% in one school year, referral for special services or placement in special education, and at-risk achievement test scores or failure in core academic subjects) and concurrently showed higher rates of externalizing and internalizing behavior problems (Shonk & Cicchetti, 2001).

A number of studies have demonstrated neglect to be profoundly disruptive to the development of critical skills which ultimately result in pervasive academic failure. Allen and Oliver (1982) found that neglected children suffered more language delays than their physically abused or nonmaltreated peers. These language delays can have long term effects on children's ability to navigate school and relational demands (Stock & Fisher, 2006). In a six-year follow up on participants from the Minnesota Mother-Child Project found that compared to their nonmaltreated peers neglected children ages 8 to 16 had discrepant standardized test scores in reading, language, and math. Physically abused children had discrepant scores only in math (Wodarski, Kurtz, Gaudin, & Howing, 1990). Similar findings were made in a study examining the effects of maltreatment on school-age and adolescent children. Researchers found neglected children to perform significantly lower than their non-maltreated peers *and* peers who were physically or

sexually abused on measures of both language and math (Kurtz, Gaudin, Wodarski, & Howing, 1993). Questions of co-occurrence of multiple abuse types and their impact remain unclear, however, due to sampling issues as obtaining “pure” samples is difficult and many studies classify children with multiple abuse type histories under a single category (Eckenrode, et al., 1993).

Placement History

Instability (residential mobility, change of caregiver status, chaotic and unpredictable environment) is the hallmark of many of foster children’s families of origin. This situation is not ameliorated, however, when a child enters foster care. Many foster children will move placements multiple times during out of home care. Studies report approximately 22-56% of foster children have had three or more placements during their time in foster care (as cited in Newton, Litrownik, & Landsverk, 2000). Currently, the average length of placement in foster care is 29 months (U.S. Department of Health & Human Services, 2006b). This is significant given that the longer the length of stay within the foster care system the more placements children are likely to have and the prospects for permanency become increasingly difficult as the already demonstrated risks and compromised mental health are further exacerbated by the inherent stress and upheaval that occurs during placement changes (Barbell & Freundlich, 2001; Glisson, Bailey, & Post, 2000).

Foster children with behavior problems are more likely to experience disrupted placements and be moved frequently, sometimes throughout the entirety of their childhood years. The disruptiveness of these volatile placement patterns contribute to

internalizing and externalizing behavior problems in foster children (Newton, Litrownik, and Landsverk, 2000). Similarly, the length of time in foster care and the number of placements have been linked to behavior problems and academic underachievement with greater number of disruptions resulting in poorer outcomes (Benbenishty, & Oyserman, 1995; Zima et al., 2000). In general, family instability is significantly related to increased rates of negative emotionality, internalizing problem behaviors, and externalizing problem behaviors (Ackerman, Brown, & Izard, 2003; Ackerman, Brown, D'Eramo, & Izard, 2002; Ackerman, Kogos, Youngstrom, Schoff, & Izard, 1999). Psychosocial functioning is particularly important for young children in foster care as it significantly predicts the likelihood of reunification after out-of-home placements (Landsverk, Davis, Ganger, Newton, & Johnson, 1996). Similarly, volatile placement histories have also been shown to increase the risk of adoption disruption due to related problematic behavioral outcomes (Simmel, 2007).

The risk for maladjustment due to family instability is moderated by child variables (i.e. temperamental adaptability and behavior and emotion regulation) meaning that children with lower levels of both demonstrate more adverse outcomes associated with family instability than their same-age peers (Ackerman, Kogos, Youngstrom, Schoff, & Izard, 1999). This example highlights a complex interaction of factors that increase or decrease vulnerability and resilience and the importance of examining placement history within a constellation of other variables.

Some children are more vulnerable to disrupted placements than others. Children with more severe behavior problems, children who were very young when first removed

from their birth home, and children whose parents have substance abuse problems are all at greater risk for placement disruption (Cooper, Peterson, & Meier, 1987; Newton, Litrownik, & Landsverk, 2000). Children with no previous behavior problems, however, are also particularly vulnerable to the negative effects of placement disruptions.

Instability compounds the negative consequences of abuse and neglect and significantly predicts outcomes across important areas of functioning such as school performance and self-regulation as well as the prevalence of internalizing and externalizing behavior problems (Ackerman, Brown, & Izard, 2003; Ackerman, Brown, D'Eramo, & Izard, 2002; Newton et al., 2000). Similarly, learning poor early environments are frequently exacerbated by frequent transitions, disrupted relationships, and a lack of continuity in activities, learning environments, and school-based relationships that ultimately bear a negative impact on overall well-being (Fong, Schwab, & Armour, 2006).

In addition to behavioral maladjustment, number of placement transitions has been found to negatively correlate with executive function in preschoolers (Pears & Fisher, 2005), a critical component of school adjustment and functioning. Similarly, children who experienced multiple placement transitions during foster care were found to have lower inhibitory control and higher oppositional behavior once in their adoptive families (Lewis, Dozier, Ackerman, Sepulveda-Kozakowski, 2007). This is likely explained by the negative impact of transition and stress on overall development (Gunnar, Fisher, & The Early Experience, Stress, and Prevention Network, 2006). One study found that academic skill delays were significantly predicted by number of out-of-home placements in that children with a higher rate of placement disruptions were more

likely to demonstrate at least one academic skill delay than foster children with more stable placement histories (Zima et al., 2000).

Parenting Practices

Behavior problems in young children develop through a variety of pathways but are most often fostered and maintained through maladaptive parenting practices. From a developmental perspective it has been observed that warm and responsive mothering results in children described as socially and emotionally competent, securely attached, and successful in school. Hostile and rejecting parenting results in insecure attachment, externalizing problems in preschool, and antisocial behavior in adolescence (Denham, Mitchell-Copeland, Strandberg, Auerbach, & Blair, 1997; Fiese, Wilder, & Bickham, 2000). Supportive and positively affective parenting contributes to emotional competence and regulation through effective modeling in response to stressful events or relationships and serves to buffer the negative effects of stress (Morris, Silk, Steinberg, Myers, & Robinson, 2007; Power, 2004). Overly controlling parenting styles can result in escalating patterns of noncompliance which translates to externalizing problems in preschoolers and conduct disorder in adolescents. In discussions of *coercion theory* Patterson (1982, 2002) and colleagues (Patterson, Capaldi, & Bank, 1991) examine the process by which parents reinforce children, be it positively or negatively, for inappropriate behavior. The behaviors then generalize from home to other settings leading to failures in school and across peer and other adult relationships resulting in long-term maintenance of antisocial behavior (e.g. noncompliance, delinquency, school failure, strained relationships, aggression, etc). These pathways are substantiated

consistently within the literature. Harsh and inconsistent parenting practices have been found to significantly predict negative behavioral and emotional outcomes for children both in immediate contexts and in long-term outcomes (Beauchaine, Webster-Stratton, & Reid, 2005; Dishion, Patterson, Stoolmiller, & Skinner, 1991; Patterson, Reid, & Dishion, 1992). Hoffman (2000) argued that overly negative or punitive parenting practices are likely to result in affective hyperarousal in children which, over time, can compromise the overall development of emotional regulation and learning. Similarly, parents' own physiological regulation (as measured by vagal tone) has a demonstrated link to emotion socialization and subsequent development of emotion understanding and competence in that parents who demonstrated higher resting vagal tone (indicative of better regulation abilities and diminished reactivity; Porges 1995) reported more desirable emotion socialization behaviors and had children with better emotion knowledge and regulation (Perlman, Camras, & Pelphrey, 2008). In fact, positive parenting has been shown to affect the development of effortful control (a key component of emotion regulation) which ultimately serves as a mediator to externalizing behavior problems (Eisenberg, Zhou, Spinrad, Valiente, Fabes, & Liew, 2005).

These forces are at play from the beginning of the parent child relationship during infancy, toddlerhood, and the early childhood years (Patterson, 2002). Zaslow et al. (2006) found that parenting during the preschool years significantly predicted cooperation and reading achievement and was a stronger predictor than demographic background. They also found that greater parent management and control was highly correlated with positive child outcomes. Similarly, Kilgore, Snyder, & Lentz (2000)

demonstrated that coercive discipline and poor monitoring at 4 ½ years of age significantly predicted conduct problems at age six for both boys and girls.

Maintaining positive parenting practices becomes increasingly more challenging with young foster children. Developmental delays, lack of attachment, and pre-existing behavior problems all exacerbate parenting stress (Baker, Blacher, Crnic, & Edelbrock, 2002). Parenting stress coupled with other risk factors (e.g. economic hardship, traditionality, family stressors, antisocial parent characteristics, gender of the child) increase the likelihood of negative discipline practices thereby increasing risk for negative outcomes for already vulnerable populations of children (Fiese, Wilder, & Bickham, 2000; Fisher & Fagot, 1993). Young children's behavior is particularly amenable to change, however, in response to positive parenting. In one study, 63% of children under six years of age demonstrated clinically significant changes in behavior after a change in parenting practices whereas only 54% of the older children in the sample demonstrated changes in behavior (Dishion & Patterson, 1992). Positive parenting in foster care becomes increasingly important in light of the developmental impact of trauma and transition. Preliminary evidence suggests that healthy parenting can serve to partially ameliorate resulting deficits (Dozier, Albus, Fisher, & Sepulveda, 2002).

Environmental Stress

Stressful life events and lack of positive coping in families places children at risk of harm on multiple levels. In one study, stress and lack of social support during infancy was found to be a significant predictor of maltreatment during the second and third years

of life (Kotch, Browne, Ringwalt, Dufort, & Ruina, 1997). Factors such as social isolation, socioeconomic disadvantage, conflict and family violence, stress, lack of social support, and parental psychopathology have consistently been linked with subsequent behavior problems in children (Maughan, 2001; Stoff, Breiling, & Maser, 1997). Whether intentional or not, stress is inextricably linked with parenting. Disciplinary practices (commands, reinforcement or attention paid to (in)appropriate behaviors, levels of coercion, etc.) and parental irritability due to stress have profound impacts on the maintenance or discontinuation of inappropriate behaviors both directly through the modeling and experience of anger and indirectly as it functions to interfere with positive family environments (Deater-Deckard, 1998; Fisher, Fagot, & Leve, 1998; Patterson, 1988; Patterson & Forgatch, 1990; Patterson, Reid, & Dishion, 1992). The impact of stress on parenting and subsequent reactivity toward children's affective displays has also been observed to have an effect on the development of key components of emotion regulation in children (Valiente, Lemery-Chalfant, & Reiser, 2007).

Given the outstanding demands of parenting a foster child, additional family stressors can result in detrimental outcomes when not moderated by effective coping and other parental resources. The impact of family stress and early adversity on young children is vast. Critical developmental windows during infancy, toddlerhood, and preschool years make young children increasingly vulnerable to stressors that affect neurobiological, physical, and psychological processes (Gunnar et al., 2006; Pears & Fisher, 2005; Trickett & McBride-Chang, 1995; Widom, Kahn, Kaplow, Sepulveda-Kozakowski, & Wilson, 2007). It has been posited that the experience of multiple

stressors takes on an additive effect (Deater-Deckard, Dodge, Bates, & Pettit, 1998; Rutter, Tizard, & Whitmore, 1970) especially on physiological arousal and functioning (Kliewer, Reid-Quiñones, Shields, & Foutz, 2009; Lepore & Evans, 1996). Evidence is scattered regarding the impact of multiple acute stressors on long-term psychological outcomes, but given the developmental vulnerability of young children short-term effects on physiological systems are significant and thus should not be dismissed. Given the developmental and environmental impact of stress, school adjustment presents another target for maladjustment. Environmental stressors during preschool have proved significant predictors of later conduct problems and school failure across subsequent years (Ackerman, Brown, & Izard, 2003; Dodge, Pettit, & Bates, 1994; Duncan & Brooks-Gunn, 1997).

Ontogenic Development

Developmental Status

Consistent and nurturing care during the early years of life set a firm trajectory toward healthy development because of critical developmental windows. Basic and applied research have demonstrated children's behavioral and physiological processes to respond to environmental risks (stressors, maltreatment, exposure to substances, etc.) or protective factors (responsiveness, consistency, nutrition, etc.) in relatively predictable patterns (Dozier, Albus, Fisher, & Sepulveda, 2002; Horwitz, Simms, & Farrington, 1994; Klee, Kronstadt, & Zlotnick, 1997; Pears & Fisher, 2005; Sánchez, Ladd, & Plotsky, 2001; Trickett & McBride-Chang, 1995). During infancy and toddlerhood, self-regulatory processes evolve in relation to responsive and contingent parenting practices.

These regulatory processes, both physiological and behavioral, promote adaptability and resilience to stressors and deficits in functioning resulting from early adversity which leave children more vulnerable.

Given this and the rate of developmental change and growth across multiple domains in early childhood (physical, psychological, emotional, self-regulatory, etc.) the impact of maltreatment, inconsistent or harsh parenting, exposure to toxic substances, stress, and placement disruption has potentially far-reaching effects. This is evidenced by the prevalence rate of developmental delays among foster children. One study found that 53% of children in substitute care showed developmental delays and that those children were 1.93 times more likely to remain in out-of-home care than their peers without developmental delays (Horwitz, Simms, & Farrington, 1994) demonstrating the intensive needs that complicate stabilization and transitions into permanency. Leslie, Gordon, Peoples, and Gist (2002) found that as much as 66% of children who had experienced maltreatment evidenced developmental delays in at least one domain. The nurturance, or lack thereof, provided by foster parents to young children in care can buffer or contribute to these already prevalent risks (Dozier, Albus, Fisher, & Sepulveda, 2002).

Developmental delays exhibited among maltreated and foster children are demonstrated across a variety of domains and tend to be linked in that delays in one area often potentiate deficits in another. This is especially true for adversity experienced during early childhood. One study found that early experiences of abuse and neglect during infancy, toddlerhood, and preschool years were more predictive of maladaptive outcomes across developmental domains than abuse or neglect that occurred during

school-age years (Manly, Kim, Rogosch, & Cicchetti, 2001). In addition to the behavioral, cognitive, and emotional byproducts of maltreatment, abusive family contexts and disrupted caregiving during early childhood can also have detrimental effects on crucial neurobiological processes (e.g. biochemical, cellular, neurophysiological) (DeBellis, 2001; Dozier, Albus, Fisher, & Sepulveda, 2002; Glaser, 2000; Gunnar, et al., 2006; Noble, Tottenham, & Casey 2005; Sanchez, et al., 2001). Short-term stress responses including the dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis as well as long-term sequelae of child maltreatment such as reductions in brain volume substantively interfere with overall healthy development (Glaser, 2000).

As developmental delay encompasses a wide variety of domains and variables, a more parsimonious examination of key constructs is warranted. From a developmental and neuroscientific perspective several key domains have emerged as being of particular importance during childhood: (1) executive attention and effortful control, (2) language, and (3) memory.

The development of executive attention and effortful control is governed by the prefrontal cortices (Rossi, Pessoa, Desimone, & Ungerleider, 2009). Effortful control defined as “the efficiency of executive attention, including the ability to inhibit a dominant response and/or to activate a subdominant response, to plan, and to detect errors,” has been noted as playing an integral role in the development of emotion regulation (Rothbart & Bates, 2006) as it allows an individual to voluntarily shift attention, inhibit emotional responses, and modulate emotional expression (Eisenberg et al., 2005). Children found to have diminished effortful control have been noted as being

more oppositional and less prepared for the classroom (Lewis, Dozier, Ackerman, Sepulveda-Kozakowski, 2005).

Another critical developmental domain is language. Language is considered a central process to both cognitive, academic, and socialemotional development (Catts, Fey, Zhang, & Tomblin, 1999; Gallagher, 1999; Stock & Fisher, 2006). Speech and language delays are particularly prevalent for foster children. Reported rates have ranged from 35% to 73% (Halfon, Mendonca, & Berkowitz, 1995; Hochstadt, Jaudes, Zimo, & Schachter 1987; Simms, 1989). Socioeconomic status has also been reported to have a differential effect on language development such that children from lower income families have decreased activity in the left perisylvian region the area of the brain associated with language and literacy (Noble, Tottenham, & Casey, 2005). This becomes increasingly important when considering the long-term impact of early speech and language delays on overall functioning. If left unameliorated, negative effects have been observed as learning-related difficulties, (Scarborough & Dobrich, 1990) and maladaptive social interaction patterns (Bloomquist, August, Cohen, Doyle, & Everhart, 1997).

Memory performs a critical function in both academic and socialemotional learning. Involving the hippocampus deep in the temporal lobe, memory develops as this area of the brain reaches maturity during early childhood, particularly before age two (Squire, 1991). Chronic stress and trauma have been observed to result in deficits in deficient hippocampal volume (De Bellis, 2005; Howe, Toth, & Cicchetti, 2006; McEwen, 1999) which would lead to questions regarding the subsequent impact on

memory function. While the quality of early childhood care at home, child care settings, and school has been shown to predict performance on memory and attention (NICHD Early Childcare Research Network, 2005), the research on basic memory processes in maltreated children, however is mixed, is mixed. Questions remain regarding contradictions about mediating mechanisms, intelligence, psychopathology, and trauma-related dissociation and memory repression (Howe, Cicchetti, & Toth, 2006).

Attachment Behaviors

A crucial task in early development is the development of a secure attachment between an infant and his/her caregiver (Bowlby 1969/1982). Children who experience maltreatment, however, often form insecure attachments with their caregivers (Cicchetti et al., 2000; Liem & Boudewyn, 1999). Estimates of insecure attachment among maltreated infants and toddlers are thought to be approximately 90% (Cicchetti et al., 2000). Studies suggest that attachment styles or patterns result from an interaction of neurobiological, interpersonal, and intrapersonal factors (Huebner & Thomas, 1995). Liem and Boudewyn (1999) present a contextual framework for examining the importance of attachment in relation to childhood maltreatment. Children develop patterns of expectation in regard to adult availability and responsiveness during infancy and toddlerhood through interaction with primary caregivers. These interactions shape the child's internal working model and conceptualizations of others in the world. For example, if a child experiences adults as responsive to their needs for comfort as well as autonomy a child will purportedly develop a working model of themselves as valued and self-reliant and a working model of others as dependable and supportive. Alternately, if

caregivers are neglectful or unresponsive to the child's needs, a resulting working model of self as unworthy or incompetent and a working model of others as rejecting or unreliable may develop (Cicchetti et al., 2000; Liem & Boudewyn, 1999).

These models crystallize a developmental process of relational maturation and coping, from which the child is equipped to handle stressors later in development (Aber & Allen, 1987; Bowlby, 1973; Liem & Boudewyn, 1999). Children with healthy representational models of self and others might be more likely to seek social support when confronted with maltreatment. Conversely, for a child who considers himself unworthy and powerless and considers caregivers to be unresponsive and rejecting or hostile, abuse may provoke the child to blame himself or develop anxious dependence on attachment figures which could likely result in an ineffective use of social support and coping strategies. One study found that maltreated foster children's representational models of self and mother significantly predicted the quality of the foster mother-child relationship as well as demonstrations of behavior (Milan & Pinderhughes, 2000).

The interplay of attachment and subsequent teaching and learning of relationship to self and other bears a tangible impact on later emotion regulation and the development of accurate social information processing abilities. One study found that higher rates of secure attachment and emotion regulation resulted in more efficient social information processing (Bauminger & Kimhi-Kind, 2008). Similarly, another study found that lower rates of controlling parent behaviors and higher rates of secure attachment behaviors were positively related to emotion regulation in toddlers (Smith, Calkins, & Keane, 2006). The emotional climate of the family context and the attachment relationship affect the

development of emotion regulation (Morris et al., 2007). Disrupted attachment processes also make children more vulnerable to psychopathology (Bowlby, 1969/1989) and further maltreatment in childhood and later into adulthood. Liem and Boudewyn (1999) found that the number of maltreatment experiences in early childhood representing challenges to the formation of secure attachments before age five predicted higher rates of childhood sexual abuse, frequency of maltreatment in adulthood, higher levels of adult depression and chronic self-destructiveness, as well as lower levels of adult self-esteem. In a review of the literature, Lyons-Ruth highlighted the role of disorganized attachment and controlling parenting in later aggressive behavior patterns among school-age children (1996). Similarly, the quality of attachment to parents has been observed as predictive of behavior and school adjustment in foster children (Marcus, 1991).

CHAPTER III

METHODS

Design

This study included a pre-experimental descriptive, correlational design because of a focus on prediction, lack of manipulating an independent variable, and no random assignment to groups (Meltzoff, 1998).

Procedures

Data used to examine the research questions above were gathered at the Oregon Social Learning Center as part of the Multidimensional Treatment Foster Care - Preschool (MTFC-P) project. MTFC-P is a randomized efficacy trial designed to examine the effectiveness of a preschool-aged extension of Multidimensional Treatment Foster Care (MTFC) developed at the Oregon Social Learning Center. MTFC is an evidence-based intervention that has been demonstrated to be an effective alternative to more restrictive settings for children in foster care as families are trained to provide therapeutic support within the family setting (Chamberlain & Moore, 1998; Chamberlain & Reid, 1991; Fisher & Chamberlain, 2000; Fisher, Ellis & Chamberlain, 1999). The MTFC-P project built upon the intervention principles of MTFC (e.g. clear and consistent behavioral expectations within the foster home, high rates of positive reinforcement for prosocial behavior, and effective limit setting for problem behavior) and adapted them through a developmental lens. The study developed as a response to the need for effective mitigation of early risk factors for young children in the child welfare system so

as to interrupt detrimental trajectories and prevent negative outcomes. Data were collected starting in 1999 on three groups of children: treatment foster care group (TFC; $n = 57$), regular foster care (RFC; $n = 60$), and a group of age- and SES-matched peers with no prior documentation of maltreatment or out-of-home care (CC; $n = 60$). Data were collected across a variety of domains in order to examine proximal and intermediate outcomes: psychosocial, neurocognitive, emotional and academic functioning; caregiving practices; satisfaction with intervention; and service utilization.

Children were first assessed at entry into the study, within three to five weeks of entering their new foster placement. They were subsequently assessed every three months on a variety of measures up to 24 months post-entry into the study. Subsequently, they were assessed at 6 month intervals for another 24 months. The study is entering its tenth year of funding, with participants currently in the 10-12 year old age range. Placement records and maltreatment histories have also been obtained from the Oregon DHS Child Welfare Division of Lane County and coded accordingly.

Participants

With the help of the Oregon Department of Human Services Child Welfare Division in Lane County, all 3- to 5-year old children entering foster care who were expected to remain in care for more than three months were identified. Prior to their recruitment for the study, children were randomly assigned to a treatment foster group or a regular foster care group. Children in the RFC group received services as usual (e.g. placed in regular state foster homes according to standard policies and procedures; accessed mental health, medical and dental care as needed; screened for developmental delays and served

by EC Cares, a local early intervention service provider; social service support to birth families). MTFC-P staff obtained consent for participation in the study from the children's caseworker, the legal guardian, and, when possible, assents from the child's birth parent. Home visits to the foster families' homes were then scheduled to obtain consent from the foster parents.

The community comparison (CC) children were recruited via flyers posted throughout community in local grocery stores, day care center, and Head Start classrooms. Advertisements in local newspapers were also placed for recruitment. Inclusion criteria for the CC group were as follows: (1) child consistently lived with at least one biological parent, (2) household income was less than \$30,000, (3) parental education was less than a 4-year college degree, and (4) family did not have any previous involvement with child welfare services as verified by child welfare services records. The families' lack of involvement in child welfare was verified by child protective services records. Consent for participation in the study was obtained from the children's parents.

Since the purpose of this study was to consider resiliency among children in the regular foster care system, data were examined on a subsample of the MTFC-P study participants - specifically, 35 participants from the regular foster care (RFC) sample that had remained in the study through middle childhood; 20 were male and 15 were female. Demographics for the sample are presented in Table 1.

Table 1

Demographic Information of Participants (N = 35)

Sample	N	%
<i>Gender</i>		
Male	20	57.1
Female	15	42.9
<i>Age at Entry into Study</i>		
3	11	31.4
4	16	45.7
5	9	22.9
<i>Ethnicity</i>		
African American	0	0
Asian American	0	0
European American	33	94.3
Hispanic	0	0
Native American	2	5.7
Other	0	0

*Measurement**Independent Variables*

The study included seven independent variables: (1) maltreatment history, (2) placement history, (3) environmental stress, (4) parenting practices, (5) developmental

status, and (6) attachment behaviors. Measures used for these variables are described below.

Maltreatment History. Information available in case files that was used to code maltreatment history although lifetime prevalence of maltreatment is beyond the scope of typical case files as many incidents of maltreatment go undocumented prior to referrals made that initiate involvement from child protective services. Case files primarily include incidents that precipitated the child's placement into state custody; this is particularly true of young children. The following categories were coded for as maltreatment using the Maltreatment Classification System developed by Barnett, Manly, and Cicchetti (1993): sexual abuse, physical abuse, emotional abuse, threat of physical abuse, threat of sexual abuse, neglect, parent death, parent incarceration, abandonment, parental substance abuse, parent not utilizing social services, disrupted foster or adoptive placement, and other. In order to reduce the number of possible categories, threat of physical abuse was coded as physical abuse and threat of sexual abuse was coded as sexual abuse (see Appendix A). Parental abandonment was coded as emotional abuse according to guidelines presented by Barnett, Manly, and Cicchetti (1993). Parental substance abuse and failure to utilize social services was coded as neglect. Cases of parental incarceration included histories of neglect and were thus coded as neglect. Approximately, 66% of the cases were double coded (i.e., coded by two separate coders), with high interrater reliability across coders ($kappa = .89$).

Due to small n in several of the maltreatment codes specific to subtype (e.g. total frequency of a particular type of maltreatment, proportion of abuse incidents by a female

relative, etc.) several variables were excluded in this study. Global mean severity of maltreatment and proportion of neglect experienced within the larger maltreatment profile were the selected variables examined in analyses. This last variable was selected because neglect has been indicated as having a particularly salient influence on the development of relational and emotional outcomes (Allen & Oliver, 1982; Wodarski, Kurtz, Gaudin, & Howing, 1990).

Placement History. Number of placement transitions was used to measure this variable. Using the placement history database obtained from the Oregon DHS Child Welfare Division in Lane County and in monthly contact with families number of foster care placements were calculated. Transitions data were limited to those having occurred prior to age 5 in order to maintain using independent variables from early childhood.

Family Stress. Measurement of environmental stressors in this study was accomplished using the *Family Events Checklist* (FEC; Oregon Social Learning Center, 1984) and was filled out by foster parents. Stress among families can take a variety of forms (e.g. economic, marital, acute or chronic, health-related, etc.) and the FEC comprises a list of life events that would be considered stressful to virtually anyone (Fisher, Fagot, & Leve, 1998). The FEC is a 46-item self-report measure that asks participants to reflect on events that are likely to occur on an everyday basis and if they occurred, how stressful they were on a 5-point scale (see Appendix B). This provides a picture of the daily level of chaos in the home. Items include questions about interpersonal conflict, financial difficulties, and child problems. Norms for the FEC were collected using low- and high-risk samples of families including some families who were

receiving family therapy due to their children's antisocial behavior. The number of total stressors as reported by foster parents on this measure was averaged across the first three waves of data collection (e.g. baseline, three months, and six months) in order to form a composite measure of environmental stress over time.

Parenting Practices. Arnold, O'Leary, Wolff and Acker (1993) developed the *Parenting Scale* (PSCAL) designed to measure dysfunctional parenting practices among families with young children (see Appendix C). Three factors of discipline styles are identified: (1) Laxness ($\alpha = .83$), (2) Overreactivity ($\alpha = .82$), and (3) Verbosity ($\alpha = .63$). Internal consistency and test-retest reliability are both adequate ($\alpha = .84$) and the factor structure is consistent with theory and research on parenting practices. The sample on which the test was normed included a group of children referred for mental health treatment due to severe behavior problems. Convergent validity with the CBCL demonstrated the PSCAL's sensitivity to discriminating between clinic and non-clinic families. Parenting Scale scores were also related to observed parenting during the measures validation.

The total score for this measure as completed by foster parents was averaged across the first three waves of data collection (e.g. baseline, three months, and six months) in order to form a composite measure of parenting practices over time.

Developmental Status. Developmental status encompasses a vast number of domains of functioning. For the purpose of this study, developmental status will be limited to neuropsychological functioning as measured by the *NEPSY: A Developmental Neuropsychological Assessment* (Korkman, Kirk, & Kemp, 1998). This tool is a norm-

referenced, standardized test for children ages 3-12 and includes eleven subscales resulting in five domains: Attention/Executive Functioning, Visuospatial Processing, Memory and Learning, Sensorimotor Function, and Language (see Appendix D). Norms are balanced and representative of age, gender, and ethnicity. The NEPSY has been in development for over ten years and demonstrates sensitivity to the strengths and deficiencies that interfere with learning. Reliability coefficients for the NEPSY have been calculated for each age separately. Split-half, test-retest, and generalizability calculations were employed respective to the nature of the subtest. For children age three to four average reliability coefficients for Core Domain Scores are as follows: Attention/Executive Function, .70; Language, .90; Sensorimotor, .88; Visuospatial, .88; Memory and Learning, .91. Baseline data on this measure were used in the analysis as the NEPSY was only conducted at entry into the study.

Attachment Behaviors. As an alternative to traditional laboratory assessment, attachment-related behaviors were measured using the Parent Attachment Diary (PAD; Stovall & Dozier, 2000; see Appendix E). Although originally designed to measure attachment behaviors among infants, the PAD has been demonstrated as a useful tool for attachment characteristics during the early childhood years. The PAD was found to correlate strongly and significantly with Ainsworth's *Strange Situation* task, a widely used lab task measure of quality of attachment between parent and child, demonstrating concurrent criterion-related validity (Dozier, Stovall, & Albus, 1999; Stovall-McClough & Dozier, 2004). The measure asks caregivers to rate how their children responded when physically hurt, frightened, or separated within the last two weeks. Items are coded to

identify attachment styles: secure (proximity seeking or contact maintenance), avoidant (ignoring or moving away from caregiver), or resistant (displaying angry behavior toward caregiver). The PAD was validated using 31 biological and 11 foster families (Dozier, Stovall, Prettyman, & Spears, 1999) examining correlations between the diary and the *Strange Situation* task. Proximity seeking ratings from the Strange Situation task correlated .48 with diary security scores and -.42 with diary avoidance scores ($p < .01$). Avoidance ratings from the Strange Situation task correlated .44 with diary avoidance scores and -.54 with diary security scores ($ps < .01$). Attachment diary scores used for this study were those collected after the child was in his/her placement for six months. This time point was selected as during the initial validation of the Attachment Diary with foster children a high rate of variability in attachment behaviors were observed during the initial two months of placement after which behaviors seemed to stabilize and take on a more predictable pattern (Stovall-McClough & Dozier, 2004).

Dependent Variables

The study included two dependent variables: (1) emotion regulation, and (2) school adjustment. Measures used for these variables are described below.

Emotion Regulation. The *Emotion Regulation Checklist* (ERC; Shields & Cicchetti, 1997) is a 24-item, norm-referenced rating scale designed to be completed by parents, teachers, or observers and includes both positively and negatively weighted items rated on a 4-point Likert scale (see Appendix F). The ERC has two subscales: (1) Emotion Regulation and (2) Lability/Negativity. Shields and Cicchetti (1998) reported strong internal consistency for both subscales. Using Cronbach's alpha, .77 was reported

for Lability/Negativity and .66 for Emotion Regulation. The two subscales were also found to be significantly correlated ($r = -.68, p < .0001$). In addition, strong convergent validity has been demonstrated with other established behavioral measures (e.g. CBCL, Minnesota Behavior Ratings) as well as through direct observation over multiple sessions ranging from $r = .44, p < .001$, for the emotion regulation observations to $r = -.79, p < .001$ for Lability/Negativity (Shields & Cicchetti, 1997). Both subscales were used to measure negative or dysregulated reactivity to environmental stimuli for this study. The Lability/Negativity subscale measures inflexibility, mood lability, and dysregulated negative affect with items such as “exhibits wide mood swings”, “is easily frustrated”, and “is prone to angry outbursts”. The Emotion Regulation subscale measures processes central to adaptive regulation including the demonstration of situationally appropriate affective displays, empathy, and emotion understanding represented by items such as “is empathic toward others,” and “can say when s/he is feeling sad, angry, or mad, fearful or afraid.” Further support for using the ERC in this study is found in the scales sensitivity in distinguishing maltreated children from non-maltreated comparison groups and children demonstrating healthy regulation versus dysregulation (Shields & Cicchetti, 1997, Shields & Cicchetti, 2001). Lastly, outcomes from the lability/negativity scale have been shown to predict school adjustment among preschoolers (Shields & Cicchetti, 2001).

ERC scores were obtained as part of the child interviewer impressions checklist that are completed by MTFC-P assessors during assessments conducted when participants were ages seven to eleven. Parents also completed the ERC during these

assessments. This could have been an adoptive family, the biological family, or a foster parent. Composite of parents' and assessors' ratings were made in order to create a more in depth picture of emotion regulation ability and minimize source bias (e.g. inflated estimates of shared variance due to reliance on a single informant). Averages of these scores across three waves of data collection were analyzed as a composite for middle childhood.

School Adjustment. The Walker-McConnell Scale of Social Competence and School Adjustment (Walker & McConnell, 1988, 1995) is a norm-referenced, standardized measure that was developed over five years and standardized with a sample of 1,800 cases representing all four U.S. geographical regions. The 43-item elementary-age version asks teachers and school professionals to rate children on a 5-point scale according to frequency of demonstrated behavior (see Appendix H). The Walker-McConnell yields scores on three factors for the Elementary Version: Teacher-Preferred Social Behavior, Peer-Preferred Social Behavior, and School Adjustment Behavior ($M = 10$, $SD = 3$). Scaled scores ($M = 100$, $SD = 15$) and percentile rankings are provided. The Teacher-Preferred Social Behavior subscale includes 16 items measuring peer-related social behavior valued by teachers (e.g. cooperates with peers, controls temper, demonstrates sensitivity). The Peer-Preferred Social Behavior subscale includes 17 items measuring peer behavior valued by classmates (e.g. makes friends easily, compromises when the situation calls for it, interacts with others, plays games skillfully). The School Adjustment Behavior subscale includes 10 items measuring adaptive social behaviors (e.g. displays study skills, works independently, listens to directions).

The Adolescent Version (for students in grades 7 through 12) is an upward extension from the original K-6 Elementary version. This 53-item scale yields scores on four factors: Self Control, Peer Relations, School Adjustment, and Empathy. The Self Control subscale contains 13 items intended to measure the social maturity that emerges in adulthood (e.g. displays self-control in difficult situations, can accept not getting his/her own way, controls temper, accepts constructive criticism). The Peer Relations subscale includes 16 items and closely matches the Peer-preferred Social Behavior subscale of the Elementary Version while containing more age-appropriate context references. The School Adjustment subscale contains 15 items and is also closely related to the School Adjustment subscale of the Elementary Version, but contains more breadth in its item pool. Lastly, the Empathy subscale includes 6 items emerging as a distinct factor analytical structure in the Adolescent Version (e.g. is considerate of the feelings of others, shows sympathy, compliments the personal attributes of others, sensitive).

The Walker-McConnell scale exhibits strong internal consistency (e.g. α coefficients ranging from .95 to .97) and test-retest reliability (e.g. .88 to .92 correlations over a 3-week period with 323 subjects) and has been shown to discriminate between clinical and nonclinical samples across multiple validation studies. Criterion-related validity has been demonstrated through significant correlations between this measure and numerous other rating scales and academic achievement measures (Merrell, 2003).

Scores from the Walker-McConnell were obtained from the school data collection measures as completed by teachers when participants were between ages seven and eleven. The Total Score percentile ranking was selected as the measure for this construct.

Averages of these scores across three waves of data were used for analyses as a composite of school adjustment across middle childhood.

The following table summarizes all measures used for this study and who data were obtained from.

Table 2

Summary of Measures

Domain	Measure	Rater	Time Completed
Maltreatment Profile	File Review	Assessment Staff	Early Childhood
Placement History	File Review	Assessment Staff	Early Childhood
Family Stress	Family Events Checklist	Foster Parent	Early Childhood
Parenting Practices	Parenting Scale	Foster Parent	Early Childhood
Developmental Status	NEPSY	Assessment Staff	Early Childhood
Attachment Behaviors	Parent Attachment Diary	Foster Parent	Early Childhood
Emotion Regulation	Emotion Regulation Checklist	Assessment staff & Current caregiver	Middle Childhood
School Adjustment	Walker-McConnell Scale of School Adjustment and Social Competence	Teachers	Middle Childhood

CHAPTER IV

RESULTS

This chapter describes the results of analyses performed to evaluate the study questions. Preparation of the data is described as well as specific analyses performed for each of the proposed research questions. Descriptive data are presented first followed by correlation analyses. Finally, analyses performed to answer specific questions regarding predictive strength of independent variables on the development of emotion regulation and school adjustment.

Preparation of Data

Prior to analysis, data were cleaned according to standards presented by Tabachnick and Fidell (2007). All measures corresponding to the variables of interest were examined and scores with substantial missing data were excluded in order to preserve the largest sample possible. Imputation of missing data was considered (i.e., ascribing or attributing values for missing data based on predictive hypotheses) but given the exploratory nature of this study and the modest sample size, imputation was not deemed appropriate. Not all participants had complete data, due to their age of entry into the study and particular measures that were run only at younger ages. For research questions 1 and 2 the full sample was analyzed. For the regression analyses (research questions 3 and 4) the final n with complete data sets on all variables of interest was 24. Data were analyzed using SPSS version 15.0. Examination of skew and kurtosis of the variables was conducted in order to verify that variable distributions met critical

assumptions of normality. Null hypothesis testing for the standard error of skew and kurtosis was conducted to examine whether the standard error of skew (s_s) or (s_k) kurtosis fell within the range of -1.0 to 1.0 (Tabachnick & Fidell, 2007). Formulaic representations of these procedures are presented below respectively:

$$s_s = \sqrt{\frac{6}{N}} \qquad s_k = \sqrt{\frac{24}{N}}$$

Data revealed distributions were essentially normal for all dependent and independent variables used in the final analyses. Data were examined for the presence of outliers both visually and in histograms. As data were normally distributed and no major outliers detected, no transformations of the data were made. This also ruled out the need for nonparametric tests.

Analyses

This study was based on a pre-experimental descriptive, correlational design (Meltzoff, 1998). Several statistical procedures were employed in order to answer the research questions (e.g. descriptive analyses, correlations, multiple linear regressions). Due to the small sample size a less conservative p value of .10 was used to counterbalance the low statistical power. In exploratory studies, such as this, it was been noted that rigorous rejection standards are not always preferable (Cohen, 1992), due to the increased chances of failing to detect meaningful results that may occur with small exploratory samples (i.e. Type II error). In such a case, however, it is important to conduct follow up replication studies in order to confirm these results given the relaxed significant standards.

Collinearity among predictor variables was inspected with tolerance values (Cohen & Cohen, 1983) and no collinearity was detected thus assuring further adherence to critical assumptions for subsequent regression analyses. This finding is important, as multicollinearity might cause instability of the results due to biased parameter estimates and inflated standard errors (Chen, 2005). The Durbin Watson test for autocorrelation among residuals was also run for all regression analyses in order to test the assumption of the independence of errors (Durbin & Watson, 1951). Autocorrelation indicates a pattern of error that may be related to extraneous variable(s). Values for Durbin Watson tests (d) all fell within acceptable ranges signifying a lack of autocorrelation.

The following section details how data were analyzed to answer the research questions posed for this study.

Descriptive and Correlation Analyses

Research Question 1: What is the proportion of foster children demonstrating favorable outcomes during middle childhood with favorable outcomes defined as (1) an ability to successfully regulate emotions and behavior in response to age-appropriate task demands, stress, or novel circumstances and (2) successful school adjustment?

Favorable outcomes (the dependent variable) were defined on two domains: emotion regulation and school adjustment. For emotion regulation, results from the Emotion Regulation Checklist as completed by both parents and assessment staff were examined. A composite measure was computed that averaged scores provided by both raters across three waves of data collection when participants were ages 7 to 11 (e.g. middle childhood). The distribution of these scores is presented in table 2.

Table 3

Distribution of Scores on Emotion Regulation Checklist

	Statistic				
	Min	Max	M	SD	Median
<i>Scale</i>					
Lability/Negativity	1.03	2.67	1.70	.45	1.61
Emotion Regulation	2.39	3.91	3.34	.34	3.36

Items on the ERC were examined to determine relative cut points on both subscales that would indicate adequate functioning on this domain, as norms have not yet been developed for this measure. Higher scores on the Lability/Negativity subscale indicate poorer functioning whereas higher scores on the Emotion Regulation subscale indicated higher functioning. Consultation with clinical and school psychologists having extensive expertise in research and interventions with this population was accessed to determine scores that would indicate favorable levels of functioning. Specifically, a review of individual test items and subsequent composite score averages were discussed. On the Lability/Negativity subscale a cutoff score of 1.5 was indicated an appropriate threshold for adequate versus unfavorable functioning. Considerations for this score included the fact that four items on the Lability/Negativity subscale referenced patterns of behavior that indicated more stable characteristics: #2 Exhibits wide mood swings (child's emotional state is difficult to anticipate b/c s/he moves quickly from positive to negative moods); #6 Is easily frustrated; #8 Is prone to angry outbursts; #13 is prone to disruptive outbursts of energy or exuberance. Furthermore, the cutoff score of 1.5 would

indicate that at least half of the items were endorsed with a rating of 2 or higher (e.g. sometimes, often, or almost always). On the Emotion Regulation subscale a cutoff score of 3.25 was deemed appropriate for favorable functioning. A score of 3.25 or higher would indicate that the child demonstrates emotion regulation “often” with at least two out of eight items reflecting more stable behaviors (e.g. “almost always”).

Shields and Cicchetti (1998) reported a strong correlation between the two subscales ($r = -.68, p < .0001$). With this sample, a similar general level of correlation was observed between the Lability/Negativity and Emotion Regulation subscales ($r = -.574, p < .01$). Based on cutoff scores described above, a total of 14 participants demonstrated adequate functioning across both domains while 9 participants demonstrated inadequate functioning across domains. The remaining 11 demonstrated variable functioning as they scored within the adequate range on one domain but not the other (see Table 3).

Table 4
Levels of Emotion Regulation Functioning

Subscale	Subscale		Total
	Emotion Regulation Favorable	Emotion Regulation Unfavorable	
Lability / Negativity Favorable	14	1	15
Lability / Negativity Unfavorable	10	9	19
Total	24	10	34

Outcomes on school adjustment in middle childhood were captured by examining percentile ranks on the Walker-McConnell scale ($n = 33$; see Table 4). A composite

average of the Total Score on the Walker-McConnell scale was created for all school data collected during ages seven to eleven ($M = 44.60$, $SD = 24.44$). Composite scores were also created to capture functioning as measured by some of the Walker-McConnell subscales. A composite of the Peer Relations and Peer-Preferred Behavior subscales was created when both the Elementary and Adolescent versions of the Walker-McConnell scales were used in data collection ($M = 43.81$, $SD = 22.81$). A composite of the Self Control and Teacher-Preferred Behaviors subscales was also created ($M = 45.19$, $SD = 25.14$).

Table 5

Distribution of Percentile Scores on Walker-McConnell Scale of Social Competence and School Adjustment

	Statistic				
	Min	Max	M	SD	Median
Total Score	3.10	93.80	44.60	24.44	40.60
<i>Subscale Composites</i>					
Peer Relations & Peer Preferred	4.90	87.50	43.81	22.81	37.10
Self Control & Teacher Preferred	7.20	93.10	45.19	25.14	44.15

Children with a score at or above the 50th percentile were considered to be demonstrating more favorable outcomes on school adjustment than those with a score under the 50th percentile. A score in this range indicates average or better functioning in

that they would be performing at a level equal to or better than 50% of their same-age peers. From the study sample, 11 children (33%) had percentile ranks at or above 50.

Table 6

Level of Favorable School Functioning (N = 33)

Total Score Percentile	<i>N</i>	%
≥ 50	11	33.3
< 50	22	66.6

Research Question 2: What is the degree of association between maltreatment, placement history, parenting practices, family stress, developmental status, attachment behaviors, emotion regulation, and school adjustment? Multiple Pearson bivariate correlations were conducted in order to examine the relationship between independent and dependent variables for this study. In spite of the small *n* there were a number of significant moderate to strong correlations. These correlation coefficients are presented in Table 6.

Among the three dependent variables the two subscales of the Emotion Regulation Checklist (Lability/Negativity and Emotion Regulation) demonstrated a significant negative correlation ($r = -.54, p < .05$) similar to that presented in the measures' original validation studies (Shields & Cicchetti, 1997; Shields & Cicchetti, 1998). This correlation indicates that higher levels of emotional lability and negativity are associated with lower levels of emotion regulation and vice versa. The Lability/Negativity subscale was also found to have a significant negative correlation to the Walker-McConnell Total Score percentile composite ($r = -.34, p < .10$) indicating that

higher levels of emotional lability and negativity are moderately associated with lower levels of overall school adjustment and social functioning.

Of the three dependent variables, the Lability/Negativity subscale of the Emotion Regulation Checklist had the highest number of significant correlations with independent variable measures. Specifically, all five domains from the NEPSY (Attention/Executive Function [$r = -.71, p < .05$], Language [$r = -.41, p < .05$], Sensorimotor [$r = -.55, p < .05$], Visuospatial [$r = -.39, p < .10$], Memory [$r = -.54, p < .05$]) had significant negative correlations with the Lability/Negativity scale meaning that higher levels of developmental functioning in early childhood were related to lower levels of emotional lability and negativity in middle childhood. A significant correlation was also found between early experiences of family stress in the foster family and later emotional lability and negativity ($r = .33, p < .10$).

The Emotion Regulation subscale of the ERC was positively correlated with the Attention/Executive Function domain on the NEPSY ($r = .36, p < .01$) indicating that higher levels of attention and executive functioning in early childhood were associated with increase emotion regulation in middle childhood. Early experiences of family stress were also negatively associated with emotion regulation in middle childhood ($r = -.36, p < .05$) indicating that family stress in early childhood is associated with decreased emotion regulation in middle childhood. Lastly, a significant negative correlation was found between the percentage of secure attachment behaviors demonstrated in early childhood with the foster parent and later emotion regulation ($r = -.33, p < .10$).

The Total Score percentile composite of the Walker-McConnell was significantly correlated with two independent variable measures: the Attention/Executive Function domain score ($r = .37, p < .10$) and the Sensorimotor domain score ($r = .46, p < .05$) of the NEPSY. Both correlations were positive, suggesting that higher levels of attention/executive functioning and sensorimotor functioning in early childhood are associated with increased school adjustment and social competence in middle childhood.

A number of intercorrelations were also found between independent variables from early childhood data collection, particularly within the domain scores of the NEPSY which were all found to positively correlate with each other at significant levels (see table 6). Two paradoxical findings were also revealed in the correlational analyses. First, the proportion of neglect within the maltreatment profile was also found to be significantly negatively correlated with family stress ($r = -.41, p < .10$) implying a relationship between increased levels of experienced neglect and a lower levels of family stress. Second, a positive correlation was found between family stress and secure attachment behaviors ($r = .31, p < .10$) implying a relationship between increased family stress and higher percentages of demonstrated secure attachment behaviors. Speculations regarding these findings are explored in the Discussion section below.

Table 7

Pearson Product-Moment Correlations among Measures of Emotion Regulation, School Adjustment, and Early Childhood Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. ERC Lab/ Neg ^a	--													
2. ERC Emo Reg ^b	-.57**	--												
3. School Adjust ^c	-.34*	.15	--											
4. # of Trans ^d	.22	-.17	.02	--										
5. Maltx Severity ^e	-.19	.19	.14	-.04	--									
6. Prop of Neglect ^f	-.01	.11	-.25	-.01	-.04	--								
7. Dev. Attn./Exec ^g	-.71**	.36**	.37*	-.19	.19	-.03	--							
8. Dev. Language ^h	-.41**	.27	.25	.05	.15	-.12	.68*	--						
9. Dev. Sensmotor ⁱ	-.55**	.30	.46**	-.29	-.24	.22	.72*	.62*	--					
10. Dev. VisSpat ^j	-.39*	.29	.30	-.08	-.23	.26	.55**	.76**	.74**	--				
11. Dev. Memory ^k	-.54**	.34	.29	-.21	.32	-.20	.67*	.67*	.52*	.41**	--			
12. Parenting Prac ^l	-.19	-.04	-.09	-.07	-.12	.06	.01	.17	.20	.16	.23	--		
13. Family Stress ^m	.33*	-.36**	-.13	.08	.16	-.41*	-.27	-.00	-.29	-.14	-.07	-.04	--	
14. % Secure Beh. ⁿ	.11	-.33*	-.13	.10	-.14	.00	-.17	-.08	-.20	.03	.07	-.01	.31*	--

* $p < .10$, ** $p < .05$

Note: ^a Emotion Regulation Checklist: Liability/Negativity scale; ^b Emotion Regulation Checklist: Emotion Regulation scale; ^c Walker-McConnell Total Score percentile; ^d Number of transition in foster care up to age 5; ^e Global Mean Severity of Maltreatment; ^f Proportion of neglect experienced in maltreatment profile; ^g NEPSY: Attention/Executive Function subscale percentile; ^h NEPSY: Language subscale percentile; ⁱ NEPSY: Sensorimotor Function subscale percentile; ^j NEPSY: Visuospatial Processing subscale percentile; ^k NEPSY: Memory and Learning subscale percentile; ^l Parenting Scale Total Score; ^m Family Events Checklist: Total Stressors; ⁿ Attachment Diary: % of Secure Behaviors

Regression Analyses

Research Question 3: What is the relative influence that maltreatment, placement history, parenting practices, family stress, developmental status, attachment behaviors, and gender, have on the development of emotion regulation during middle childhood?

Hierarchical multiple regression analyses (Cohen & Cohen, 1983) were performed in order to explain how variables during early childhood predicted emotion regulation in middle childhood. Two distinct regression analyses were conducted with the Lability/Negativity score from the ERC as the dependent variable in one and the Emotion Regulation score from the ERC as the dependent variable for the other. This was done because both scores represent relatively unique factors within the emotion regulation construct. Due to the varying strength of relationships observed in the correlational analyses and *a priori* theory-driven inquiry, a hierarchical variance partitioning procedure was used by entering independent variables into the regression based on theory (Pedhazur & Schmelkin, 1991). Specifically, hierarchical regression was used to determine if the addition of developmental status information improved prediction of emotion regulation beyond that attributable to maltreatment history, family stressors, and attachment behaviors. Ultimately, parenting practices and the global mean for maltreatment severity were excluded from the models. This decision was made as a result of two distinct factors. First, these two variables were found to have no significant correlations to the dependent variables or other independent variables in the correlational analyses. Second, the measurement of parenting practices among foster parents is riddled with extraneous problems. The measure used in this study (Parenting Scale, Wolff & Acker, 1993)

demonstrated little variability among the different subscales scores (e.g. Laxness, Overreactivity, Verbosity). Furthermore, it was the experience of the researchers in this study that foster parents were resistant to reporting negative parenting practices and thus the accuracy of their parenting practices is subject to question on this measure. The sample used for this study also had a high frequency of placement changes and thus stability of the construct over time was compromised as multiple reporters may have contributed to results.

The first hierarchical regression analysis was performed to predict variance in emotion lability and negativity. At the first step of the procedure gender, age at entry into the study, and number of transitions prior to the study were entered as a block for control variables. Second, proportion of experienced neglect, percent of secure attachment behaviors, and total family stressors were entered. Finally, at the third step the NEPSY core domain scores (Attention/Executive Function, Language, Sensorimotor, Visuospatial, Memory) were entered. NEPSY scores were entered last in order to determine what unique variance developmental status explained over and above the other factors. Table 7 displays the standardized regression coefficients (β), the t statistics evaluating the significance of those coefficients, R^2 , adjusted R^2 , and F values for each model step, and R^2 and F change values for each model step (e.g. entry of a block of IVs) for the first regression analysis run for lability and negativity.

After the initial model was tested it was observed that proportion of neglect ($\beta = .04, ns$) and secure attachment behaviors ($\beta = .02, ns$) did not significantly contribute to predicting later demonstrations of lability and negativity and were thus excluded from a

second regression analysis. Environmental stress ($\beta = .62, p < .05$) did predict variance uniquely. After the third block of developmental status variables were entered, family stress no longer predicted lability and negativity, but attention and executive function ($\beta = .60, p < .05$) did significantly and uniquely contribute.

Table 8

Hierarchical Regression Analysis: Predicting Variance in Lability/Negativity

Variable	β	t	Model R^2	Adj. R^2	F	R^2 change	F change
Step 1			.17	.05	1.38	.17	1.38
Gender	.27	1.33					
Age at study entry	-.35	-1.68					
Pre-MTFC-P Trans	-.01	-.03					
Step 2			.48	.30	2.65*	.31	3.41*
Gender	.30	1.64					
Age at study entry	-.58	-2.80*					
Pre-MTFC-P Trans	.10	.51					
Prop. of Neglect	.04	.18					
Secure Attach Beh.	.02	.11					
Environ. Stress	.62	2.35**					
Step 3			.71	.44	2.67*	.23	1.88
Gender	.09	.41					
Age at study entry	-.40	-1.46					
Pre-MTFC-P Trans	-.06	-.30					
Prop of Neglect	-.09	-.39					
Secure Attach Beh.	.30	1.31					
Environ Stress	.22	.74					
Attn/Exec. Function	-.60	-2.17**					
Language	.64	1.67					

Table 8 Continued

Variable	β	t	Model R^2	Adj. R^2	F	R^2 change	F change
Sensorimotor	.34	.97					
Visuospatial	-.44	-1.24					
Memory	-.43	-1.66					

* $p < .10$, ** $p < .05$

A second hierarchical regression was conducted with fewer independent variables in order to find a more parsimonious model. At the first step of the procedure gender, age at entry into the study, and number of transitions prior to the study were entered as a block for control variables. Second, total family stressors score was entered alone. Finally, at the third step the NEPSY core domain scores (Attention/Executive Function, Language, Sensorimotor, Visuospatial, Memory) were entered. Table 8 displays the standardized regression coefficients (β), the t statistics evaluating the significance of those coefficients, R^2 , adjusted R^2 , and F values for each model step, and R^2 and F change values for each model step (e.g. entry of a block of IVs) for the second regression analysis run for lability and negativity.

During this second run of the model family stress was found to significantly contribute to the model after both step two ($\beta = .62, p < .05$) and step three ($\beta = .45, p < .10$). Attention and executive function was found to also significantly contribute to the overall model once added in step three ($\beta = -.58, p < .05$). Other measures of developmental status (Language [$\beta = .49, ns$], Sensorimotor [$\beta = .31, ns$], Visuospatial [$\beta = -.32, ns$], Memory [$\beta = -.28, ns$]) did not significantly contribute to the overall model.

At step 2, with family stress added to the equation, $R^2 = .48$, $F(1, 19) = 4.40$, $p < .05$. The adjusted R^2 of .37 indicates that more than one third of the variability in emotion lability and negativity in middle childhood is predicted by family stress experienced during early childhood foster placements. At step three, $R^2 = .67$, $F(5, 14) = 3.14$, $p < .05$. The adjusted R^2 of .46 indicates that almost half of the variability in lability and negativity in middle childhood is predicted by not only family stress during early childhood foster placements but developmental status, specifically attention and executive functioning. The addition of developmental status resulted in a modest but not statistically significant increment in R^2 .

Table 9

Refined Hierarchical Regression Analysis: Predicting Variance in Lability/Negativity

Variable	β	t	Model R^2	Adj. R^2	F	R^2 change	F change
Step 1			.17	.05	1.38	.17	1.38
Gender	.27	1.33					
Age at study entry	-.35	-1.68					
Pre-MTFC-P Trans	-.01	-.03					
Step 2			.48	.37	4.40**	.31	11.32**
Gender	.29	1.75*					
Age at study entry	-.59	-3.25*					
Pre-MTFC-P Trans	.10	.62					
Environ Stress	.62	3.37**					
Step 3			.67	.46	3.14**	.19	1.59
Gender	.15	.73					
Age at study entry	-.50	-1.91*					
Pre-MTFC-P Trans	.05	.26					

Table 9 Continued

Variable	β	t	Model R^2	Adj. R^2	F	R^2 change	F change
Environ Stress	.45	2.02*					
Attn/Exec. Function	-.58	-2.11**					
Language	.49	1.39					
Sensorimotor	.31	.88					
Visuospatial	-.32	-1.01					
Memory	-.28	-1.24					

* $p < .10$, ** $p < .05$

Next, regression analyses were run to examine predictive factors for the development of emotion regulation. Step one was to enter the control variables (e.g. gender, age at entry into the study, and number of transitions prior to the study). Second, proportion of experienced neglect, percent of secure attachment behaviors, and total family stressors were entered. Finally, at the third step the NEPSY core domain scores (Attention/Executive Function, Language, Sensorimotor, Visuospatial, Memory) were entered. Table 9 displays the standardized regression coefficients (β), the t statistics evaluating the significance of those coefficients, R^2 , adjusted R^2 , and F values for each model step, and R^2 and F change values for each model step (e.g. entry of a block of IVs) for the first regression analysis run for emotion regulation.

The initial model revealed no significant predictive contributions from the independent variables. F statistics and change statistics also revealed a lack of significance. Variables entered at step two of the model (proportion of neglect [$\beta = -.08$, ns], secure attachment behaviors [$\beta = -.15$, ns], family stress [$\beta = -.46$, ns]) did not result

in explaining any portion of the variance. Similarly, the NEPSY core domain scores (attention/executive function [$\beta = .74, ns$], language [$\beta = -1.11, ns$], sensorimotor [$\beta = -1.13, ns$], visuospatial [$\beta = 1.28, ns$], memory [$\beta = 1.62, ns$]), revealed no significant predictive value in step three of the model testing.

Table 10

Hierarchical Regression Analysis: Predicting Variance in Emotion Regulation

Variable	β	t	Model R^2	Adj R^2	F	R^2 change	F change
Step 1			.05	-.09	.36	.05	.36
Gender	-.19	-.84					
Age at study entry	.12	.53					
Pre-MTFC-P Trans	.08	.37					
Step 2			.29	.04	1.16	.24	1.90
Gender	-.22	-1.01					
Age at study entry	.26	1.06					
Pre-MTFC-P Trans	.04	.16					
Prop. of Neglect	-.08	-.31					
Secure Attach Beh.	-.15	-.57					
Environ. Stress	-.46	-1.50					
Step 3			.48	.00	1.01	.19	.88
Gender	-.10	-.36					
Age at study entry	.21	.57					
Pre-MTFC-P Trans	.10	.36					
Prop of Neglect	.03	.11					
Secure Attach Beh.	-.43	-1.41					
Environ Stress	-.24	-.59					
Attn./Exec. Function	.27	.74					

Table 10 Continued

Variable	β	t	Model R^2	Adj R^2	F	R^2 change	F change
Language	-.57	-1.11					
Sensorimotor	-.53	-1.13					
Visuospatial	.61	1.28					
Memory	.56	1.62					

* $p < .10$, ** $p < .05$

A second hierarchical regression was conducted with fewer independent variables in order to find a more parsimonious model. At the first step of the procedure gender, age at entry into the study, and number of transitions prior to the study were entered as a block for control variables. Because the family stress score was approaching significance in the first model test ($\beta = -.46, p = .15$) it was included as the sole variable in step two. Finally, at the third step the NEPSY core domain scores (Attention/Executive Function, Language, Sensorimotor, Visuospatial, Memory) were entered. Table 10 displays the standardized regression coefficients (β), the t statistics evaluating the significance of those coefficients, R^2 , adjusted R^2 , and F values for each model step, and R^2 and F change values for each model step (e.g. entry of a block of IVs) for the second regression analysis run for lability and negativity.

During this second run of the model family stress was found to significantly contribute to the model after both step two ($\beta = -2.35, p < .05$) and step three ($\beta = -1.76, p < .10$). Unlike the model presented for lability and negativity, however, attention and executive function was not found to significantly contribute to the overall model once

added in step three ($\beta = .24, ns$). Other measures of developmental status (Language [$\beta = -.32, ns$], Sensorimotor [$\beta = -.49, ns$], Visuospatial [$\beta = .39, ns$], Memory [$\beta = .36, ns$]) also did not significantly contribute to the overall model.

At step two, with family stress added to the equation, $R^2 = .27, F(1, 19) = 1.71, ns$. Although the F statistic was not significant, the incremental change in F was ($F\Delta = 5.50, p < .05$). The adjusted R^2 at step two of .11 indicates that approximately one tenth of the variability in emotion regulation in middle childhood is predicted by family stress experienced during early childhood foster placements. At step three with the addition of the developmental status variables, $R^2 = .39, F(5, 14) = .99, ns$. The adjusted R^2 of -.01 indicates that this model does not predict the variance in emotion regulation in middle childhood even though family stress continues to make a unique contribution.

Table 11

Refined Hierarchical Regression Analysis: Predicting Variance in Emotion Regulation

Variable	β	t	Model R^2	Adj R^2	F	R^2 change	F change
Step 1			.05	-.09	.36	.05	.36
Gender	-.19	-.84					
Age at study entry	.12	.53					
Pre-MTFC-P Trans	.08	.37					
Step 2			.27	.11	1.71	.21	5.50**
Gender	-.20	-1.01					
Age at study entry	.32	1.48					
Pre-MTFC-P Trans	-.01	-.05					
Environ. Stress	-.51	-2.35**					
Step 3			.39	-.01	.99	.12	.56

Table 11 Continued

Variable	β	t	Model R^2	Adj R^2	F	R^2 change	F change
Gender	-.17	-.62					
Age at study entry	.36	1.02					
Pre-MTFC-P Trans	-.06	-.25					
Environ Stress	-.54	-1.76*					
Attn./Exec. Function	.24	.66					
Language	-.32	-.67					
Sensorimotor	-.49	-1.04					
Visuospatial	.39	.90					
Memory	.36	1.16					

* $p < .10$, ** $p < .05$

Research Question 4: What is the relative influence that maltreatment, placement history, parenting practices, family stress, developmental status, attachment behaviors, and gender, have on the development of school adjustment during middle childhood?

Hierarchical multiple regression analysis (Cohen & Cohen, 1983) was performed in order to explain how variables during early childhood in foster care predict school adjustment in middle childhood. For reasons explained above, parenting practices and the global mean severity score for maltreatment were excluded from this analysis. At step one of the regression gender, age at entry into the study, and number of transitions prior to the study were entered as a block for control variables. For the second block, proportion of experienced neglect, percent of secure attachment behaviors, and total family stressors were entered. Finally, at the third step the NEPSY core domain scores (Attention/Executive Function, Language, Sensorimotor, Visuospatial, Memory) were

entered. NEPSY scores were entered last in order to determine what unique variance developmental status explained over the other factors. Table 11 displays the standardized regression coefficients (β), t statistics evaluating the significance of those coefficients, R^2 , adjusted R^2 , and F values for each model step, and R^2 and F change values for each model step for the regression analysis run for school adjustment.

After the initial model was tested it was observed that proportion of neglect ($\beta = -.54, p < .05$) was a significant contributor to the model at step two. Secure attachment behaviors ($\beta = -.07, ns$) and family stress ($\beta = -.36, ns$), however, did not significantly contribute to predicting school adjustment and were thus excluded from a second regression analysis. After the third block of developmental status variables were entered, proportion of neglect continued to factor significantly into the model ($\beta = -.79, p < .05$), with the exception of all other independent variables.

Table 12

Hierarchical Regression Analysis: Predicting Variance in School Adjustment

Variable	β	t	Model R^2	Adj. R^2	F	R^2 change	F change
Step 1			.08	-.06	.61	.08	.61
Gender	-.20	-.91					
Age at study entry	.23	1.03					
Pre-MTFC-P Trans	-.15	-.66					
Step 2			.35	.10	1.41	.26	2.10
Gender	-.28	-1.30					
Age at study entry	.18	.79					
Pre-MTFC-P Trans	-.20	-.88					
Prop. of Neglect	-.54	-2.16**					
Secure Attach Beh.	-.07	-.27					

Table 12 Continued

Variable	β	t	Model R^2	Adj. R^2	F	R^2 change	F change
Environ. Stress	-.36	-1.29					
Step 3			.69	.38	2.24*	.35	2.47*
Gender	.02	.08					
Age at study entry	-.26	-.87					
Pre-MTFC-P Trans	.04	.18					
Prop of Neglect	-.79	-3.52**					
Secure Attach Beh.	-.21	-.84					
Environ Stress	.13	.38					
Attn./Exec. Function	.06	.19					
Language	-.50	-1.35					
Sensorimotor	.64	1.44					
Visuospatial	.54	1.30					
Memory	.16	.61					

* $p < .10$, ** $p < .05$

A second hierarchical regression was conducted with fewer independent variables in order to find a more parsimonious model. At the first step of the procedure gender, age at entry into the study, and number of transitions prior to the study were entered as a block for control variables. Due to the lack of significance in their contribution during the first model test, secure attachment behaviors and family stress were excluded and block two consisted solely of the proportion of neglect variable. Finally, at the third step the NEPSY core domain scores (Attention/Executive Function, Language, Sensorimotor, Visuospatial, Memory) were entered. Table 12 displays the standardized regression coefficients (β), the t statistics evaluating the significance of those coefficients, R^2 ,

adjusted R^2 , and F values for each model step, and R^2 and F change values for each model step (e.g. entry of a block of IVs) for the second regression analysis run for lability and negativity.

During this second run of the model proportion of neglect was again found to significantly contribute to the model after both step two ($\beta = -.47, p < .05$) and step three ($\beta = -4.59, p < .05$). This model also revealed the sensorimotor score to uniquely and significantly predict variance ($\beta = 2.16, p < .05$). Other measures of developmental status (Attention/Executive Function [$\beta = .23, ns$], Language [$\beta = -1.32, ns$], Visuospatial [$\beta = 1.31, ns$], Memory [$\beta = .46, ns$]) did not significantly contribute to the overall model.

At step two, with proportion of neglect added to the equation, $R^2 = .26, F(1, 19) = 1.66, ns$. The adjusted R^2 of .10 revealed little explanatory power for the model predicting school adjustment although a significant change in the F statistic was observed ($F\Delta = 4.55, p < .05$). At step three, $R^2 = .70, F(5, 14) = 3.64, p < .05$. Additionally, a significant change in the F statistic was observed with the addition of the third block of developmental status variables ($F\Delta = 4.13, p < .05$). The adjusted R^2 of .51 indicates that approximately half of the variability in school adjustment in middle childhood is predicted by the proportion of neglect experienced in early childhood prior to foster care and by sensorimotor functioning in early childhood.

Table 13

Refined Hierarchical Regression Analysis: Predicting Variance in School Adjustment

Variable	β	t	Model R^2	Adj. R^2	F	R^2 change	F change
Step 1			.08	-.06	.61	.08	.61
Gender	-.20	-.91					
Age at study entry	.23	1.03					
Pre-MTFC-P Trans	-.15	-.66					
Step 2			.26	.10	1.66	.18	4.55**
Gender	-.26	-1.22					
Age at study entry	.13	.60					
Pre-MTFC-P Trans	-.17	-.82					
Prop. of Neglect	-.47	-2.13**					
Step 3			.70	.51	3.64**	.44	4.13**
Gender	-.01	-.04					
Age at study entry	-.20	-.99					
Pre-MTFC-P Trans	-.02	-.13					
Prop of Neglect	-.86	-4.59**					
Attn./Exec. Function	.05	.23					
Language	-.41	-1.32					
Sensorimotor	.68	2.16**					
Visuospatial	.41	1.31					
Memory	.09	.46					

* $p < .10$, ** $p < .05$

Summary of Results

Descriptive statistics of the sample were presented on the dependent variables (emotion regulation and school adjustment). 41% of the sample ($n = 14$) demonstrated adequate emotion regulation functioning on both domains in middle childhood, 32% ($n =$

11) demonstrated variable functioning, and 26% ($n = 9$) demonstrated inadequate emotion regulation in middle childhood. Based on a cutoff score at the 50th percentile, 33% ($n = 11$) of the sample demonstrated adequate school functioning in middle childhood.

Correlations were run between all independent and dependent variables to examine strength of relationships between scores in early and middle childhood. Early childhood scores from all five domains on the NEPSY (Attention/Executive function, Language, Sensorimotor, Visuospatial, Memory) demonstrated statistically significant negative correlations with the Lability/Negativity subscale score on the Emotion Regulation Checklist in middle childhood indicating that high levels of early childhood developmental functioning was associated with lower levels of lability and negativity in middle childhood. Higher levels of family stress in early childhood were significantly associated with higher levels of lability and negativity in middle childhood. Higher levels of attention and executive function in early childhood were significantly associated with higher levels of emotion regulation in middle childhood. Lower levels of family stress in early childhood were significantly associated with improved emotion regulation in middle childhood. Lower levels of secure attachment behaviors with foster parents in early childhood were also significantly associated with higher levels of emotion regulation in middle childhood. Higher levels of attention and executive functioning as well as sensorimotor functioning in early childhood were both significantly associated with improved school functioning in middle childhood.

Lastly, regression models were presented in order to analyze the predictive contribution of early childhood independent variables to middle childhood emotion regulation functioning and school adjustment. In the prediction of middle childhood scores of lability and negativity, family stress and attention/executive functioning scores from early childhood made significant and unique contributions. In the prediction of emotion regulation in middle childhood, family stress during early childhood made a significant and unique contribution. In the prediction of school adjustment during middle childhood, the proportion of neglect experienced prior to entry into foster care during early childhood as well as sensorimotor functioning made significant and unique contributions. The addition of developmental status scores (NEPSY) in the regression model for school adjustment also resulted in a significant change in R^2 .

CHAPTER V

DISCUSSION

The purpose of this study was to examine the relative influence and relationship of several early childhood variables on the development of favorable outcomes during middle childhood for children who had been placed in foster care during their preschool years. Similar to research demonstrating the enduring effects of risk on later development, the presence of protective factors during early childhood has a comparable impact on the development of assets in later life. This study sought to examine the variables associated with positive adaptation in spite of the odds that predict foster children to fare worse than their nonmaltreated peers.

The development of critical competencies during early childhood is vital to long-term success. Early dysfunction and the absence of competencies are predictive of later delinquency, underachievement, and psychosocial maladjustment (Loeber, 1990; Trembley, Pihl, Vitaro, & Dobkin, 1994). For young children in foster care, these early deficits may be remediated by improved care and intervention support, but they may also be exacerbated by continued exposure to risks. In the present study, although the final sample was small, the data set is extremely unique because of its depth and breadth of rich data on what is an extremely high-risk and transient population. This study lays a foundation upon which a more comprehensive picture of how risk and protective factors promote or inhibit resilience can be modeled.

Overall, there were two variables that seemed to have the most significant impact on the development of favorable outcomes: lack of family stress and developmental ability. These variables are discussed in the following sections in terms of the extent to which they interact with neurophysiological development, the quality of the parent-child relationship, and social-emotional development. Early childhood neglect was also found to be a strong predictor of school adjustment, but not of emotion regulation. Interestingly, the role of secure attachment behaviors had a relationship contrary to the initial hypotheses. Possible mechanisms for this phenomenon are presented. Lastly, parenting practices and placement history did not emerge consistent with original hypotheses—rather, they played no statistically significant role in the development of later emotion regulation or school adjustment.

Fostering Adaptation

A number of interesting findings emerged regarding early childhood variables and their relationship to later adaptation. Independent variables yielding statistically significant relationships to the dependent variables are presented first followed by a discussion of variables that did not demonstrate statistically significant results.

The Impact of Environmental Stress

A prominent finding in this study was the benefit of the absence of stress on the development of favorable outcomes. In the analyses, family stress during foster care in early childhood uniquely contributed to the prediction of overall emotion regulation in middle childhood and was associated with both emotional lability (e.g. higher levels of stress were related to higher rates of lability/negativity and lower levels of emotion

regulation). The role of stress in the early foster care environment is multifaceted. Generally speaking, foster care is intended to function as a protective factor in that the child is removed from an unhealthy environment and placed in the care of more competent providers. Children entering a foster home have already experienced varying degrees of trauma and stress and may take months to begin showing signs of stabilization and recovery. As the young foster child enters this new environment, they are charged with the daunting task of abandoning previously held parent-child interaction patterns that while unhealthy and often rejection-oriented are familiar and well-rehearsed. They must also learn unique and often very challenging new routines, and develop skills and competencies similar to their same-age peers without the benefit of prior years of priming, modeling, practice, and feedback. The effects of neglectful and abusive parenting during the early years of life leave children at a distinct disadvantage in being able to handle even the most typical stressors. During infancy and toddlerhood, caregivers' ability to function as an external source of affective and physiological regulation results in the child's ultimate ability to self-govern these processes, processes central to the development of emotion regulation. Foster parents are faced with the comparable task of proximal regulation as preschool-aged foster children can, as a result of inadequate developmental nurturance, demonstrate the emotional maturity and regulation capacity of an infant or toddler. Concurrently, due to chronic adversity of the impact of stress on the development of regulatory systems, foster children's physiological rhythms are frequently dysregulated (Bruce, Fisher, Pears, & Levine, 2008) which may interfere with the acquisition of new skills and ultimately with stabilization.

Foster children evidence a heightened vulnerability to stressors because of neurophysiological dysregulation (Bruce, Fisher, Pears, & Levine, 2008; Fisher, Gunnar, Dozier, Bruce, & Pears, 2006; Fisher, Stoolmiller, Gunnar, & Burraston, 2007). This dysregulation can inhibit their ability to cope effectively with stressors. In response, it becomes essential that foster parents to provide more intensive support or implement therapeutic interventions to remediate deficits. Over the course of stabilization in foster care, regulatory processes respond to therapeutic caregiving and children begin to exhibit more typical patterns concurrent with behavioral stabilization (Fisher, Gunnar, Dozier, Bruce, & Pears, 2006). Environmental stressors, however, can weaken foster parents' ability to manage their own stress in response to children's negative behaviors. These heightened levels of foster parent-reported stress have been shown to interfere with the stabilization of diurnal cortisol patterns in young foster children indicative of healthy regulatory functioning (Fisher & Stoolmiller, 2008). Furthermore, inasmuch as stress interferes with effective parenting, foster parents may be unable to amend regulatory deficits by responding therapeutically to children who demonstrate exaggerated reactivity to stressors.

The task at hand for both foster children to recover and adapt as well as for foster parents to guide, protect, and nurture is clearly immense. With the introduction of additional stressors into the fostering environment, there is a manifold impact on the foster parents, the foster child, and the parent-child relationship therein. The experience of foster parenting is by no means simple given the propensity among foster children to demonstrate behavioral and emotional difficulties. Foster parents must be the child's

“teacher” before they become their “parent” so as to instruct the child in the seemingly simple, but in fact sophisticated, navigation of daily tasks and routines. The introduction of a foster child into a family can be extremely disruptive as they often require specialized care and consideration unique to what foster parents generally found to be effective with their own typically developing children. Additional stressors, therefore, can easily compromise the concerted effort put forth by foster parents to this daunting task. Under stress, the foster family’s ability to effectively parent the high-needs foster child in their home becomes increasingly difficult. Ultimately, this can diminish the protective nature of the foster placement and its potential to be therapeutic and thereby result in delayed stabilization.

Environmental Stress and the Parent-Child Relationship

As children start to build bonds with their foster parents they often seek to recreate familiar interaction patterns which have frequently been characterized by unpredictability, rejection, and chaos. These tendencies require foster parents to exercise an immense amount of patience, compassion, and tenacity as foster children will often seek to reject before being rejected and resist the better efforts of foster parents to nurture and love them. Here too, the impact of stress can interfere with their ability to remain nonreactive to young foster children’s attempts to recreate hostility in the home and ultimately interrupt what is already a tenuous attachment development process. Paradoxically, however, this was not captured in the analysis. While there was a significant correlation between family stress and percentage of secure attachment behaviors as demonstrated by the child, this relationship was positive signifying that

higher levels of family stress were related to higher percentages of secure attachment behaviors. One possible explanation for this could be that young children attach more readily to caregivers in environments that are familiar. As discussed previously, many foster children enter foster care having left homes that were characterized by stress and chaos. It is often the case that life with the foster family bears little to no resemblance to anything familiar. In the case that there are higher levels of family stress in the foster home, the young foster child may respond positively to this familiar tone and more readily develop a healthy attachment style with their foster parent. Clarifying the causal relationship within this phenomenon would entail more targeted analysis.

Developmental Ability and its Enduring Effect

Results of this investigation pointed to the powerful role of early childhood developmental ability on later outcomes. Developmental status, as it was conceptualized here, was a composite of five primary domains as measured by the NEPSY: Attention and Executive Functioning, Language, Sensorimotor Functioning, Visuospatial Functioning, and Memory. Regarding middle childhood demonstrations of emotional lability and negativity, all five domains were associated (e.g. poorer developmental functioning in early childhood was related to increased lability and negativity in middle childhood) and attention and executive functioning played a particularly instrumental role in its prediction. There was a similar positive correlation between attention and executive function and the score for emotion regulation. Interestingly, however, the developmental status scores did not predict any of the variance in the emotion regulation construct.

In the analysis looking at school adjustment in middle childhood, sensorimotor functioning in early childhood came out as a significant predictor of success. This was a surprising result and unique compared to previous findings. In their review of the NEPSY, Ahmad and Warriner (2001) reported low positive correlations between NEPSY domain scores and classroom scores across various core academic subjects. As one might expect, language yielded higher correlations while sensorimotor scores yielded lower correlations. As measured by the NEPSY, the sensorimotor assessment includes sensory input at the tactile level, fine motor speed for simple and complex movements, the ability to imitate hand positions, rhythmic and sequential movements, and visuomotor precision in controlling pencil use. Sensorimotor function, the ability to integrate sensory stimulation and interact motorically with the environment, has long been understood as a key developmental stage of infancy and early toddlerhood (Piaget, 1952) which develops as the child ages (Korkman, Kirk, & Kemp, 1998). A key component of sensorimotor function is the formation of procedural memory such as in conditioning or skill learning, but does not yet entail conceptualization which emerges in later development (Mandler, 2007). Whether sensorimotor function has a causal link to later school adjustment per se is unclear. What these findings may suggest, rather, is poorer levels of sensorimotor function in early childhood may be indicative of a larger developmental delay as sensorimotor function is believed to be a fundamental precursor to other developmental milestones. In fact, recent studies have found unique sensorimotor deficits among a number of different at-risk children such as those exposed to cocaine in utero or those

with cerebral palsy, spina bifida, and temperature sensitivity (Ramirez, Behrends, Blackney, & Herndon, 1998; Singer, Angelopolous, Bass-Busdiecker, & Mascia, 1998).

Maltreatment and the Power of Neglect

Interestingly, the severity of maltreatment did not emerge as a statistically significant correlate of later outcomes in spite of the large body of research that speaks otherwise. This finding could have been due to Type II errors (false negative) as a result of sampling restrictions and low statistical power. As a result, neglect was selected as the primary maltreatment construct of interest due to its pervasive influence on development. Contrary to initial hypotheses, neglect did not emerge as a predictor of emotion regulation in spite of research that discusses the importance of parental regulation and modeling during infancy and toddlerhood. The proportion of neglect experienced during early childhood, however, did reveal itself to be a significant predictor of school adjustment during middle childhood. Specifically, less neglect experienced in early childhood was associated with better school adjustment in middle childhood. The impact of early neglect on development of key competencies as a result of insufficient stimulation, nourishment, interaction, and modeling is enduring and speaks strongly to the importance of early intervention support and remediation for young children.

Attachment and its Role in Emotion Regulation

On the whole the findings on attachment behaviors were paradoxical. Percent of secure attachment behaviors as demonstrated between the foster parent and child were negatively associated with emotion regulation in that lower levels of secure attachment behaviors were associated with higher emotion regulation. One possible explanation for

this might point to what is commonly known as a “loyalty bind” that many foster children experience having entered out-of-home care. When a child has a strong bond with their biological parent or primary caregiver and that placement is disrupted it is expected that over time the child will develop a similar attachment to their foster parent thereby gaining the nurturance and emotional reciprocity crucial to healthy development. Many children struggle with the inherent conflict, however, of reconciling the disrupted relationship with their biological parent or prior caregiver with whom they had a strong attachment. It is not uncommon that children experiencing such an internal conflict resist developing an attachment to their foster parent. A strong attachment to their birth parent and a lack thereof with the foster parent could point to the presence of healthy emotional priming on the part of the birth parent thereby lending itself to the later development of emotion regulation. It could also be the case that children who are less securely attached to their foster parents are more guarded in their emotional expression thereby inhibiting emotional responses more systematically over time.

The development of a secure attachment with the foster parent is undoubtedly beneficial to overall stabilization and positive outcomes while in out-of-home care. Supportive intervention, such as that provided in the treatment condition of the Multidimensional Treatment Foster Care - Preschool study, has been shown to facilitate the development of such attachments. Fisher and Kim (2007) found that compared to the intervention group in the original MTFC-P study, RFC children (who made up the sample for this study) did not evidence improvements in attachment security over the course of their foster placement whereas children in the intervention group did. The study also

pointed to a significant interaction between the treatment condition and the age at first placement with children having been placed in care at younger ages demonstrating greater increases in secure attachment behaviors over time. While there were no group differences between mean age of entry into foster care at the beginning of the original MTFC-P study it would be interesting to examine whether those remaining in the sample used for this study were placed into foster care at older ages and thus less likely to demonstrate significant growth in secure attachment behavior.

With regard to how attachment was measured, it should be noted that similarly to the Parenting Scale used to measure parenting practices, the Parent Attachment Diary was a self-report measure filled out by foster parents. Although validation studies for this measure indicate strong psychometric properties, the measure may have been subject to bias in that foster parents may have been hesitant to report reactive or insecure attachment behaviors among their foster children.

Parenting Practices in the Foster Home

Parenting practices as measured for this study captured three parenting dimensions among foster parents: laxness, verbosity, and overreactivity (Arnold, O'Leary, Wolff, & Acker, 1993). Results did not reveal parenting practices as having any significant correlation or predictive value regarding emotion regulation or school adjustment. One possible reason for this lies in the difficulty with using self-reporting for this domain. By and large, foster parents are not likely to report parenting behaviors that are overtly negative or ineffective which weakened the overall ability to assess this construct. It is possible that the parenting measure selected did not address the

appropriate parenting behavior as it related to the dependent variables of interest. Recent research has pointed to the importance of flexibility and consistency within the parent-child dynamic as a key factor in the development of self-regulation (Lewis, Granic, & Lamm, 2006). Parenting that is inflexible (characterized by power struggles and an inability to adapt to shifting demands) and/or inconsistent (characterized by vacillation between overly permissive and punitive responding) may be more predictive of long-term emotion regulation and school adjustment as a result of inefficient shaping and conditioning that impacts behavioral development and adaptation as well as the child's ability to map on to environmental contingencies. Ultimately, these were not constructs captured in the parenting measure used for this study. Another hypothesis for the lack of contribution from parenting practices in this study is that the parent-child dynamic between the foster parent and foster child was not as influential at the time of measurement as was the parent-child relationship with the birth family or during earlier years.

Placement History

In the initial correlational analyses the number of placement transitions prior to age five was selected as the placement history variable. Surprisingly, no statistically significant correlations emerged. As a result, number of transitions prior to entry into the MTFC-P study was used as a control variable during the regression analyses. Although research has consistently pointed to the impact of volatile placement histories this study did not reveal any associations. This could be an artifact of the data in that due to the small sample size and the relatively limited range of placement frequencies, there may

not have been great enough variance within this measure to detect differential impact on outcomes.

Limitations

The most important limitation to this study was in its sample size, which was relatively small for the type of analyses that were envisioned for this investigation. Although the original sample consisted of 60 children in regular foster care, attrition was a major factor and at the time of this study only 34 remained with mostly intact data sets. With the addition of the developmental status measures in the regression analyses as a final block, the sample was only 24. Although data were still normally distributed and met critical assumptions for all analyses run, the small sample size and number of variables selected for analysis decreased statistical power and increased the likelihood of Type II error (false negative; Glass & Hopkins, 1996). With a larger sample, greater sensitivity to detect statistical significance would result. It was for this reason that α was increased to .10 so as to increase the probability of rejecting a true null hypothesis. It is also not clear whether there was any particular pattern in regards to attrition. Should participants with greater instability or those lacking permanency have been the ones to leave the study outcomes may have look different. Lastly, when the Emotion Regulation and School Adjustment data were collected during middle childhood other contextual factors were not taken into consideration for this study. Without examining other considerations (e.g. placement stability, acute stressors, etc.) one cannot be confident that the results obtained were not influenced by extraneous factors.

The sample, albeit extremely unique, was also mostly heterogeneous in ethnicity (e.g. disproportionately Caucasian) and geography (Lane County, Oregon). This demographic fact limits external validity and the ability to generalize findings broadly to the larger population.

Implications of Findings

As a field, as we begin to engage in a more in depth conversation about what defines resilience and favorable outcomes we must explore the breadth and depth of a continuum of skills and assets. While emotion regulation and school adjustment were the focus of this study other features of favorable outcomes may be better indicators of resilience. For example, emotional lability is a complex phenomenon the absence of which may not necessarily be indicative of emotion regulation but an example of a restricted emotional range or perhaps even of dissociative features wherein an individual does not respond to a stimuli in a predictable manner. Other life course factors such as relationship status, employment, and health will be important to explore in longitudinal studies.

A depth of understanding about the how to procure more favorable outcomes for a population at extreme risk is of public health importance. Foster children frequently enter adulthood demonstrating a level of psychological, occupational, and relational need that can translate into an immense burden on society. More importantly, protective factors can be introduced that buffer the impact of abuse and neglect and insulate this tremendously vulnerable population. It therefore becomes our ethical responsibility as scientists and practitioners to explore the constellation of need in its entirety in proportion to the

balance of risk and protection that may or may not serve to ameliorate these deficits so as to foster resilience. Some children do defy the odds and though their experiences may be statistical anomalies they are not entirely unique. As a population, they can inform us of the recipe for resilience and those insights can and should be put to policy and intervention development. As expensive and resource-intensive it is to remediate the preponderance of deficits exhibited by children in foster care, it is worth our while to focus efforts on the variables most predictive of enhancing protective factors and those indicator skills of resilience and success such as emotion and self-regulation and school adjustment.

Of particular note from this study should be those variables we would consider *alterable* as those are most amenable to intervention efforts. First, efforts focused on buffering and reducing stress for foster families has undeniable value given the findings discussed here. Foster care should and often does act as a protective factor when children are removed from dangerous and damaging environments. Under heightened stress, however, a foster family's ability to remain therapeutic and support the healing and recuperation of the young children in their care becomes tragically compromised. The cascading effect of this on both the family environment as well as the foster child's developmental trajectory has far-reaching effects. Second, developmental ability is often considered a more stable construct, but more recent research points to developmental capacities as being alterable and amenable to intervention. The brain's plasticity in children points to the importance of early intervention as a means of interrupting negative trajectories and fostering adaptation. Attention and executive function, self regulation

(both behavioral and emotional), language, and memory function are most responsive during early years while skills and brain mapping are still in development. In light of the findings discussed herein, the attainment of developmental milestones as well as stabilization of regulatory function should be of primary focus for intervention with young foster children.

Future Directions

The study presented here was exploratory and laid a foundation for a number of further directions. The logical next step is taking these findings and integrating them into a more comprehensive model using more sophisticated statistical procedures such as hierarchical linear modeling and structural equation modeling. This step would facilitate examining the mechanisms of adaptation with mediating and moderating factors. In order to do this effectively, however, sample size would need to increase. Imputation of missing data would facilitate this as well as posing research questions that would lend themselves to the inclusion of the intervention group participants.

There are a number of other variables that possibly bear influence on the development of favorable outcomes and warrant further examination. Foster parenting characteristics such as level of experience and training, number of other children in the home, and amount of social support may all mediate the impact of family stress and effective parenting. Additionally, given the longitudinal nature of this data set there are a number of factors guiding development during the transition from early to middle childhood. Namely the status of children's permanency may play a key role in developing assets and overall resilience. Whether children were returned to the care of their

biological parents or a relative, adopted, or remained in foster care should be added to the overall model. Other influencing factors such as educational experience, access to specialized education supports or other interventions also warrant inspection.

As both family stress and attention and executive functioning both emerged as key constructs in this study, the development and testing of interventions to target these factors would make a significant contribution to promoting positive outcomes for this population. Interventions designed to support foster parents in stress-reduction techniques such as mindfulness-based parent management training that enhance their therapeutic potential and mediate the effect of stress may prove to be instrumental in young children's overall adaptation and emotional development. Similarly, interventions targeting attention and executive functioning development in young foster children are needed.

Lastly, collection of data on outcomes long-term will prove to be integral to the overall promotion and successful dissemination of these findings as well as future interventions. As prevention efforts are generally under-funded, the value of this type of resource allocation must be demonstrated in tangible outcomes as well as dollars and cents. Examining service utilization rates in later childhood, adolescence, and adulthood for children who have received intervention support and not is vital to the proliferation of the risk prevention field of study and practice.

Conclusion

In summary, the study presented here revealed that in regards to the development of assets, specifically emotion regulation and school adjustment, during middle childhood

for children who were in foster care during their preschool years family stress, developmental status, and neglect play a pivotal role. In spite of the vulnerable nature of young foster children and the preponderance of risk, there are critical axis points upon which resilience can be leveraged. Although certain variables tested did not reveal significant relationships as expected (e.g. parenting practices, attachment behaviors, and placement history) there are clear directions in which to move forward that will reveal greater insights and clarity. As we continue building a comprehensive picture of wellness and the mechanisms by which foster children attain critical assets and competencies we move closer to a systemic shift in how we, as a field of scientists and practitioners, are able to care for and protect them and not seek to solely minimize risk but promote health and success.

APPENDIX A
MALTREATMENT CODING MANUAL

**SYSTEM FOR QUANTIFYING CHILD PROTECTIVE SERVICE RECORDS
SUBTYPE DEFINITIONS AND SEVERITY SCALES**

Subtypes

1. Physical Abuse (PA)
2. Sexual Abuse (SA)
3. Failure to Provide (FTP, Physical Neglect)
4. Lack of Supervision (LOS, Physical Neglect)
5. Emotional Maltreatment (EM)
6. Moral/Legal/Educational Maltreatment (MLE)

Please note: Throughout the scales, 1 = least severe, 5 = most severe.

PHYSICAL ABUSE

Physical Abuse is coded when a caregiver or responsible adult inflicts a physical injury upon a child by other than accidental means. Injury does not include culturally sanctioned physical alterations such as circumcision and ear piercing.

There are some situations in which the distinction between Physical Abuse and other subtypes becomes ambiguous. The following criteria are provided as guidelines to assist coders in making these distinctions. Physical restraint is typically scored under Emotional Maltreatment. However, in cases in which a child incurs physical injuries when the parent is attempting to restrain the child (e.g., rope burns), then the injury would be scored as Physical Abuse, and the restraint would also be scored under Emotional Maltreatment. If the caregiver threatens the child but there is no physical contact with the child, Emotional Maltreatment would be scored rather than Physical Abuse. Please see the Emotional Maltreatment scale for further elaboration of these points.

Physical injuries that occur as a direct result of sexual interaction (e.g., vaginal or rectal tears) are coded solely under Sexual Abuse. Other injuries that may accompany sexual acts in an effort to force a child to engage in sexual relations (e.g., beatings, burning) are scored under both Physical Abuse and Sexual Abuse.

Severity Rating

1 = The caregiver inflicted *minor marks* on the child's body during a spanking; there were no marks to the neck or head.

Reports indicated that the caregiver had *beaten* the child; no other information was given. The child received *injuries* that were documented to have occurred by *nonaccidental means*.

The details of the report were not specific enough to warrant a higher rating.

The caregiver was reported to have spanked the child with an open hand or an *object likely to inflict only minor marks* in most cases (e.g., a switch, a soft belt, a ruler, a paddle), with the child sustaining marks on or below the shoulders.

Examples:

- The child received a bruise on the arm after being hit with an open hand.
- Minor bruises on the child's bottom were reported following a spanking with a belt.

2 = The caregiver inflicted *numerous* or *nonminor* marks to the child's body from an incident. The caregiver spanked the child with an *object likely to leave a nonminor mark* (e.g., a hair brush, a belt buckle, an electrical cord), or kicked or punched the child with a fist, leaving marks on the child's body below the neck.

Examples:

- The child sustained welts on the back after being beaten with a hair brush.
- The child was beaten with an electrical cord, resulting in numerous marks.

3 = The caregiver inflicted *marks on the child's head, face, or neck* (e.g., a black eye). The caregiver's rough handling of the child resulted in *serious bruises or minor lacerations* (e.g., required stitches or minor medical attention).

The caregiver inflicted *minor burns* (e.g., minor cigarette burns) to the child's body.

Examples:

- The child received a hand print on the neck after the parent grabbed him.
- The child had a black eye resulting from being punched in the face.
- Small circular burns on the child's hands were identified as cigarette burns.

4 = The caregiver hit the child with an *object* (e.g., a baseball bat, a telephone) *likely to result in serious injury* (e.g., nonminor lacerations, second-degree burns, fracture, or concussion), or threw the child against the wall, but injuries that were sustained did not require hospitalization, according to available medical information.

The caregiver attempted to *choke or smother* the child, but no emergency medical care was required.

The caregiver inflicted *serious burns* (second degree) to the child's body, but the injury did not require hospitalization.

The caregiver inflicted an injury that required some *hospital care*, such as treatment in the Emergency Room, but did not require hospitalization for more than 24 hours (e.g., stitches, fractures, nonminor sprain).

Examples:

- The child was beaten with a board that had nails in it. The child received bruises and cuts.
- The child was thrown down the stairs and fractured one arm.
- The child was severely burned by the parent and was treated in the Emergency Room.

5 = The caregiver inflicted an injury to the child that required *hospitalization* (e.g., severe/multiple burns, internal injuries), and/or that was permanently physically damaging or disfiguring (e.g., resulting in brain damage, severe scarring, crippling). The caregiver inflicted a *fatal injury*.

Examples:

- The child was set on fire, resulting in severe burns that were permanently disfiguring.
- The child was hospitalized for one week for internal injuries and evidence of a shaken infant syndrome.

SEXUAL ABUSE

Sexual Abuse is coded when any sexual contact or attempt at sexual contact occurs between a caregiver or other responsible adult and a child, for purposes of the caregiver's sexual gratification or financial benefit. In cases of sexual abuse, caregiver or responsible adult refers to any family member or friend who has a relationship with the child, or is in a position of authority over the child (e.g., babysitter). Because this system assesses Child Protective records only, there are some instances of sexual abuse that are not available in the Child Protective records. For example, sexual abuse that occurs outside of the home perpetrated by nonfamily members typically is investigated solely by criminal courts, and consequently, may not be accessible. Any relevant information in the records related to sexual abuse should be scored. Researchers should be aware of this issue, and we encourage investigators to use additional methods for exploring extrafamilial maltreatment that may not be available through Child Protective records.

Please note that caregivers may use physical or psychological coercion in their attempts to engage a child in sexual relations. In cases where the caregiver verbally threatens a child in an effort to have sexual relations, then Emotional Maltreatment and Sexual Abuse would both be scored. As noted under Physical Abuse, physical injuries that occur as a direct result of sexual interaction (e.g., vaginal or rectal tears) are coded solely under Sexual Abuse. Other injuries that may accompany sexual acts in an effort to force a child to engage in sexual relations (e.g., beatings, burning) are scored under both Physical Abuse and Sexual Abuse.

Severity Rating

1 = The caregiver *exposes the child to explicit sexual stimuli* or activities, although the child is not directly involved.

The child is explicitly acting out sexual acts/behaviors about which they would not otherwise have knowledge unless they had witnessed the act (and there is no indication that they came to the knowledge because a perpetrator had them engage in the act; if so, code that incident rather than the acting out). The perpetrator is coded "unknown." A general statement such as "the child engaged in sexualized behavior" is not coded.

Examples:

- The caregiver exposes the child to pornographic materials.
- The caregiver makes no attempt to prevent the child from being exposed to sexual activity.
- The caregiver discusses sex explicitly in front of the child in a non-educational fashion. Non-educational discussion of sex includes graphic depiction of parents' sexual activity or fantasies to the child. These discussions are held without any attempt to prevent the child from exposure to such descriptions.

2 = The caregiver makes direct *requests for sexual contact* with the child.

The caregiver *exposes his or her genitals* to the child for the purposes of adult sexual gratification or in an attempt to sexually stimulate the child.

Caregiver engages in physical behaviors towards the child that may be sexually gratifying to the caregiver or the precursor for more serious sexual abuse (i.e., repeatedly pulling an

adolescent onto the caregiver's lap, "grooming behaviors").

Examples:

- The caregiver asks the child to engage in sexual relations, but no physical contact is involved.
- The caregiver invites the child to watch him masturbate.
- The child performs fellatio on another child.

3 = The caregiver engages the child in mutual *sexual touching*, or has the child touch the caregiver for sexual gratification.

The caregiver touches the child for sexual gratification.

Examples:

- The caregiver fondles the child for sexual gratification.
- The caregiver engages in mutual masturbation with the child.

4 = The caregiver physically *attempts to penetrate the child* or actually penetrates the child sexually. This includes coitus, oral sex, anal sex, or any other form of sodomy.

Examples:

- The caregiver molests the child
- The caregiver engages in or attempts intercourse with the child.
- The child has venereal disease. No information regarding the sexual contact is known.
- A mother has oral sex with her son.

5 = The caregiver has *forced intercourse* or other forms of sexual penetration. Force includes the use of manual or mechanical restraint, for the purpose of engaging the child in sexual relations. Force also includes use of weapons, physical brutality, and physically overpowering the child, specifically for engaging in sexual relations. Note that Physical Abuse may be scored in addition to Sexual Abuse in cases in which the child is injured as a result of physical force, and the injury is not a direct result of the sexual penetration. The caregiver *prostitutes the child*. This includes using the child for pornography, allowing, encouraging or forcing the child to have sex with other adults.

Examples:

- The caregiver ties the child to the bed and rapes the child. (Note that Emotional Maltreatment would also be scored.)
- The caregiver sodomizes the child at gunpoint.
- The caregiver forces the child to participate in the filming of pornographic movies.
- The caregiver invites one or more other partners to have sexual relations with the child.

PHYSICAL NEGLECT, FAILURE TO PROVIDE (FTP)

Physical Neglect, Failure to Provide is coded when a caregiver or responsible adult fails to exercise a minimum degree of care in meeting the child's physical needs. When families are below the poverty level, physical neglect is scored if children's physical needs are not met

because the parents fail to access available community resources for the well-being of their children. For example, parents are unable to provide food for their children; however, they have not taken the necessary steps to apply for food stamps or to seek alternate sources of emergency sustenance.

Failure to provide includes not meeting children's physical needs in any of the following domains:

- a. supplying the child with adequate *food*.
- b. ensuring that the child has *clothing* that is sanitary, appropriate for the weather and permits the child freedom of movement.
- c. providing adequate *shelter*.
- d. ensuring adequate *medical, dental, and mental health care*.
- e. ensuring the child's adequate *hygiene*.

Lack of prenatal care and violence against the pregnant woman, and hence the unborn child, are coded in this category. These are coded even if the woman did not know she was pregnant since the experience of the child was still affected. In the case of domestic violence that affects the fetus, the person inflicting violence is coded as the perpetrator. For lack of prenatal care, the mother is coded as the perpetrator unless she was actively prevented from obtaining the care against her will.

As with each of the severity scales, the 5-point range for Failure to Provide is meant to be a helpful guideline in making judgments about the seriousness of the impact of the incident on the child's development. However, as with each subtype of maltreatment, there will be occurrences in which the specific nature of the incident dictates to the coder that an event requires a higher rating than indicated by the guidelines of the system. For example, parental failure to follow through with treatment for a low to moderate elevation in the child's blood lead level would typically be given a code of 3. However, if the child has extremely high lead levels that remain untreated through parental negligence, a 4 or a 5 could be scored, depending on the severity of the impairment to the child. In general, when in doubt, coders should stay within the guidelines of the system. Only when a situation clearly goes beyond the nature of the example should a coder adjust the level of severity.

- 1 = The caregiver does not ensure that food is available for *regular meals*. The child (less than age 10) often has had to fix his or her own supper and/or occasionally misses meals because of parental negligence.
- The caregiver fails to provide *clothing* for the child that is adequately clean and that allows *freedom of movement* (e.g., the clothing is so small that it restricts movement or so large that the child often trips or has difficulty keeping the clothing on).
- The caregiver does not attempt to *clean the house*. Garbage has not been removed, dirty dishes are encrusted with food, and floors and other surfaces are very dirty. An unpleasant odor from garbage and debris permeates living quarters.
- The caregiver has missed several of the child's *medical or dental appointments* and often fails to take the child to the doctor or dentist for "checkups" or "well baby" appointments. The caregiver does not ensure that the child is taken to the doctor or health clinic for adequate immunizations, and medical personnel have expressed concern.

The caregiver fails to provide adequate prenatal or postnatal care (unless there is evidence of illness, drug addiction, or some other more severe problem that warrants a higher rating).

The caregiver does not attend to a *mild behavior problem* about which professionals or paraprofessionals have commented (e.g., the child exhibits some symptomatology, but displays relatively mild impairment in social or school functioning).

The caregiver does not attempt to keep the child clean. The caretaker *bathes* the child and/or washes the child's hair very infrequently. The child brushes teeth only infrequently or not at all, and signs of tooth decay or discoloration are evident.

Examples:

- A 9-year-old child fixes dinner several times per week because the caregivers are sleeping
- The child always wears clothing that is so small that it restricts movement.
- The caregiver has failed to sign papers for evaluation of a behavior problem that has been reported at school.
- The child is dirty and frequently scratches matted hair.
- Clothing is dirty and smells of urine.

2 = The caregiver does not ensure that any *food is available*. The house is without food often, and two or more consecutive meals are missed 2-3 times per week. The caregiver does not feed the child for 24 hours.

The caregiver does not dress the child in *clothing* that is *appropriate for the weather* (e.g., lightweight clothing during the winter).

The caregiver is aware that the *house is infested* with roaches or other vermin and has not attempted to improve the conditions.

The caregiver does not ensure adequate *sleeping arrangements* for the child (e.g., there are not beds or mattresses, or the mattresses are sodden with urine or other substances likely to promote the growth of mold or mildew).

The caregiver seeks medical attention but does not follow-through consistently with *medical recommendations* for a minor illness or infection (e.g., prescribed medicine is not administered for mild infection, chronic head lice is not treated).

The caregiver does not change the infant's diaper frequently, often leaving *soiled diapers unchanged* for several hours, resulting in diaper rash.

Prenatal non-violent marital conflict.

Examples:

- A child has walked to school on several consecutive days wearing only a thin jacket without hat or gloves. The temperature has averaged 25 degrees Fahrenheit.
- A social worker has visited the home several times when no food has been available. The children report that they do not have lunch or dinner 2 or 3 times per week.
- The child has been diagnosed with an ear infection, but the parent does not follow through with administration of the prescribed antibiotic.

3 = The caregiver does not provide meals on a regular basis, thereby perpetuating a pattern of *frequently missed meals*, as many as four or more periods of at least two consecutive meals

per week are unavailable to the child.

The caregiver fails to make *adequate provisions for shelter* for the family. For example, the caregiver does not acquire or maintain public assistance, resulting in a loss of residence or loss of financial assistance for seven days or more.

The caregiver does not seek or follow through with *medical treatments for moderately severe medical problems* (e.g., the caregiver does not follow preventive measures for a chronic heart condition, or moderately elevated blood lead levels are left untreated), or the caregiver administers medical treatment that is inappropriate without consulting a doctor (e.g., caregiver gives child mild sedatives to control child without a doctor's consultation).

The caregiver does not follow through on *treatment* or treatment program for a diagnosed *psychological or behavioral disorder*. This disorder is interfering with the child's ability to engage in developmentally appropriate peer relationships or school functioning.

The caregiver maintains a *somewhat unsanitary living situation*, where spoiled food or garbage is frequently present and/or where rat or vermin infestation is extreme and untreated.

The expectant mother jeopardizes the health of her unborn child by using *alcohol or drugs during pregnancy*, but no fetal alcohol symptoms are evident.

Prenatal domestic violence such as slapping in the mother in the face.

The caregiver is taking illegal substances while breastfeeding the infant.

Examples:

- The children are not fed frequently. They have missed consecutive meals an average of four times a week for the past several months.
- The family has been evicted because the parent did not take appropriate actions to maintain public assistance and made no other arrangements for making rent payments. The family has no stable living arrangements for 2 weeks.
- The parent has been drunk several times during pregnancy.
- The child has come to school with an infected cut. Despite notes from the school nurse recommending medical attention, the cut continues to be untreated.
- A social worker has visited the home several times, and each time the house has been a mess. Dirty dishes and spoiled food were all over the kitchen table, counters, and sink. Rats were seen in the open garbage bins by the front door. The child is emotionally disturbed and is in a treatment program. The caregiver has not sent the child to the program for weeks.

4 = The caregiver has made *no arrangements for adequate shelter* (e.g., the caregiver has not sought heat during the winter; the family is living in a car because alternative housing was not sought). This condition continues for prolonged periods.

The caregiver maintains the home environment such that *living conditions are extremely unhealthy* (e.g., feces and urine are present in the living areas).

The caregiver does not seek or comply with *medical treatment for potentially life-threatening illness or injury* (e.g., the child is not taken to the Emergency Room for severe bleeding, third-degree burn, fractured skull).

The caregiver has provided such poor nourishment that the child *fails to gain weight or grow at the rate expected* for their development. The failure to grow as expected is not due to any

identifiable organic factors.

Prenatal domestic violence that directly threatens the fetus such as punching the mother in the stomach, withholding food or water from the mother.

Examples:

- The children live in an unheated home because the parents have failed to ensure that heating was available. During the winter, the children came to school with frostbite.
- The child was hit by a car, receiving a fracture and severe bruises. The child came to school complaining of pain and stated that the parents would not take him to the hospital.

5 = The caregiver has provided such *poor nourishment or care* to the child that physical consequences have ensued such as weight loss in an infant, severe malnutrition, or severe nonorganic failure-to-thrive.

The caregiver has abused alcohol or drugs during pregnancy to the extent that the infant is born with Fetal Alcohol Syndrome or a *congenial drug addiction*.

The caregiver provided such *gross inattention to the child's medical needs* that the child died or was permanently disabled as a result of lack of medical treatment (e.g., severe starvation or dehydration).

The caregiver does not seek professional help for the child's *life threatening emotional problems* (e.g., suicidal or homicidal attempts).

Prenatal domestic violence that results in death or permanent damage to the child, premature delivery or hospitalization.

Examples:

- At birth, the child is addicted to heroin.
- The child is diagnosed as being severely malnourished.
- The caregiver was informed that the child had expressed suicidal ideation, but the caregiver did nothing to ensure the child's safety.

PHYSICAL NEGLECT, LACK OF SUPERVISION (LOS)

Presently, Lack of Supervision is one of the most frequently reported subtypes of maltreatment; however, it is a particularly ambiguous subtype, in part because no clear criteria or standards exist regarding what constitutes age-appropriate supervision. Within this system, Lack of Supervision is coded when a caregiver or responsible adult does not take adequate precautions to ensure a child's safety in and out of the home, given the child's particular emotional and developmental needs. The parent's failure to ensure the child's safety may include both permitting the child to be exposed to dangerous situations (e.g., allowing the child to play in an unsafe area, permitting the child to accompany someone with a known history of violent acts) as well as failing to take adequate precautions to evaluate the conditions pertaining to the child's safety (e.g., neglecting to screen the background or competency of alternate caregivers, failing to ascertain the child's whereabouts). There are four broad elements that caregivers may violate to jeopardize children's physical safety.

- a. *Supervision:* failing to take steps to ensure that the child is engaging in safe activities.

According to this dimension, as the number of hours that the child is unsupervised increases, so does the potential for harm. Therefore, severity scores for Lack of Supervision are augmented with more prolonged periods of inadequate supervision. To assist coders in making distinctions about the relative seriousness of particular instances of Lack of Supervision, we have provided appropriate durations of inadequate supervision that are intended to serve as guidelines rather than as firm criteria. We recognize that these cutoff points are somewhat arbitrary and that exact times are frequently unavailable in the records; however, we felt that establishing ranges of time was necessary to clarify coding decisions and, thus, to increase reliability among coders.

- b. *Environment*: failing to ensure that the child is playing in a safe area. This dimension is distinguished from lack of hygiene or medically unhealthy conditions of the living environment covered under Failure to Provide. In the case of Lack of Supervision, environment refers to immediate physical dangers inside or outside the home, such as broken glass, unguarded electrical fixtures, toxic chemicals, and firearms.
- c. *Substitute Care*: failing to provide for adequate substitute care in the caregiver's absence, or mental or physical incapacity. In this respect, lack of substitute care includes situations when auxiliary supervision is not obtained, when parents do not ensure that substitute caregivers are able to adequately supervise the child, when caregivers are unable to adequately monitor the child's safety because the caregivers are intoxicated with alcohol or drugs, or when caregivers have a severe psychiatric condition that makes appropriate supervision of children highly unlikely (e.g., caregiver has delusions or hallucinations).
- d. *Development Needs*: failing to recognize the developmental needs of the child in providing adequate supervision to ensure the child's safety. Because, in general, the consequences of failing to supervise younger children are potentially more serious, the influence of the child's developmental level should be considered when making decisions about the severity of parental failure to provide adequate supervision. Additionally, children who have a history of dangerous, impulsive, or immature behavior require more intensive supervision, and may be given a higher severity rating if they are unsupervised. For example, an adolescent who is known to exhibit poor judgment and to engage in impulsive and destructive behavior would require more supervision than most children of the same age. It is difficult to quantify the amount of supervision that is required at each developmental level. The examples provided give some guidelines of relative severity, but the information available for each case must be considered with regard to the age and particular developmental needs of each child.

In summary, when making individual decisions about severity, the coder should take into account the length of time that the child was left unsupervised, the amount of danger present in the physical environment, the adequacy of potential substitute caregivers, and the developmental needs of the child.

Severity Rating

1 = The caregiver fails to provide adequate supervision or arrange for alternate adequate

supervision for *short periods of time* (i.e., less than 3 hours) with *no immediate source of danger* in the environment.

Examples:

- An 8-year-old is *left alone* during the day for a few hours.
- Preschoolers play outside unsupervised or are left in the care of an 8-year-old supervisor for the afternoon. In this case, the preschoolers who are unsupervised in an environment with a few hazards reported would receive a code of 1. Similarly, supervision of preschoolers by a slightly older child would represent mildly inadequate alternate supervision, which would also be coded 1. The 8-year-old is unsupervised, receiving a code of 1 for the short duration. The presence of Emotional Maltreatment should also be evaluated in cases in which the 8-year-old is expected to assume inappropriate responsibility.)
- Children are left in the care of *questionable suitable babysitters* (e.g., preadolescent, mildly impaired elderly person).

2 = The caregiver fails to provide supervision or arrange for alternate adequate supervision, or provides poor supervision for *several hours* (approximately three to eight hours), with *no immediate source of danger in the environment*.

The caregiver fails to provide supervision for *short periods of time* (less than 3 hours) when the children are in an *unsafe play area*.

Children receive *inadequate supervision despite a history of problematic behavior* (e.g., impulsive behavior, hyperactivity).

Examples:

- The child is left alone frequently during the day *without a responsible caregiver* available.
- An infant is left in the care of an 8-year-old for several hours. (In this case, the infant is given a code of 2. The 8-year-old would be given a code of 1, similar to the example under level 1.)
- The child is allowed to play in an unsafe play area (e.g., broken glass present, old basement or garage cluttered with toxic chemicals, power tools, or old refrigerator) unsupervised.
- Children get into trouble with neighbors because of lack of supervision.

3 = The caregiver fails to provide adequate supervision for *extended periods of time* (e.g., approximately 8 to 10 hours).

The caregiver allows the child to play in an *unsafe play area for several hours* (approximately 3 to 8 hours).

Examples:

- The child is left *alone at night* (e.g., for 8 to 10 hours).
- A 6-year-old is locked out of the home alone, and the caregiver does not return until evening.
- The child is left in the care of an unreliable caregiver (e.g., one who is known to drink or is extremely inattentive or the parent makes no attempt to ensure that the caregiver was reliable) for several hours.

4 = The caregiver does not provide supervision for *extensive periods of time* (e.g., overnight, or approximately 10 to 12 hours).

The caregiver allows the child to play in an area that is *very dangerous* (i.e., high probability that the child will be hit by a car or fall out of a window, get burned, or drown).

A child with a know *history of destructive or dangerous acts* (e.g., fire-setting, suicidal ideation) is left unsupervised.

Examples:

- A grade-school child is *left alone overnight*.
- The child is allowed to play by highway or on the roof of a condemned building.
- The child is *allowed to go with a caregiver* who has a know history of violence and/or sexual acts against children who has a restraining order prohibiting contact with the child.
- The child is allowed to have contact with a person against whom there is a restraining order and/or who is known to be violent or dangerous (even if the caregiver is also present).

5 = The caregiver fails to provide adequate supervision for *more than 12 hours*.

The caregiver places the child in a *life-threatening situation* or does not take steps to prevent the child from being in a life-threatening situation.

Examples:

- A preschool child is *left alone for 24 hours*.
- The child is *kicked out* of the home with no alternative living arrangements.
- The caregiver keeps *loaded firearms* in a location that is accessible to the child.
- A toddler plays near a swimming pool unsupervised. (Note that, for a toddler, being unsupervised near water is considered life threatening because of the high frequency of deaths by drowning to this age child.)

EMOTIONAL MALTREATMENT (EM)

There is a growing consensus that virtually all acts of abuse and neglect carry negative emotional/psychological messages to their victims. Consequently, it may be argued that every act of maltreatment constitutes Emotional Maltreatment. We have differentiated acts of Emotional Maltreatment from other forms of maltreatment for the purpose of maintaining the individual conceptual integrity of each of the subtypes defined within our system. The majority of incidents falling into Emotional Maltreatment involve persistent or extreme thwarting of children's basic emotional needs. This category also includes parental acts that are harmful because they are insensitive to the child's developmental level. These needs include, but are not limited to, the following:

- a. *Psychological Safety & Security*: the need for a family environment free of excessive hostility and violence and the need for an available and stable attachment figure. Note that this category refers to the interpersonal climate of the home, whereas Lack of Supervision (LOS) refers to cases in which the physical environment is unsafe. (See below for additional distinctions among subtypes.)

- b. *Acceptance & Self-esteem*: the need for positive regard and the absence of excessively negative or unrealistic evaluation, given the child's particular developmental level.
- c. *Age-appropriate Autonomy*: the need to explore the environment and extrafamilial relationships, to individuate within the bounds of parental acceptance, structure, and limit setting, without developmentally inappropriate responsibility or constraints placed on the child.

There are acts of maltreatment that may be scored solely as Emotional Maltreatment or that may be scored in conjunction with other subtypes of maltreatment. To clarify potentially confusing areas, we specify the following inclusion/exclusion criteria:

- a. One area of interface between Emotional Maltreatment and incidents of Physical Abuse concerns physical restraint or confinement of a child. Because restraint or confinement jeopardizes the child's need for autonomy, we consider these acts to be Emotional Maltreatment. However, if the acts result in physical injuries (e.g., rope burns), these acts would be scored as both Emotional Maltreatment and Physical Abuse.
A second area of overlap surrounds incidents of homicidal threats. In situations in which parents attempt to terrorize children by threatening them or making gestures of harm, Emotional Maltreatment is scored. However, if, during the act, the parents actually inflict injury to the children, the act is considered Physical Abuse.
- b. In instances in which there is evidence that threats or psychological coercion is employed in an effort to engage the child in sexual relations, then both Sexual Abuse and Emotional Maltreatment would be scored. (Please see Sexual Abuse for an elaboration of this point.)
- c. An important distinction between Emotional Maltreatment and Physical Neglect is necessary in instances of abandonment. In cases in which a parent abandons a child but ensures that the child is adequately supervised and that the child's physical needs are met (e.g., leaves the child with relatives with no information about the parent's whereabouts), we consider this to be Emotional Maltreatment. If the child is left completely alone with no provisions for supervision or physical needs, then Lack of Supervision, Failure to Provide, and Emotional Maltreatment may each be scored.
- d. In situations in which a young child is forced to accept primary responsibility for the care of another individual and in which criteria for Lack of Supervision are met (as a result of either child's need for more intensive supervision), then both Emotional Maltreatment (for the supervising child) and Lack of Supervision (for the one or both children) would be scored.

Severity Ratings

1 = The caregiver regularly expects or requires the child to assume an *inappropriate level of responsibility* (e.g., school-aged child assuming primary responsibility for caretaking younger children; the report must include an explicit statement that the child is responsible for the caretaking role).

The caregiver *undermines the child's relationships* with other people significant to the child (e.g.,

makes frequent derogatory comments about other parent).

The caregiver often *belittles or ridicules the child* (e.g., calls the child “stupid,” “loser,” “wimp”).

The caregiver *ignores or refuses to acknowledge* the child’s bids for attention (e.g., the caregiver generally does not respond to infant cries or older child’s attempts to initiate interaction).

The caregiver *uses fear or intimidation* as a method of disciplining.

Examples:

- The caregiver expects her 10-year-old to take responsibility for the care of an infant.
- The caregiver talks on the phone and leaves the baby to cry for extended periods in the crib.
- The caregiver shows no interest in the child’s achievements.

2 = The caregiver does not permit *age-appropriate socialization* (e.g., school-aged child not permitted to play with friends).

The caregiver places the child in a *role-reversal* (e.g., child is expected to take care of the caregiver).

The caregiver consistently thwarts the child’s developing sense of maturity and responsibility (e.g., *infantilizes* the child).

The caregiver *rejects or is inattentive* to or unaware of the child’s needs for affection and positive regard (e.g., the caregiver does not engage in positive or affectionate interactions with the child; this lack of attention is a chronic pattern).

The caregiver allows the child to be exposed to the caregiver’s extreme but *nonviolent marital conflict*.

Examples:

- The caregiver is extremely passive and unable to meet the children’s needs for attention. Any interactions that do occur are harsh and critical.
- The caregiver does not want the child to go out of the house after school because the caregiver is lonely and wants company.
- The caregiver frequently yells, screams, and insults the spouse in front of the child.
- The caregiver encourages a 4-year-old to continue to wear diapers despite the child’s physical and psychological ability to use the toilet appropriately.

3 = The caregiver *blames the children for marital or family problems* (e.g., tells the children that they are the reason for the spouse’s divorce).

The caregiver sets-up the child to fail or to feel inadequate by having *inappropriate or excessive expectations* for the child.

The caregiver makes a serious and convincing *threat to injure the child*.

The caregiver calls the child *derogatory names* (e.g., “slut,” “whore,” “worthless”).

The caregiver *binds* the child’s hands and feet for moderate periods of time (e.g., approximately 2 to 5 hours); the child is not unattended.

The caregiver exposes child to *extreme, unpredictable, and/or inappropriate behavior* (e.g., violence toward other family members, psychotic or paranoid ideation that results in violent outbursts that terrorize the child).

The caregiver demonstrates a pattern of *negativity or hostility* toward the child (e.g., the caregiver screams at the children that they can never do anything right).

Examples:

- The caregiver constantly screams and curses at the children and calls them names.
- The caregiver chronically rejects the children.
- The caregiver threatened to throw the child out of the window.

4 = The caregiver *threatens suicide or abandonment* in front of the child.

The caregiver allows the child to be exposed to *extreme marital violence* in which serious injuries occur to the caregiver.

The caregiver *blames* the child for the *suicide or death* of another family member.

The caregiver *confines and isolates the child* (e.g., locks the child in his or her room), and the confinement is between five and eight hours.

The caregiver uses *restrictive methods to bind* a child or places the child in close confinement (e.g., the child is tied to a chair or is locked in a box) for less than two hours. (Close confinement is scored in situations in which the child's movement is extremely restricted or the temperature, ventilation, or lighting is severely limited or is maintained in a detrimental range.)

Examples:

- The children witnessed a fight between the parents in which the mother had to be hospitalized after being assaulted by the father.
- The caregiver locked the child in a room for ten hours for misbehavior.
- The caregiver tells the children that they are going to be put up for adoption because they are so bad.

5 = The caregiver makes a *suicidal attempt* in the presence of the child.

The caregiver makes a *homicidal attempt or realistic homicidal threat* against the child without actual physical harm to the child.

The primary caregiver *abandons the child* for 24 hours or longer without any indication of when or if he or she will return and where he or she can be located. (Note: Lack of Supervision and/or Failure to Provide may also be scored unless provisions are made for the child's physical well-being and need for supervision to be addressed. See description above for an elaboration of the interface among Emotional Maltreatment, Lack of Supervision, and Failure to Provide in instances of abandonment.)

The caregiver uses *extremely restrictive methods to bind* a child or places the child in close confinement for two or more hours (e.g., the child is tightly tied to a chair or is locked in a trunk).

The caregiver *confines the child to an enclosed space* (e.g., locks the child in a closet or small space) for extended periods (e.g., more than 8 hours).

Examples:

- The caregiver chains the child to the wall of the apartment with a dog collar for two days.
- The mother left the children with their grandmother for 2 weeks without any indication of where she was and when (or if) she would be returning.

- The caregiver chased the child with the car in an effort to terrorize the child. The child was not physically injured.
- The caregiver took an overdose of sleeping pills in the children's presence. The caregiver told the children that life with them was intolerable.

MORAL-LEGAL/EDUCATIONAL MALTREATMENT

Moral-Legal/Educational Maltreatment is coded when any behaviors on the part of the caregiver or responsible adult occur that fail to demonstrate a minimum degree of care in assisting the child to integrate with the expectations of society, which includes insuring the child's adequate education. The caregiver either exposes or involves the child in illegal activity or other activities that may foster delinquency or antisocial behavior in the child. Alternately, the caregiver does not ensure that the child is properly socialized by regularly attending school.

If the child discloses during play, *explicit* details about illegal behavior/drugs that they would not otherwise know (i.e., pretending to talk on the phone and ordering "eight balls"), code M-L.

Severity Ratings

1 = *M-L*: The caregiver permits the child to be present for adult activities for which the child is under age.

ED: The caregiver often lets the child stay home from school, and the absences are not the result of illness or family emergency (e.g., a death in the family). The absences occur for less than 15% of the reported time.

Examples:

- *M-L*: The caregiver takes the child to drunken parties and adult bars that are clearly not family situations.
- *ED*: The caregiver allows the child to miss 25 days of school in a school year without explanation.

2 = *M-L*: The caregiver participates in illegal behavior with the child's knowledge (e.g., shoplifting, selling stolen merchandise).

ED: The caregiver allows the child to miss school as much as 15%-25% of the reported period, not due to illness.

Examples:

- *M-L*: The child was present when the caregiver was selling drugs.
- *ED*: the caregiver did not send the child to school so that the child could baby-sit for younger siblings. The child missed 9 out of 45 days.

3 = *M-L*: The caregiver knows that the child is involved in illegal activities, but does not attempt to intervene (e.g., permits vandalism, shoplifting, drinking).

ED: the caregiver keeps the child out of school or knows that the child is truant for extended periods (26%-50% of year, or as many as 16 school days in a row) without caregiver's intervention.

Examples:

- *M-L*: The caregiver has been informed that the child has been shoplifting, but the caregiver has done nothing.
- *ED*: The child has missed 3 consecutive weeks of school, not due to illness.

4 = *M-L*: The caregiver involves the child in misdemeanors (e.g., child is encouraged to shoplift, child is given drugs). Adults encourage or force participation in illegal activities.

ED: The caregiver frequently keeps the child out of school for significant amounts of time (more than 50% of the reported period, or 16+ days in a row), but the child maintains school enrollment.

Examples:

- *M-L*: The caregiver encourages the child to steal food from the grocery store.
- *ED*: The family has moved several times, and each time, the child has missed significant periods of school. The child is enrolled but has missed more than half of the school year.

5 = *M-L*: The caregiver involves the child in felonies (e.g., the child participates in armed robbery, kidnapping).

ED: The caregiver encourages a child (less than 16 years old) to drop out of school or does not send the child to school at all.

Examples:

- *M-L*: The child has lived in a drug house run by the caregivers. The child has been involved in selling drugs and has participated in armed conflicts with other drug dealers.
- *ED*: The caregiver has not enrolled the child in school, and the child is receiving no educational instruction.

GENERAL CODING RULES

Incidents

The date of an incident is the date circled on the report.

If domestic violence is indicated as being an ongoing problem, code it once. Specific incidents of domestic violence may then be coded as well (i.e., domestic violence is ongoing - code EM3, and in one instance stepfather held a knife to mom's throat - code another EM3 single, with a different incident number).

Use specific examples in the coding manual to determine severity unless there's a striking example or reason to code lesser or greater severity (e.g., caretaker uses drugs, code LOS3).

We will not code a "detached" mother who has just given birth unless there is explicit evidence to back up the claim. For example, if the mother was handed the baby and didn't want to take him/her. Then it could be coded EM.

Perpetrators

"Ongoing domestic violence" includes both parental perpetrators, but a specific incident of domestic violence will only code the offender as a perpetrator (unless otherwise specified). If the D.V. is CLEARLY ongoing, code each incident separately and also give one ongoing for both caregivers.

Potentially abusive acts by a sibling or another child will be coded only if other child/sibling is at least 3 years older than the target child.

Reliable Reporters/Founded Incidents

An SCF result of "Unable to Determine" or "Unfounded" does not negate everything in that report.

If an incident or type of abuse is listed in a court document then consider it founded even if no prior evidence exists in the file, and even if the parents/caretakers deny it.

Police officers, doctors and caseworkers are considered reliable, codeable sources, even if SCF report is deemed "Unable to Determine"

If a police officer, doctor or caseworker tells of a first-hand report by a perpetrator or child, then it is considered valid and codeable.

All codeable incidents within a referral from a valid reporter will be coded unless reporter specifically states that s/he has doubts as to the validity.

APPENDIX B

FAMILY EVENTS CHECKLIST

FAMILY EVENTS CHECKLIST

IN THE LAST WEEK:

YES, an event did occur:

<u>NO</u> Event did not occur	But no negative effect <u>on you</u>	Slightly negative effect <u>on you</u>	Very negative effect <u>on you</u>
1	2	3	4

1. Disagreement or unpleasantness with repairman, store clerk, or other sales or service people.
2. Tension between two or more family members not involving you concerning past or present conflict.
3. Family member arrived home an hour or 2 later than expected or has not come home at all.
4. There was not enough money to buy something important needed for the family, such as food or clothing.
5. Looking for a job--made contacts, such as calling, applying, interviewing, etc.
6. Conflict or argument with ex-spouse.
7. Family member on food binge.
8. Conflict or tension between you and any family member(s).
9. Something stolen from a family member.
10. Contact with lawyer/legal system.
11. Did not have enough money to buy a desired but not absolutely needed item.
12. Work situation stressful
13. Someone in family other than you in bad mood, unhappy, angry, or depressed.
14. The car broke down or needs repair.
15. Conflict or disagreement with any of your children over schoolwork/homework.
16. Someone in family injured or hurt.
17. Paid the bills.
18. One or more of your children came home very upset.
19. You or someone in the family lost money.
20. School contacted you because of any child's poor work, bad behavior, tardiness, truancy, or other problem behavior.
21. Disagreement with friend.
22. A repair was necessary for household item.
23. You had school exam, paper, or other major school assignment or school problem
24. You failed to receive expected money or had unexpected bill.
25. Had contact with unemployment or welfare office
26. Physical fighting between family members.
27. Someone criticized the way you are raising/handling your children.
28. Unable to take planned vacation, expected time off, or weekend trip.

APPENDIX C
PARENTING SCALE

allowed to do.

or she wants.

9. When my child misbehaves...

I give my child a long lecture. - - - - - - - - -

I keep my talks short and to the point.

10. When my child misbehaves...

I raise my voice or yell. - - - - - - - - -

I speak to my child calmly.

11. If saying no doesn't work right away...

I take some other kind of action. - - - - - - - - -

I keep talking and try to get through to my child.

12. When I want my child to stop doing something...

I firmly tell my child to stop. - - - - - - - - -

I coax or beg my child to stop.

13. When my child is out of my sight...

I often don't know what my child is doing. - - - - - - - - -

I always have a good idea of what my child is doing

14. After there's been a problem with my child...

I often hold a grudge. - - - - - - - - -

things get back to normal quickly.

15. When we're not at home...

I handle my child the way I do at home. - - - - - - - - -

I let my child get away with a lot more.

16. When my child does something I don't like...

I do something about it every time it happens. - - - - - - - - -

I often let it go.

17. When there's a problem with my child...

things build up and I do things I don't mean to do. - - - - - - - - -

things don't get out of hand.

18. When my child misbehaves, I spank, slap, grab, or hit my child...

never or rarely. - - - - - - - - -

most of the time.

19. When my child doesn't do what I ask...

I often let it go or end up doing it myself. - - - - - - - - -

I take some other action.

20. When I give a fair threat or warning...

I often don't carry it out. - - - - - - - - -

I always do what I said.

21. If saying no doesn't work...

I take some other kind of - - - - - - - - -

I offer my child something nice so he/she will behave.

APPENDIX D

DEVELOPMENTAL NEUROPSYCHOLOGICAL ASSESSMENT

NEPSY Answer Sheet

Subtest	Raw Score	Scaled Score
Body Part Naming		
Design Copying		
Phonological Processing		
Visual Attention		
Comprehension of Instructions		
Imitating Hand Positions		
Visuomotor Precision		
Narrative Memory		
Block Construction		
Sentence Repetition		
Statue		

	Attention/ Executive	Language	Sensorimotor	Visuospatial	Memory
Sum Scaled Scores					
Core Domain Score					
Percentile					

APPENDIX E
PARENT ATTACHMENT DIARY

Reaction/Response Questionnaire

1. Think of any times in the **past 2 weeks** when your child was physically hurt and answer the following: (This includes anything like falling down, scraping a knee, bumping into something, etc.)

A. Which of the following did **your child** most commonly do after he or she was hurt? **CIRCLE ALL THAT APPLY.**

1. looked at me for reassurance
 2. acted as if nothing was wrong
 3. acted angry/frustrated (ex. stomped feet, kicked legs)
 4. looked at me very briefly then looked away and went on
 5. signaled to be picked up or held, reached for me
 6. did not indicate he/she wanted or needed me
 7. cried and remained where he/she was, did not signal for me
 8. whimpered or cried briefly and kept on going, did not look at me
 9. sought to be physically close to me (but actual contact did not occur)
 10. went off by him/herself
 11. acted cool or aloof
 12. called for me
 13. came to me
 14. cried
 15. other(s) _____
 16. did not happen **SKIP TO ITEM 2**
-

B. What were **your** most common **immediate** response(s)? **CIRCLE ALL THAT APPLY.**

1. hugged and/or held child
2. rubbed back, stomach, head, etc.
3. kissed child
4. did not touch child in any way
5. asked child to hop up or get up
6. spoke firmly to child
7. remained silent
8. put child in crib, play pen /lay child down for nap
9. gave child medicine, band aid, etc.
10. said something like "oh you're fine, you're not hurt" or told child not to be upset
11. picked child up
12. used soothing or explanatory talk to reassure child
13. hit, slapped, spanked
14. laughed
15. ignored child
16. went to another room

17. put child in another room
18. tried to distract child with something else
19. called a doctor, friend, relative for help
20. other(s) _____

C. Which of the following did **your child** do next? **CIRCLE ALL THAT APPLY.**

1. was soon calmed or soothed
2. pushed me away angrily or in frustration
3. stomped and/or kicked feet
4. remained upset, was difficult to soothe
5. did not indicate he/she needed my help
6. turned away when picked up or made contact
7. sunk into me or held on to me until calmed down
8. did not easily let me hold him/her but remained upset (ex. arched back, put arm in between us)
9. acted cool or aloof
10. continued to play, did not notice me
11. hit, kicked at me
12. turned from me angrily or in frustration
13. ignored me
14. became quiet and then fussy again
15. other(s) _____

2. Think of any times in the **past 2 weeks** when your child was frightened or afraid of something. (This should not include dropping child off, leaving child, or any other separations)

A. Which of the following did **your child** most commonly do when he or she was frightened? **CIRCLE**

ALL THAT APPLY.

1. looked at me for reassurance
2. acted as if nothing was wrong
3. acted angry/frustrated (ex. stomped feet, kicked legs)
4. looked at me very briefly then looked away and went on
5. signaled to be picked up or held, reached for me
6. did not indicate he/she wanted or needed me
7. cried and remained where he/she was, did not signal for me
8. whimpered or cried briefly and kept on going, did not look at me
9. sought to be physically close to me (but actual contact did not occur)
10. went off by him/herself
11. acted cool or aloof
12. called for me
13. came to me

14. cried
15. other(s) _____
16. did not happen **SKIP TO ITEM 3**

B. What were **your immediate** response(s)? **CIRCLE ALL THAT APPLY.**

1. hugged and/or held child
2. rubbed back, stomach, head, etc.
3. kissed child
4. did not touch child in any way
5. asked child to hop up or get up
6. spoke firmly to child
7. remained silent
8. put child in crib, play pen, lay down for a nap
9. gave child medicine, band aid, etc.
10. said something like "oh you're fine, you're not scared" or told child not to be upset
11. picked child up
12. used soothing or explanatory talk to reassure child
13. hit, slapped, spanked
14. laughed
15. ignored child
16. went to another room
17. put child in another room
18. tried to distract child with something else
19. called a doctor, friend, relative for help
20. other(s) _____

C. What did **your child** do next? **CIRCLE ALL THAT APPLY.**

1. was soon calmed or soothed
2. pushed me away angrily or in frustration
3. stomped and/or kicked feet
4. remained upset, was difficult to soothe
5. did not indicate he/she needed my help
6. turned away when picked up or made contact
7. sunk into me or held on to me until calmed down
8. did not easily let me hold him/her but remained upset (ex. arched back, put arm in between us)
9. acted cool or aloof
10. continued to play, did not notice me
11. hit, kicked at me
12. turned from me angrily or in frustration
13. ignored me
14. became quiet and then fussy again

15.other(s)_____

3. Think of any times in the **past 2 weeks** when you and your child were separated – preferably when your child became upset or distressed. (This can include leaving to go out, going to another room, dropping the child off, etc...This does not include putting child to bed.)

A. How did **your child** respond to the separation? **CIRCLE ALL THAT APPLY.**

1. cried, screamed, or yelled
2. went off by him/herself
3. went after me
4. held on to me, wouldn't let go
5. was happy to keep doing what he/she was doing
6. acted angry or frustrated (ex. stomped feet, kicked legs)
7. was upset but did not indicated that he/she wanted or needed anyone
8. whimpered or cried briefly and kept going, did not look at me
9. acted as if nothing was wrong
10. called after me
11. wanted to be picked up or held
12. acted cool or aloof
13. hit, kicked, or pushed me
14. other(s)_____

B. What was **your child's** immediate reaction when he/she saw you again? **CIRCLE ALL THAT APPLY.**

1. greeted me (ex: smiled, said my name, said hello)
2. came to me
3. brought me a toy or other object
4. turned away as I picked up or made contact
5. if upset, was easily soothed and calmed by me
6. pushed me away angrily
7. crawled or walked away when he/she saw me
8. sunk into me or held on to me until calmed down
9. did not easily let me hold him/her but remained upset (ex. arched back, put arm in between us)
10. whimpered quietly to him/herself (may have looked at me briefly)
11. wanted to be held, fussed and wanted to get down, then wanted to be picked right back up again
12. continued doing what he/she was doing before (didn't notice me)
13. looked at me briefly then looked away, did not smile or greet me

14. started to approach me then turned and wandered somewhere else
15. if upset, was not easily soothed and/or calmed by me
16. stomped and/or kicked feet
17. signaled to be held and/or picked up
18. acted as if he/she was angry with me
19. acted cool or aloof
20. hit, kicked me
21. cried and remained where he/she was
22. cried, screamed
23. other(s) _____
24. did not happen **SKIP TO ITEM 4**

Child's Behavior toward Others Questionnaire

4.

A. In the past 2 weeks, how friendly has _____ been with new adults?

- 1 - generally not friendly (e.g. wary, does not approach new adults, clings to parents).**
- 2 - mixed reaction (e.g. usually friendly but sometimes cries, friendly to some strangers but not others, wary at first but then warms).**
- 3 - very friendly, interacts freely with all new adults**

B. Has your child ever been shy or afraid of strangers?

- 0 - child has never been shy or afraid of strangers**
- 1 - child has been shy/afraid of strangers consistently**
- 2 - initially showed shyness/fear of strangers, no longer does so**
- 3 - did not show shyness/fear of strangers before, now does**
- 4 - child has been shy/shown fear of strangers, no time frame specified**

C. In the past 2 weeks, what has your child done when he/she meets new adults?

- 0 - child has not met any new adults**
- 1 - stands back, observes, evaluates**
- 2 - approaches adult (shows toys, speaks, asks questions)**
- 3 - is upset by new adults (e.g., cries, clings to parents, covers eyes)**
- 4 - respondent doesn't know**
- 5 - child is indifferent to new adults**

D. Thinking of the past 2 weeks how willing would _____ be to go home with an adult he/she had just met?

- 0 - no, never has been willing**
- 1 - yes, always has been willing to**
- 2 - yes initially, currently no**
- 3 - no initially, currently yes**
- 4 - respondent doesn't know**
- 5 - yes, sometimes**

E. In the past 2 weeks, has _____ had a tendency to wander? If yes, is _____ subsequently distressed when he/she finds him/herself separated from you?

- 0 - no, child does not wander off, has no opportunity (e.g., is kept in house or yard)**

- 1 - no, does not wander off**
- 2 - yes, child wanders, then is distressed at separation**
- 3 - yes, wanders off and is not distressed at separation**
- 4 - respondent doesn't know**

APPENDIX F
EMOTION REGULATION CHECKLIST

EMOTION REGULATION CHECKLIST

During the last three months, using this scale.....

rarely/never 1	sometimes 2	often 3	almost always 4
-------------------	----------------	------------	--------------------

This child...

- | | | | | |
|--|---|---|---|---|
| 1. Is a cheerful child..... | 1 | 2 | 3 | 4 |
| 2. Exhibits wide mood swings (child's emotional state is difficult to anticipate because s/he moves quickly from a positive to negative mood)..... | 1 | 2 | 3 | 4 |
| 3. Responds positively to neutral or friendly overtures by adults | 1 | 2 | 3 | 4 |
| 4. Transitions well from one activity to another; doesn't become angry, anxious, distressed, or overly excited when moving from one activity to another..... | 1 | 2 | 3 | 4 |
| 5. Can recover quickly from upset or distress (for example, doesn't pout or remain sullen, anxious or sad after emotionally distressing events) | 1 | 2 | 3 | 4 |
| 6. Is easily frustrated..... | 1 | 2 | 3 | 4 |
| 7. Responds positively to neutral or friendly overtures by other children. | 1 | 2 | 3 | 4 |
| 8. Is prone to angry outbursts/tantrums easily | 1 | 2 | 3 | 4 |
| 9. Is able to delay gratification | 1 | 2 | 3 | 4 |
| 10. Takes pleasure in the distress of others(for example, laughs when another person gets hurt or punished; seems to enjoy teasing others). | 1 | 2 | 3 | 4 |

During the last three months, using this scale.....

rarely/never	sometimes	often	almost always
1	2	3	4

This child...

- | | | | | |
|---|---|---|---|---|
| 11. Can modulate excitement (for example, doesn't get "carried away" in high energy play situations or overly excited in inappropriate contexts) | 1 | 2 | 3 | 4 |
| 12. Is whiny or clingy with adults..... | 1 | 2 | 3 | 4 |
| 13. Is prone to disruptive outbursts of energy and exuberance | 1 | 2 | 3 | 4 |
| 14. Responds angrily to limit-setting by adults..... | 1 | 2 | 3 | 4 |
| 15. Can say when s/he is feeling sad, angry, or mad, fearful or afraid..... | 1 | 2 | 3 | 4 |
| 16. Seems sad or listless | 1 | 2 | 3 | 4 |
| 17. Is overly exuberant when attempting to engage others in play | 1 | 2 | 3 | 4 |
| 18. Displays flat affect (expression is vacant or inexpressive; child seems emotionally absent) | 1 | 2 | 3 | 4 |
| 19. Responds negatively to neutral or friendly overtures by other children (for example, may speak in an angry one of voice or respond fearfully) | 1 | 2 | 3 | 4 |
| 20. Is impulsive | 1 | 2 | 3 | 4 |
| 21. Is empathic towards others; shows concern when others are upset or distressed..... | 1 | 2 | 3 | 4 |
| 22. Displays exuberance that others find intrusive or disruptive .. | 1 | 2 | 3 | 4 |
| 23. Displays appropriate negative emotions (anger, fear, frustration, distress) in response to hostile, aggressive or intrusive acts by peers..... | 1 | 2 | 3 | 4 |
| 24. Displays negative emotions when attempting to engage others in play. | 1 | 2 | 3 | 4 |
| 25. Shows sensitivity to others' personal space | 1 | 2 | 3 | 4 |

- | | | | | |
|--|---|---|---|---|
| 26. Is overly talkative in an attempt to engage you in conversation..... | 1 | 2 | 3 | 4 |
| 27. Is shy | 1 | 2 | 3 | 4 |

APPENDIX G
WALKER-MCCONNELL SCALE OF SOCIAL COMPETENCE AND SCHOOL
ADJUSTMENT

Please read each item below carefully and rate the child's behavioral status in relation to it. If you have not observed the child displaying a particular skill or behavioral competency defined by an item, circle 1, indicating "Never." If the child exhibits the skill at a high rate of occurrence, circle 5, for "Frequently." If the child's frequency rate is in between these two extremes, please circle 2, 3, or 4, indicating your best estimate of its rate of occurrence.

Please answer each item. DO NOT MARK BETWEEN THE NUMBERS ON THE RATING SCALE.

Circle one of the numbers from 1 to 5 to indicate your frequency estimate.

Never

Sometimes

Frequently

1

2

3

4

5

1. Other children seek child out to involve him/her in activities.
2. Changes activities with peers to permit continued interaction.
3. Uses free time appropriately.
4. Shares laughter with peers.
5. Shows sympathy for others.
6. Makes friends easily with other children.
7. Has good work habits, e.g., is organized, makes efficient use of class time, etc.
8. Asks questions that request information about someone or something.
9. Compromises with peers when situation calls for it.
10. Responds to teasing or name calling by ignoring, changing the subject, or some other constructive means.
11. Spends recess and free time interacting with peers.
12. Accepts constructive criticism from peers without becoming angry.
13. Plays or talks with peers for extended periods of time.
14. Voluntarily provides assistance to peers who require it.
15. Assumes leadership role in peer activities.
16. Is sensitive to the needs of others.
17. Initiates conversation(s) with peers in informal situations.
18. Expresses anger appropriately, e.g., reacts to situation without becoming violent or destructive.
19. Listens carefully to teacher instructions and directions for assignments.
20. Answers or attempts to answer a question when called on by the teacher.
21. Displays independent study skills, e.g., can work adequately with minimum teacher support.
22. Appropriately copes with aggression from others, e.g., tries to avoid a fight, walks away, seeks assistance, defends self.
23. Responds to conventional behavior management techniques, e.g., praise, reprimands, timeout.
24. Cooperates with peers in group activities or situations.
25. Interacts with a number of different peers.
26. Uses physical contact with peers appropriately.
27. Responds to requests promptly.

28. Listens while others are speaking, e.g., as in circle or sharing time.
29. Controls temper.
30. Compliments others regarding personal attributes, e.g., appearance, special skills, etc.
31. Can accept not getting his/her own way.
32. Is socially perceptive, e.g., "reads" social situations accurately.
33. Attends to assigned tasks.
34. Skillfully plays games and activities at recess and other times.
35. Keeps conversations with peers going.
36. Finds another way to play when requests to join others are refused.
37. Is considerate of the feelings of others.
38. Maintains eye contact when speaking or being spoken to.
39. Gains peers' attention in an appropriate manner
40. Accepts suggestions and assistance from peers.
41. Invites peers to play or share activities.
42. Does seatwork assignments as directed.
43. Produces work of acceptable quality given her/his skill level.

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