ABSTRACT

MCPHERSON, ANDREA VISE. Parental Warmth and Socioeconomic Status as Predictors of Social Competence Among Abused Children. (Under the direction of Mary E. Haskett, Ph.D.).

Studies of the effects of physical abuse on child adjustment have documented numerous adverse consequences on young children's physical, cognitive, psychological, and social functioning. Given the overwhelming negative effects that maltreatment can have on a child's life, it is remarkable that some victims prevail despite physical abuse. The present study was designed to investigate factors that predict individual differences in functioning of 78 children with substantiated histories of abuse. It was expected that parental warmth and socioeconomic status would significantly predict membership in "resilience groups" (high, medium, and low). Children's social adjustment was measured by teacher reports and peer interactions via direct observation. The Hollingshead Index of Social Status was used to measure SES. A Nurturing Parenting Style composite was used as an indication of parental warmth and was formulated based on a 30-minute interaction session between parents and their children. Separate ordinal logistic regression analyses were conducted to test hypotheses. Predictions were not supported. A discussion of study limitations and directions for future research is presented.

PARENTAL WARMTH AND SOCIOECONOMIC STATUS AS PREDICTORS OF SOCIAL COMPETENCE AMONG ABUSED CHILDREN

By

ANDREA VISE MCPHERSON

A thesis submitted to the Graduate Faculty of
North Carolina State University
in partial fulfillment of the
requirements for the Degree of
Master of Science

PSYCHOLOGY

Raleigh

2006

Approved By:

Lynne Baker Ward	William P. Erchul

Mary E. Haskett
Chair of Advisory Committee

BIOGRAPHY

Andrea Vise McPherson was born on May 6, 1979 to Andy and Billie Vise. She is the youngest of three girls and grew up in Orange County, North Carolina. Andrea graduated from Orange High School in Hillsborough, NC and went on to complete her Bachelor of Arts in Psychology at the University of North Carolina—Wilmington. At UNCW, Andrea was a member of Psi Chi, the National Honor Society of Psychology as well as the Zeta Chi chapter of Alpha Xi Delta sorority. Andrea spent a lot of her free time in Wilmington playing volleyball for various recreational leagues as well as being a member of the Club volleyball team for UNCW. She completed her Bachelors in December of 2001 and started her graduate education at North Carolina State University in Raleigh, NC. While attending NCSU, Andrea married David L. McPherson. Andrea will pursue her doctorate at NCSU after gaining her Masters of Science degree in Psychology.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

Introduction

A coordinated tracking system of all states' child protective services (CPS) activity indicates the number of reports of child maltreatment increased from 2.6 million in 1990 to 2.9 million in 1994 (Huebner, 2002). The most recent data, now available for 2004, show that CPS agencies received approximately 60,000 referrals of maltreatment each week involving 5.5 million children that year (U.S. DHHS, 2004). The National Child Abuse and Neglect Data System (NCANDS) reported 872,000 victims of child maltreatment with an estimated 1,490 child fatalities in 2004. This translates to a rate of 2.03 children per 100,000 in the general population. NCANDS defines "child fatality" as the death of a child caused by an injury resulting from abuse or neglect, or where abuse and/or neglect were contributing factors. The accuracy of these statistics is uncertain because recent studies in Colorado and North Carolina have estimated as many as 50 to 60% of deaths resulting from abuse or neglect are not recorded (Crume, DiGuiseppi, Byers, Sirotnak, Garrett, 2002; Herman-Giddens et al., 1999). Almost all child fatalities (93% in 2004) are associated with physical abuse or neglect, as opposed to other types of child maltreatment. Physical abuse alone was cited in more than one-quarter (28%) of reported fatalities. Abuse is not rare in our world today, and if the trends above continue, these numbers are likely to continue rising.

Studies of the effects of maltreatment have documented adverse consequences on young children's physical, cognitive, psychological, and social functioning (Cicchetti, 1990). These effects can be severe and longlasting; abused and neglected children are likely to suffer from many problematic outcomes such as delinquency, alcohol or drug problems, depression, and posttraumatic stress disorder (Huebner, 2002; McGloin & Widom, 2001; Whipple & Richey, 1997). Maltreatment may disrupt many normal developmental processes

such as the development of self-concept, interpersonal relationships, or self-regulation of affect or arousal (Masten & Wright, 1998). From the perspective of the child's psychological development, child abuse harms critical areas such as attachment, self-control, and moral and social judgments (Wolfe, 1999). These disruptions are linked to subsequent emotional and behavioral problems among abused children.

Given the overwhelming negative effects maltreatment can have on a child's life, it is remarkable that some victims prevail despite physical abuse. A relatively new area of research seeks to explain why some children who are at significant risk of failing go on to succeed. These "resilient" children, as they are termed, overcome great adversity to live productive and healthy lives. The term "protective factors" refers to influences that modify, ameliorate, or alter a person's response to an environmental stressor that predisposes one to a maladaptive outcome (Mrazek & Mrazek, 1987). According to Rutter (1987), it is through understanding of protective mechanisms that useful prevention and intervention strategies will come. Studies of resilience in the face of a known risk factor for poor mental health sequelae are likely to identify processes that will inform clinical intervention and prevention efforts (Spaccarelli & Kim, 1995). To that end, the present study was designed to investigate two potential protective factors for maltreatment. Specifically, the study was designed to examine the degree to which parental warmth and the availability of family resources (i.e., socioeconomic status) predicted social adjustment within a sample of abused children.

These two factors were chosen for the study for several reasons. First, to limit the focus of the study to a reasonable scale, this investigator chose to examine potential protective factors that operate at the level of the child's family context. Both socioeconomic status and parental warmth are environmental or contextual factors that are known to have a

significant influence on the developmental outcomes and social adjustment of young children. Second, these two factors were chosen because, although low SES and lack of parental warmth are strongly predictive of abusive parenting, there is evidence of variability in both SES and warmth among families characterized by child maltreatment. Given the positive outcomes associated with parental warmth (Heller, Larrieu, D'Imperior, & Boris, 1999; Mrazek & Mrazek, 1987; Perkins & Jones, 2004; Price & Glad, 2003), it is reasonable to expect that those parents who use overly harsh physical discipline with their children, but do so in the context of a nurturing parenting style, might have children with relatively positive outcomes. Similarly, given the advantages to children raised in families with significant financial resources (Mrazek & Mrazek, 1987), abuse that occurs in the context of a relatively high level of financial resources might have a less negative impact than abuse that occurs in the context of poverty. Finally, the potential contribution of the investigation of these factors to intervention and prevention efforts was considered to be substantial. For these reasons, this investigator examined the degree to which SES level and parental warmth predicted relatively positive adjustment among children who had a history of physical child abuse.

Currently, nearly one in five young children in the United States lives in poverty; almost half of them live in extreme poverty (Wagner, Spiker, & Linn, 2002). Child development experts agree that poverty takes a heavy toll on children (Egeland, Carlson, & Sroufe, 1993). High proportions of children living in poverty have preschool behavior problems and function poorly in social, emotional, behavioral, and academic domains in elementary school (Egeland & Abery, 1991; Pianta, Erickson, Wagner, Kreutzer, & Egeland, 1990). In contrast, being in the middle to upper social class and having educated parents are

characteristics associated with positive outcomes for children (Mrazek & Mrazek, 1987).

The effect of income on child development is thought to occur through the impact of poverty

on a young child's home environment, including opportunities for learning through positive

mother-child interactions and the provision of cognitive and emotional stimulation (Wagner

et al., 2002). Those reviewing the research on poverty concede that the quality of parenting

children receive and the general conditions of their physical surroundings might play the

largest role in negative outcomes for poor children (Bradley et al., 1994). Indeed,

socioeconomic status is closely associated with parental discipline choices and level of

sensitivity and warmth that parents display in interactions with their children.

Low socioeconomic status has been recognized as a risk factor for abusive parenting.

Data from official reports and surveys have indicated that low-income families tend to have

the highest rates of physical abuse (Brown, Cohen, Johnson, & Salzinger, 1998; Whipple &

Richey, 1997). Poverty leads to frustrations and stressors that constrain parents from

providing the kind of stimulating and nurturing care they desire for their children, and guide

parents to becoming violent more often (Bradley et al., 1994). In a study by McLoyd (1990),

parents who experienced chronic economic hardship often resorted to the use of physical

punishment as a means of controlling their children's actions. As will become apparent in

this paper, however, there exists variability in socioeconomic status among abusive parents

(i.e., not every abusive parent and their children live in poverty).

All children need supportive environments that nurture their development to enable

them to be the best and happiest people they can become (Scarr & Deater-Deckard, 1997).

The longstanding premise by Bowlby is that early parental warmth and sensitivity, and

resulting attachment relationships with caregivers, influence children's beliefs and

expectations about themselves and others (Kim & Cicchetti, 2004). Caregivers who are available, responsive, and nurturing foster representations of the self as worthy and lovable, others as trustworthy and dependable, and relationships as nurturing and supportive (Price & Glad, 2003). Patterson (2002) has viewed a high-quality parent-child relationship as a prime example of success in fulfilling the nurturance function of parenting. Infants and toddlers who grow up without consistent stimulation and with low levels of parental warmth show a pattern of insecure-disorganized attachment; insecure attachment, in turn, can result in a maladaptive view of others (Wolfe, 1999). Low parental warmth has also been recognized as a correlate of abusive parenting. Low parental warmth is often joined with harsh discipline practices, high levels of conflict, and inconsistent caregiving, all of which can negatively influence the child's future relationships (Cicchetti & Lynch, 1995). Although abusive parents have been described as lacking in warmth and nurturing behavior (Wolfe, 1999), diversity in warmth has been identified even among these parents (Haskett, Smith Scott, & Sabourin Ward, 2004).

In summary, past research has indicated that children's social competence is associated with their family's level of socioeconomic status and with the degree to which their parents are warm and sensitive to their needs. Findings suggest that a warmer parenting style and greater availability of resources are associated with positive outcomes for children. Furthermore, high parental warmth and a reasonable level of social and economic resources can be buffers for children at risk for social maladjustment due to exposure to a host of risk factors. Although abused children often experience a lack of parental warmth and are often reared in conditions of low SES, there is diversity among abused children on both factors. There is some indication that parental warmth and availability of resources might be

protective for abused children, but the extant literature is extremely limited in both the number of studies and methodological sophistication of published reports.

Understanding pathways to resilience and social competence in children facing stress such as maltreatment has potential to contribute to the development of intervention strategies designed to maximize competence (Kinard, 1998). The study of resilience in the face of maltreatment also is likely to identify processes that inform preventative efforts (Spaccarelli & Kim, 1995). The study adds to the existing literature related to resilience by investigating the protective functions that parental warmth and socioeconomic status serve for a sample of abused children.

This paper begins with a review of the detrimental effects associated with child maltreatment and a review of variables identified as protective factors for maltreated children. Next, a review of the literature related to resilience is provided. This review consists of findings from past research and the many methodological challenges associated with examining the construct of resilience.

Literature Review

History and Definitions of Physical Abuse

Throughout history, even before it was first termed, child abuse has been present. Abusive acts that would not be tolerated in today's world were viewed as acceptable in the past. One historical view was that children were once looked upon as "poison containers"--receptacles into which adults projected disowned parts of their psyches, so they would control these feelings in another body without danger to themselves (deMause, 1998). Newborn infants, in particular, were perfect poison containers because they were so "unpolluted." The newborn then became so full of the parent's projections that even if he or she was allowed to live (up to half the children in early societies were murdered at birth), the infant had to be tied up--tightly swaddled in bandages for up to a year or more---to prevent it from "tearing its ears off, scratching its eyes out, breaking its legs, or touching its genitals" (deMause, 1998, p. 3).

Historically, a second cruel act towards children was child sacrifice. In Carthage a large cemetery, The Tophet, contains over 20,000 urns from 400 to 200 B.C. These urns hold bones of children that are believed to have been sacrificed by their parents. In Greek mythology, King Agamemnon sacrificed his daughter Iphigenia in order to gain favorable weather for an invasion. In ancient Palestine, the sacrifice of firstborn sons was common. As late as 1204 in Rome, fishermen in the Tiber River would find in their nets the bodies of children. Even today, archaeologists are continuing to discover frozen corpses of children who were abused and then sacrificed in South America from the Incan culture.

In the United States in 1874, the child abuse case of Mary Ellen from New York motivated the beginning of children's rights recognition (The New York Society for the

Prevention of Cruelty to Children, 2002). Mary Ellen suffered from both physical and emotional abuse in her foster home. Neighbors reported that she was never allowed to be outside and if she was, it was never far away from a leather whip that was often used to beat Mary Ellen. Eventually, Etta Wheeler, a caseworker, stood up for Mary Ellen and took her case to the police. The police could not help Mary Ellen because there were no laws allowing them to intervene into a person's home. Etta Wheeler sought the help of the American Society for the Prevention of Cruelty to Animals using the rationale that children were a part of the animal kingdom and could therefore be protected under the same laws. A petition was presented to the Supreme Court on behalf of Mary Ellen. With the help of witnesses and Mary Ellen's personal testimony, Mary Ellen's stepmother was sentenced to one year in prison. Mary Ellen's case sent aftershocks around the nation and resulted in the foundation of the New York Society for the Prevention of Cruelty to Children (NYSPCC) in 1874. The NYSPCC was the first organization in the United States to focus on the legal protection of children's rights (The New York Society for the Prevention of Cruelty to Children, 2002).

Child abuse and neglect are defined by both federal and state legislation. The Child Abuse Prevention and Treatment Act (CAPTA) is the Federal legislation that provides minimum guidelines that States must incorporate in their statutory definitions of child abuse and neglect (National Clearinghouse on Child Abuse and Neglect Information, 2004). Based on CAPTA guidelines, each State and U.S. Territory provides its own definitions of child abuse and neglect. As applied to reporting statutes, these definitions describe the acts and conditions that determine the grounds for state intervention in the protection of a child's well-being. The standard for what constitutes abuse varies among States. Many States define abuse in terms of "harm or threatened harm" to a child's health or welfare. A few States

define abuse in terms of "serious harm or threat of serious harm."

In North Carolina, under statute § 7B-101 an abused juvenile is defined as any youth less than age 18 whose parent, guardian, custodian or caretaker does any of the following: inflicts or allows to be inflicted upon the juvenile a serious physical injury by other than accidental means; creates or allows to be created a substantial risk of serious physical injury to the juvenile by other than accidental means; uses or allows to be used upon the juvenile cruel or grossly inappropriate procedures or cruel or grossly inappropriate devices to modify behavior; commits, permits, or encourages the commission of a violation of laws regarding sexual offenses by, with, or upon the juvenile; or creates or allows to be created serious emotional damage to the juvenile (National Clearinghouse on Child Abuse and Neglect Information, 2004).

Negative Outcomes of Physical Abuse

Physical abuse is associated with a host of potential negative outcomes affecting several aspects of a child's life. The domains affected include physical, cognitive, psychological, and social functioning. Explanations of the mechanisms through which child abuse produces detrimental effects on children's functioning have been drawn from social learning theory, family systems theory, and developmental psychology (Rudo, Powell, & Dunlap, 1998). Social learning theory suggests that violence exposure has effects on children's behavior through modeling and positive and negative reinforcement for aggression (Dodge, Bates, & Petit, 1990; Emery, 1989; Jaffe, Wolfe, Wilson, & Zak, 1986) and through the development of coercive parent-child interactions (Patterson, DeBaryshe, & Ramsey, 1989). Family systems approaches have examined the mediating roles that family stress and disrupted parent-child relationships may play in violent families (Cicchetti & Lynch, 1993).

Developmental approaches have examined the disruptive effects of family violence on processes particular to different stages of development and/or over the course of development (Finkelhor & Dziuba-Leatherman, 1994). These approaches give explanations for specific negative outcomes of physical abuse. These outcomes are placed into categories for organizational purposes in this paper; however, in reality these outcomes could be classified into one of several areas of functioning. For example, children's problem-solving skills are considered to be components of both cognitive and social functioning.

Physical functioning. Injuries within the physical domain include head injury (from being shaken or hit with a hard object), abdominal injuries, bone fractures, bruising, and burning. Subdural hemorrhage of the head is a major cause of death and handicap in babies. It has been known for many years that this problem is often caused by abusive shaking. In the early 1970s, the term "whiplash shaken infant syndrome" was established to describe a form of abuse involving vigorous manual shaking of infants that resulted in intracranial and intraocular bleeding. Subdural hematomas during the first two years of life are usually acute; the majority of these are thought to result from child abuse. Abdominal injuries are a rare but serious feature of abuse in childhood (Barber & Sibert, 2000). The most common reason for referral to child protection teams and for medical assessment for child abuse is bruising (Barber & Sibert, 2000). Objects that may cause bruising include sticks, cords, belts, slippers, and of course hands. A fifth injury found in abused children is burns. Contact or dry burns in abuse can arise from a wide range of household appliances: irons, curling irons, heating grids, light bulbs, radiators, and cigarettes. Bath scalding is less common but its injuries are likely to be more severe when prolonged contact with hot water is maintained (Barber & Sibert, 2000).

Physical health problems in childhood are also common outcomes associated with physical abuse. These include high rates of gastrointestinal problems, physical functional disability, physical health symptoms, and hospitalizations (Thompson, Kingree, & Desai, 2004). Unfortunately, the negative outcomes of abuse stretch far beyond physical ailments and expand past childhood years. Negative outcomes for the cognitive domain are presented next.

Cognitive functioning. Cognitive impairments of abused children are likely to be seen in the school setting. Abused children are significantly more likely than their peers to show impairments in the learning process (Wolfe, 1999). Low educational aspirations, lack of language stimulation, little encouragement to learn, and lack of recognition of strengths and achievements serve to undermine academic success. More specifically, an abused child may experience a decline in language ability and poor overall school performance (Flisher, Kramer, & Hoven, 1997). To illustrate, in a study of 840 children ranging from kindergarten through grade 12, maltreated children performed significantly below their nonmaltreated peers on standardized tests and grades, repeated more grades, and had more disciplinary referrals and suspensions (Eckenrode, Laird, & Doris, 1993). As a result of negative family experiences and environmental deprivation, physically abused and neglected children also were found to perform two years below grade level in verbal and math abilities (Salzinger, Kaplan, Pelcovitz, Samit, & Kreiger, 1984).

Physically abused children are also likely to suffer deficits in their cognitive functioning. These deficits have been attributed to the limited inspiration received in the home by caregivers who are more concerned with the child's appearance and obedience than their need to be encouraged to explore and attempt new challenges. Over the last two

decades, research on the development of maltreated children has revealed concerns regarding the mental representations that these children have of themselves and others (Price & Glad, 2003). This research indicates that on average, maltreated children exhibit representations of self, others, and relationships that reflect the dysfunctional relationships they have at home with their caregivers (Cicchetti & Lynch, 1995). Along these lines, there is evidence that maltreated children have less positive views of their relationships with their parents. Buchsbaum, Toth, Clyman, Cicchetti, and Emde (1992) found that, relative to the story narratives of nonmaltreated children, maltreated children's narratives tended to involve more themes of aggression, neglect, and some sexualized behaviors. In addition, maltreated children's responses included generalized statements about the self as bad. There is also evidence that maltreated children tend to have negative representations of their relationships with individuals outside the family. McCrone and colleagues (1994) examined maltreated children's representations of relationships using a projective storytelling procedure. They found that maltreated children's stories involving others were characterized by negative interpersonal expectations, difficulty resolving social problems, and a preoccupation with negative aspects of relationships to the exclusion of more positive aspects of relationships.

Physical abuse also affects the way information is mentally processed and used to organize behavior (Crittenden & DiLalla, 1988). Social information processing is a term that refers to the thinking process a child goes through in response to social situations. The social information-processing model proposes that children come to a social situation with a set of biologically limited capabilities and a database of memories of past experiences (Crick & Dodge, 1994). Based on the cues from the situation and their past experiences, the child will respond. Dodge and colleagues (1990) found that when presented with hypothetical social

dilemmas involving unfamiliar peers, physically abused children were less attentive to relevant social cues, more biased toward attributing hostility toward peers, and less likely to provide competent solutions to interpersonal difficulties. Similarly, Price and Glad (2003) examined the hostile attributional tendencies of maltreated children. Their sample consisted of 44 children who had been legally identified as maltreated, and 56 children served as a nonmaltreated comparison group. Results indicated that relative to nonmaltreated children, physically abused boys were more likely to attribute hostile intentions to a variety of relationship figures. Additionally, a positive relation was found between the frequency of physical abuse and hostile attributional tendencies.

Psychological functioning. From the perspective of the child's psychological development, child abuse can harm critical areas of development such as self-control, and moral and social judgments (Wolfe, 1999). These deficits are linked to subsequent emotional and behavioral problems among abused children. One of the more pronounced outcomes of child abuse is elevated symptoms of depression, hopelessness, and lower self-esteem relative to nonmaltreated youth from similar socioeconomic backgrounds (Downey & Walker, 1989; Kaufman, 1991; Kinard, 1995; Toth, Manly, & Cicchetti, 1992). Toth and colleagues (1992) revealed that 22% of physically abused children met the clinical criteria for depression, compared with 6% of the nonmaltreated group and 3% of the neglected group. In a review of 15 studies on the effects of violence in the home on children's functioning, Rudo and colleagues (1998) reported findings of high rates of internalizing problems for the physically abused children in 10 of the 15 studies. Six of the studies indicated that physically abused children were significantly more dysfunctional than were comparison children on measures of depression, hopelessness, and unhappiness. An epidemiological study of the aftermath of

child physical abuse (Flisher et al., 1997) revealed that those with histories of physical abuse were about three times more likely to suffer a mood disorder, four times more likely to show a disruptive disorder, and two to four times more likely to have an anxiety disorder than their nonabused counterparts.

Social functioning. Developing social skills and age-appropriate social competencies is paramount to formation of positive and stable peer relationships (Levendosky, Okun, & Parker, 1995). Social competence and social problem-solving skills are the outcome of previous experiences as well as predictors of current and future adjustment and psychopathology (Parker & Asher, 1987). The family most often provides the context out of which peer relationships emerge. Social adjustment is an arena in which one might expect to find harmful effects of maltreatment because abuse occurs in this social context. It is likely that maltreated children will adopt maladaptive stances toward novel situations based on past experiences, such as not trusting others and expecting them to be threatening and hostile (Cicchetti, 1989; Dodge, Bates, & Pettit, 1990). Indeed, numerous studies document that abused children are at risk for problematic outcomes in social functioning.

Research has shown that child abuse is associated with difficulty inferring emotional responses of others as well as expressing one's own emotions effectively. Most children learn emotional regulation naturally, through emotional expressions and explanations given by their caregivers (Shields & Cicchetti, 1997; Walden & Smith, 1997). Abused children, in contrast, live in a world of emotional turmoil and extremes, making it very difficult to understand, label, and control their internal emotional states (Wolfe, 1999). Such a deficit can lead to maladaptive interactions with peers (Rogosch, Cicchetti, & Aber, 1995) and to peer rejection (Dodge, 1983). Abused children have repeatedly been shown to display

problems interacting successfully with peers (Cicchetti, Lynch, Shonk, & Manly, 1992;

Hoffman-Plotkin & Twentyman, 1984; Klimes-Dougan & Kistner, 1990; Main & George,

1985). Main and George (1985) conducted an early study to compare the social interactions

of 10 physically abused toddlers with 10 control children. The authors reported that the

abused and nonabused toddlers responded to other children's distress in very different ways.

In general, the nonabused toddlers tended to exhibit interest, empathy, sadness, or concern;

however, the abused toddlers responded to a peer's distress with fear, threats, and angry

behavior (including active physical attack). Studies of social behavior with peers and adults

have found that, from a very young age (i.e., 3-5 years old), abused children are significantly

more aggressive toward peers (Egeland & Sroufe, 1981; Haskett & Kistner, 1990; Hoffman-

Plotkin & Twentyman, 1984). As part of a larger study, Herrenkohl and colleagues (1984)

observed the social behavior of maltreated and nonmaltreated preschool children. The

maltreated children behaved more aggressively, especially in response to frustrating

situations such as a difficult task or interfering behavior by others.

Based on teacher reports, Rogosch and colleagues (1995) found maltreated children

to experience more difficulties in their peer relations, to be less socially competent, to show

more aggressive behavior, and to be avoided more often by peers when in a social setting.

When examining the social relationships of physically abused 8- to 12-year-olds, Salzinger

and colleagues (1993) found physically abused children to be more aggressive and hostile

and to show less cooperation and leadership skills than their nonabused classmates. Their

lack of peer acceptance was confirmed by the finding that abused children were more likely

to be rejected by their peers and receive less positive reciprocity with peers chosen as friends.

Not surprisingly, teachers and parents often describe abused children as being more difficult to manage, less socially mature, and less capable of developing trust with others (Herrenkohl, Herrenkohl, Toedter, & Yanushefski, 1984; Kinard, 1980; Salzinger et al., 1984). These characteristics, among others, appear to put the abused child at risk for not developing friendships and for becoming a loner at school (Bolger & Patterson, 2001; Bolger, Patterson, & Kupersmidt, 1998).

In conclusion, past research has documented a host of potential negative outcomes for physically abused children. Several domains can be affected, including a child's physical, cognitive, psychological and social functioning. In spite of these general findings, research indicates that some victims prevail despite physical abuse. Attempts to understand these "resilient" children, as they are termed, have recently become a primary goal among researchers and clinicians interested in maximizing positive outcomes for abused children. In the following sections, the term resilience is introduced and elaborated upon. An overview of the construct of resilience and past challenges in examining resilience is given, followed by the definition of resilience that was used in the present study.

Defining Resilience

In spite of the negative outcomes found among abused children, such outcomes are not inevitable. In fact, some children who have experienced abuse appear to fare relatively well (Cicchetti, Rogosch, Lynch, & Holt, 1993; Egeland et al., 1993; Herrenkohl, Herrenkohl, & Egolf, 1994; Kaufman, Cook, Arny, Jones, & Pittinsky, 1994; Moran & Eckenrode, 1992). Over the past two decades, as research on resilience has evolved, investigators have moved from viewing resilience as the absence of psychopathology to conceptualizing it as a manifestation of competence and adaptive behavior (Kinard, 1998;

Luthar, 1993). Studies of resilience have been designed to identify factors or characteristics that assist individuals in positive adaptation in spite of adversity (Tusaie & Dyer, 2004). A large volume of research has been designed to examine individual, interpersonal, familial, and broader environmental contributors to resilience (Curtis & Cicchetti, 2003; Luthar, 2003; Luthar, Cicchetti, & Becker, 2000; Masten, 2001).

Resiliency is multidimensional in nature. An individual might be resilient in one domain but not exhibit resiliency in another domain. For example, a child who is found to be resilient based on social competence may not be classified as resilient in academic or cognitive domains of functioning. Luthar and colleagues (2000) stated, "Some high-risk children manifest competence in some domains but exhibit problems in other areas." p.548 In a study by Kaufman and colleagues (1994), approximately two-thirds of children with histories of maltreatment were academically resilient; however, when examining these same children in the domain of social competence, only 21% exhibited resiliency. The multidimensional nature of the construct resilience has created several concerns in the literature regarding how to define, measure, and interpret resilience. The following sections will include discussions of these challenges.

There is much ambiguity found in the literature about the topic of resilience, especially when one attempts to operationally define it. Despite the recent plethora of studies on resiliency, there is no consensus regarding its definition (Grizenko & Fisher, 1992; Kaufman et al., 1994; Luthar & Zigler, 1991; Masten, Best, & Garmezy, 1990; Rutter, 1993; Spaccarelli & Kim, 1995). Several definitions of resilience have been presented in past research. To illustrate, resilience has been defined as lack of depressive or other clinical symptoms (Kaufman, 1991; Moran & Eckenrode, 1992), self-report of successful functioning

(Valentine & Feinauer, 1993), and graduating from high school (Herrenkohl, Herrenkohl, & Egolf, 1994). Among the most common definitions of resilience are "processes encompassing positive adaptation within the context of significant adversity" (Luthar, Cicchetti, & Becker, 2000, p 543), the positive end of the distribution of developmental outcomes in at risk samples (Rutter, 1990), showing better than expected outcomes (Masten, 2001), and good recovery from trauma (Cicchetti & Rogosch, 1997; Masten, Best, & Garmezy, 1990). Masten, Best, and Garmezy (1990) distinguished three types of definitions of resilience: (a) positive outcomes despite experiencing high-risk environments; (b) competent functioning in the face of acute or chronic major life stressors; and (c) recovery from trauma. The component that is common among all definitions of resilience is that there must have been a risk or stressful experience at some point in an individual's life. In the present study, resilience was defined as social competence relative to other children who had experienced the common stress of physical abuse.

The question of how to define resilience is crucial, but choosing an operational definition is no simple task (Kinard, 1998). Kinard (1998) has pointed out six key issues that must be addressed in formulating an operational definition: (a) distinguishing between factors defining resilience and factors related to resilience; (b) selecting sources of data; (c) deciding how many sources of data to use; (d) choosing scoring criteria to indicate resilience; (e) determining when to measure resilience; and (f) examining resilience over time.

Investigators of resilience have relied on various sources of data for measuring resilience following trauma or stress. Sources have included maternal ratings, teacher ratings, peer ratings, and children's self-reports of functioning; intelligence tests and achievement tests; and school performance (Kinard, 1998). Some investigators have relied on only one

measure or one rater to define resilience (Herrenkohl et al., 1994), while others used several (Bradley et al., 1994; Cicchetti et al., 1993; Kaufman et al., 1994). Separate classifications of resilience by source are likely to yield the greatest understanding of the development of resilience in children (Kinard, 1998); therefore, the present study utilized teacher reports, parent reports, and playground observations of social functioning.

Once measures have been chosen, there are several different ways that scoring criteria may be used for classifying resilience. First, measures with validated cutoff scores are thought to offer a concise method for classifying resilience (Kinard, 1998). For example, the Achenbach Child Behavior Checklist (CBCL) contains cutoff points for clinical behavior problems, and those children scoring in the normal range would be considered resilient. A number of investigators have utilized this approach (Bradley et al., 1994; Kaufman et al., 1994; Spaccarelli & Kim, 1995). Bradley and colleagues (1994) investigated 243 consecutively born preterm, low birth weight infants drawn from a larger study from hospitals in eight cities. Only 26 children were identified as functioning below the clinical cut-off on the CBCL for social/adaptive parameters at age 3.

A second illustration of using an index or cut-off score to define resilience comes from Spaccarelli and Kim (1995), who examined resilience among 43 sexually abused girls. The investigators defined resilience in terms of the absence of clinical levels of symptomatology and as maintenance of age-normative levels of social competence. Based on victims' self-reports of anxiety and depression, 44% of the girls were resilient; the other 56% were at or above the clinical cut-off for elevations on the Child Depression Inventory (CDI) and/or the Revised Children's Manifest Anxiety Scale (RCMAS). A similar rate of resilience versus clinical symptomatology was obtained from the parent report version of the Child

Behavior Checklist (CBCL), with 47% of the girls being resilient, or below the clinical cut-off on the anxiety/depression subscale. These two illustrations show how investigators have used a cut-off score to define resilience. A second way of defining resilience is presented next.

Some investigators define resilience as functioning in the highest percentage of the sample distribution. This definition allows the investigator to identify a subgroup of children who are functioning well relative to the full sample. One such way is to divide the entire sample based on mean scores, such that children are either above the mean (resilient) or below the mean (nonresilient) (e.g., Masten, Morison, Pellegrini, & Tellegen, 1990). Of most relevance to the present study is the operational definition of resilience employed in previous research by Cicchetti and colleagues (1993) as well as Flores and colleagues (2005) who utilized this approach.

Cicchetti investigated evidence for resilience among school-aged, disadvantaged maltreated ($n = 127$) and nonmaltreated ($n = 79$) children. Social adjustment, school difficulty, and psychopathology were assessed from self, peer, and camp counselor perspectives and school records. To examine child functioning broadly, seven indicators of competent adaptation were evaluated. First, the perspectives of peers and adults were combined to form indices of prosocial, disruptive-aggressive, and withdrawn behavior. A school risk index was used as the fourth indicator of maladjustment. The child's self-report of depression and the counselor reports of internalizing and externalizing behavior problems were included as the fifth and sixth indicators of psychological disturbance. Finally, self-report of depression was retained as the seventh indicator. In order to identify the most competently functioning children, Cicchetti and colleagues divided the sample into thirds

based on children's scores on those seven indicators of functioning. The criteria to be met for each of the seven indices were as follows: the highest third of the distribution for the prosocial composite, the lowest third of the distribution for the disruptive-aggressive composite, the withdrawn composite, the CDI, the internalizing, and externalizing, and no indicators on the school risk index. Children meeting the criterion for competent functioning on a given dimension were given a score of 1 for that dimension; all remaining children received a score of 0. Summing across these seven domains yielded a total for the number of areas in which each child exhibited competent functioning: children's scores thus ranged from 0 to 7 ($M = 2.26$, $SD = 1.77$). Children who received scores of 4 or greater were functioning at a level one standard deviation above the mean, and were therefore placed in the high-functioning or resilient level. In contrast, a score of 0 or 1 was designated as low-level adaptive functioning, and a middle range score of functioning was a 2 or 3.

Using an identical method of defining resilience, Flores and colleagues (2005) investigated the effects of child maltreatment and processes influencing maladaptation and resilience among abused Latino children. Participants included 133 Latino children (76 maltreated, 57 nonmaltreated) from an urban setting who attended a summer camp designed for low-income children. To examine overall functioning, nine indicators were evaluated. Three composite variables assessing prosocial behavior, aggressiveness, and withdrawal were created from the counselors' reports. From the perspectives of peers, four indicators of social functioning based on peer nominations were used. Finally, two indicators of behavioral symptomatology were based on counselor ratings of internalizing and externalizing behavior problems. In order to define the most competent functioning children, Flores and colleagues divided the sample into thirds based on children's scores on these nine indicators. Children's

scores were dichotomized for each of the nine indicators to reflect high functioning (a score of 1) or no high functioning (a score of 0). Summing across the nine indicators resulted in a total score of resilient functioning, with a possible range of scores from 0 to 9 ($M = 3.04$; $SD = 2.12$). Resilient children were defined as high functioning with scores ranging from 6-8 (no child obtained a score of 1 for all nine indicators), middle functioning from 2-5, and low functioning from 0-1. Using a method very similar to Cicchetti and colleagues (1993) and Flores and colleagues (2005), competent functioning of children in this study was defined on the basis of children's competence *relative to the study sample*.

Resilience among Abused Children

Researchers who have examined the resilient patterns of abused children have found that not all maltreated children develop deficits or negative outcomes in their social behavior (e.g., Cicchetti & Rogosch, 1997). For example, Farber and Egeland (1987) examined features of resilience among maltreated children from infancy to preschool age. Participants were drawn from a larger study of pregnant women identified as being at risk for maltreatment. These mothers were followed from birth until the children were preschool age. Children were assessed on the following: attachment at 12 and 18 months of age, autonomous functioning at 24 months of age, self-awareness and socialization at 42 months, and peer relations and socialization in preschool. Forty-four mothers were subsequently identified as abusive or neglectful. The comparison sample consisted of 85 mothers who were not identified as being abusive. In general, maltreated children were not functioning as competently as were the comparison children at each of the assessments; however, there were several maltreated children who were functioning competently at the various assessment periods. For example, 53.7% and 53.8% of the maltreated children were securely attached at

12 and 18 months, respectively. When functioning was examined longitudinally, it was evident that many maltreated children who were functioning well at one assessment period declined at the next assessment period. For example, only 40% of the maltreated children were found to be competent as measured by the problem solving task given at 24 months, and 22% were competent in terms of their peer relations at the preschool assessment. Despite these negative outcomes, Farber and Egeland found variability within the maltreated sample, which is indicative of individual differences in social adjustment among maltreated children.

Cicchetti and Rogosch (1997) attempted to examine individual differences among maltreated children in a 3-year longitudinal study. Their sample consisted of 213 maltreated and nonmaltreated children who attended a summer camp for low-income and disadvantaged children. Results indicated that significantly more maltreated children than nonmaltreated children were members of the low functioning group. In addition, significantly more nonmaltreated children than maltreated children were found in the high-functioning group. In spite of these generally negative findings, the researchers found a very small percentage (1.5%) of maltreated children within the high functioning group.

Drawing from a study that was discussed earlier, Flores and colleagues (2005) found significantly more maltreated Latino children were in the low functioning group in comparison to the number of nonmaltreated Latino children labeled as low functioning, but 9.2% of the maltreated Latino children were labeled as high functioning. Similarly to findings of Cicchetti and colleagues (1993), more maltreated children than nonmaltreated children evidenced low levels of competence (43.3 vs. 26.6%, respectively). However, maltreated and nonmaltreated children were equally represented in demonstrating high levels of competence (18.1 vs. 22.8%, respectively).

In summary, the presence of resilience within samples of children at risk for maladjustment highlights the fact that individuals at risk may function adaptively, or develop adaptive functioning patterns over time. Studies show that even children who have experienced physical abuse can be resilient to the impact of abuse. Explanation of this phenomenon may be found in developmental psychopathology principles that have recently been applied to the research on resilience, particularly in the study of the sequelae of childhood maltreatment (Cicchetti & Toth, 1995). These principles suggest that exposure to a given trait or environmental experience (such as abuse) is moderated by a host of associated risk and protective factors. The purpose of the present study was to investigate the potential protective function of parental warmth and socioeconomic status on the social adjustment of abused children. Past research, albeit quite limited, indicates that those two factors could serve to buffer children from the harmful effects of abuse on social adjustment.

Protective Factors

Garmezy (1985) offered a framework for organizing discussions of protective and compensatory factors that has proven to be helpful and has since been used in other studies (Luthar & Zigler, 1991; Masten et al., 1999). First, there are *dispositional attributes within the child*, including temperament, personality traits, gender, coping styles, locus of control, and self-esteem. Second, there are *family characteristics* that can protect high-risk children; such factors include family cohesion and warmth, positive parent-child relationships, and harmonious interparental relations. Finally, there are *domains of extrafamilial contexts* that have been shown to be protective, including the availability of a positive adult figure; positive school experiences; and safe, supportive neighborhoods. Using this organizational

framework, factors that seem to protect children from negative outcomes of child maltreatment are presented next.

Protective Factors for Maltreated Children

As investigators began studying the dynamic concept of resilience among abused children, several factors emerged that served as a "protective shield" to a child experiencing abuse. When studying maltreatment, protective factors can be organized according to Garmezy's framework. The first form of protective factors includes attributes that are present within the child. These include, for example, intelligence (Garmezy, Masten, & Tellegen, 1984; Herrenkohl et al., 1994; Werner, 1989) and high self-esteem (Cicchetti et al., 1993; Moran & Eckenrode, 1992). Secondly, some family characteristics have been identified as protective factors; these variables include having a high level of family cohesion and warmth (Egeland et al., 1993; Garmezy et al., 1984; Perkins & Jones, 2004) and absence of family background of psychopathology (Mrazek & Mrazek, 1987). Lastly, protective factors within the larger social domain of extra-familial contexts include having access to good health, educational, social welfare services (Mrazek & Mrazek, 1987); and having a strong extra-familial support system (Egeland et al., 1993; Perkins & Jones, 2004; Tusaie & Dyer, 2004).

As noted previously, the focus of the current investigation is the potential protective function of socioeconomic status and parental warmth on the social adjustment of abused children. Past literature has supported the impact of each of these factors on outcomes for children, and there is some support for each factor specifically in protecting children at risk for negative outcomes. A discussion of these findings and the gaps in the extant literature are presented next.

Socioeconomic Status (SES)

Socioeconomic status remains a great interest to mental health professionals, developmentalists, and educators because low-SES children lack access to resources and experiences that would support positive outcomes for young children. SES has been operationalized in various ways, including indicators such as family income, education, family size, ethnicity and mobility, to name a few (White, 1982). Two or more of these indicators are often combined into one factor reflecting social class. Although researchers may differ on specific concepts and measures of SES, there is agreement that parental occupation, education, and income are important components of SES (DeGarmo, Forgatch, & Martinez, 1999). Socioeconomic status impacts children and their families across several domains, including quality of the home environment, several domains of child adjustment, level of parental nurturance, and parent discipline choices. These areas are discussed in the following paragraphs, beginning with the impact of poverty on the home learning environment.

Studies support the notion that parents with less support and fewer financial resources are less likely to (a) purchase reading and learning materials for their children, (b) take their children to educational and cultural events, and (c) regulate the amount of television their children watch (Bradley & Corwyn, 2001; Hess, Holloway, Price, & Dickson, 1982). As a result, children who are raised in poverty often experience problems at school, which can lead them on a path towards developing either conduct problems or withdrawn behaviors (Battin-Pearson et al., 2000). In contrast, advantages to having a higher level of socioeconomic status include being able to afford an array of services and goods and social connections that potentially benefit children (Bradley & Corwyn, 2002). High-SES parents

engage children in more conversations, read to their children more, and provide more teaching experiences. Their conversations are richer, contain more contingent responsiveness, and include more efforts to involve the child in the conversation (Bradley & Corwyn, 2002). Finally, their teaching style includes more scaffolding and complex verbal strategies (Borduin & Henggler, 1981).

Socioeconomic status is also associated with children's level of intellectual functioning and academic achievement, perhaps as a result of the early learning environment provided for children. To illustrate, Mercy and Steelman (1982) studied 6- to 11- year olds and found that each measure of socioeconomic status (family income, maternal education, paternal education) used in the Health Examination Survey predicted intellectual attainment, with parent education being the best predictor. Scarr and Weinberg (1978) studied 15 year olds and found maternal and paternal education to be equally good predictors of intellectual achievement. In a more recent study, DeGarmo and colleagues (1999) examined separate effects of maternal education, occupation, and income for a sample of 238 divorced or recently separated mothers of 6- to 9-year-old sons. Education and occupation were measured via coded categories and parenting practices were measured using direct observations of mother-child interactions. Investigators found that family income, parent education, and parent occupation were associated with quality of parenting, which in turn affected school achievement.

Poverty is also associated with social maladjustment of children, perhaps due to the impact of poverty on parenting. Dodge, Pettit and Bates (1994) examined mediators of the relation between socioeconomic status and later child conduct problems and found that socioeconomic status assessed in preschool significantly predicted teacher-rated externalizing

problems and peer-rated aggressive behavior in kindergarten and first, second, and third

grades. They proposed that the effect of socioeconomic status on children's aggressive

behavior was mediated, at least in part, by social experiences. In fact, socioeconomic status is

closely associated with quality of parents' interactions with their children. Elder and his

colleagues (1985), who studied families that had experienced economic decline during the

Depression, reported that fathers who sustained heavy financial losses were likely to be less

nurturing. Those fathers also were more irritable and punitive in their interactions with their

children than were fathers who did not undergo such losses. Furthermore, McLoyd (1990)

studied the influence of economic hardship on the parent-child relationship and stated that

mothers who were poor were more likely to use power-assertive techniques in disciplinary

encounters, and were more likely to use physical punishment as a means of disciplining and

controlling their children.

In addition to its association with levels of nurturing behavior, SES is also associated

with harshness of parenting and with discipline choices. To illustrate, Pinderhughes, Nix,

Foster, and Jones (2001) examined the unique and combined effects of neighborhood

characteristics on parental behaviors in a longitudinal study. Their study included 368

mothers from high-risk communities in four parts of the United States. Five neighborhood

characteristics were examined: poverty, residential stability, public services, presence of

social networks and neighborhood danger. Initial correlations revealed significant relations

between harsh interactions and three of the neighborhood characteristics. Most important to

the proposed study, more harsh interactions were associated with greater neighborhood

poverty. Investigators concluded that findings indicated that neighborhood poverty

undermined positive parenting. Along those lines, research shows that it is the absence of

positive parenting, not just the presence of negative parenting, that links low SES to child well-being (Brody, Flor, & Gibson, 1999).

On the far end of the continuum of harsh parenting is physical abuse. Low socioeconomic status has been identified as a strong predictor of abusive parenting (Brown et al., 1998; Whipple & Richey, 1997). Gillham and colleagues (1998) obtained details of all registered cases of child physical abuse, sexual abuse, and neglect for three years in Glasgow, Scotland. Substantial correlations were found with all indices of deprivation; the relationship between high rates of male unemployment and physical child abuse were particularly strong. In general, male unemployment rates alone accounted for two-thirds of the variance in total abuse and neglect rates.

It is important to note that, although low SES is associated with abusive parenting, there are many parents with limited financial and social resources who do not abuse their children. In addition, there are many abusive parents who are *not* characterized by low socioeconomic status. It was proposed in this study that level of SES would differ for abused children who were functioning well relative to other abused children. Based on the review of the literature, availability of financial resources could be considered a compensatory factor, as it is associated with positive outcomes for the general population of children. There is limited evidence, however, that a high level of socioeconomic status protects maltreated children from negative outcomes. A single study that provides some evidence of the protective nature of SES was conducted by Herrenkohl and colleagues (1994). Those researchers found that low SES posed the greatest risk for dysfunction among maltreated children; one could conclude from that finding that higher SES was associated with lower risk for dysfunction among abused children.

In summary, the effects of socioeconomic status on children and their families have been documented, yet little is known about the protective function of SES for maltreated children, specifically. The present research was designed to fill this gap in the current understanding of protective factors for abuse. Another major gap in the knowledge base is the lack of understanding of parenting factors that might serve to buffer abused children from negative outcomes in terms of social maladjustment. Research to support the investigation of parental warmth as a protective factor is presented below.

Parental Warmth

In early research that sought to describe primary dimensions of parenting, a warm-cold hostile dimension was one that was found consistently (Schaefer, 1959). Many terms have been used in past research to refer to the benefits of children perceiving their parents as warm, affectionate, and as accepting of their child's emotions and attitudes (Wind & Silvern, 1994); these terms include empathetic, emotionally available, and responsive. The proposed study was designed to investigate parental warmth, operationalized as providing a sensitive, responsive, and positive atmosphere for the parent-child relationship and children's development.

Empirical evidence has suggested that parental warmth is directly related to parent-child relationship quality, which in turn is related to children's self-esteem and social competence. More specifically, children of parents lacking in warmth tend to be insecurely attached (Waters, Hamilton, & Weinfield, 2000), and children with insecure attachments tend to be liked less by their peers and teachers (Cohn, 1990). Furthermore, early bonding and a good parent-child relationship are key factors in providing protection for children under extreme stress (Ziesemer, Marcoux, & Marwell, 1994). Webster-Stratton (1990) stated that

the impact of stress on children is mediated by the quality and sensitivity of the parents' interactions with their children.

Past research indicates that parental warmth and sensitivity can protect child witnesses of marital violence from negative outcomes. To illustrate, Katz and Gottman (1997) explored four different parenting processes as potential protective mechanisms, one of which was parental warmth. Fifty-six preschool children (32 males, 24 female) were assessed at 5-years old (Time 1) and at 8-years old (Time 2). At Time 1, observations of marital and parent-child interactions were conducted along with measures of children's intelligence, regulatory physiology, and vagal tone. Parents were also interviewed individually about their feelings of their children's emotions. At Time 2, children's outcomes were obtained. These included observations of interactions with peers, mother and teacher ratings of child adjustment, and measures of achievement. Based on measures from Time 1 and Time 2, investigators selected seven potential buffers, one of which was parental warmth. Parental warmth was computed as the sum of observed warmth minus the sum of observed coldness. Results indicated that parental warmth buffered children against negative outcomes in academic achievement and emotion regulation ability.

Even though abusive parents are often found to show low levels of parental warmth in interactions with their children, there is in fact variability in warmth expressed by these parents. Evidence of this variability is seen in Haskett, Smith Scott, and Sabourin Ward's (2004) investigation of subgroups of physically abusive parents. Cluster analysis of observed parenting and self-reported discipline was used to subgroup 149 abusive parents. One cluster was comprised of abusive parents who were relatively warm, positive, sensitive, and engaged during interactions with their children; parents in the other cluster were relatively negative,

disengaged or intrusive, and insensitive in interactions with their children. That finding

suggests that there is indeed variability in parental warmth within samples of abusive parents.

Sabourin Ward and Haskett (under review) used cluster analysis to understand the

heterogeneity in social adjustment of abused children and found that among their sample of

maltreated children, a range of sensitivity and harsh parenting practices existed. Thus, even

though the entire sample of abused children had experienced physical abuse, the parenting

context experienced by subgroups differed significantly. Of most interest for the present

study, the first cluster of parents was characterized by warmth that was comparable to

warmth expressed by matched nonabusive parents. Furthermore, children of parents with

greater warmth were more well-adjusted on several indices of social adjustment than were

children of parents in the cluster characterized by low warmth. Such a finding hints at the

potential link between high warmth and positive social adjustment for children who have

experienced abuse.

Several studies have been done to illustrate the potential buffering effect of parental

warmth on abused children. Kim and Cicchetti (2004) examined the concurrent and

longitudinal relations of mother-child relationship quality, self-esteem, social competence,

and maladjustment among 206 maltreated and 139 nonmaltreated children from low-income

families. Investigators found that secure mother-child relationship quality, regardless of

maltreatment status, was negatively related to internalizing symptoms at Time 1 and to both

internalizing and externalizing symptoms at Time 2. Secondly, Egeland and his colleagues

(1993) conducted a longitudinal study of high-risk children and their families. They collected

measures of child adaptation at each developmental period starting in infancy and continuing

through age 18. Secure attachment relationship with the mother at 12 and 18 months served

as a protective factor. The authors concluded that early sensitive and emotionally responsive caregiving promoted positive outcomes (e.g., confidence in the self) when intervening functioning and conditions were poor. In conclusion, providing a sensitive, responsive, and positive atmosphere for the parent-child relationship is likely to have a positive effect on the child's social adjustment.

Current Study

This research was based on past research that showed that some children, in the face of adversity, fared relatively well compared to other children who had experienced similar adversity. The body of research on resilience among children at risk indicates that there is a relationship between both parenting and socioeconomic status and child's social competence. Specifically, a warmer parenting style and a greater availability of resources can serve protective functions for children. However, whether those factors protect physically abused children, specifically, has not been adequately investigated in past research. Thus, the primary purpose of this research was to contribute to the growing literature related to resilience, and to examine the potential protective functions of parental warmth and socioeconomic status on social adjustment of physically abused children. By understanding the relation of these two factors to adaptation of physically abused children, one can direct intervention efforts and perhaps begin preventative efforts. It was hypothesized that parental warmth and socioeconomic status would serve as protective factors for social adjustment of physically abused children.

The hypotheses were as follows:

1. Level of parental warmth will significantly predict membership in "resilience groups" (high, medium, low), with higher warmth associated with membership in the high resilience group.

2. Level of socioeconomic status will significantly predict membership in "resilience groups" (high, medium, low), with higher SES associated with membership in the high resilience group.

Method

Participants

Participants were a subset of a larger sample of maltreated and nonmaltreated children. The purpose of the larger study was to examine the influences of parenting and social information processing on children's social-emotional functioning. The larger sample consisted of 115 physically abused and 100 non-abused children. Comparison children will not be mentioned again because they were not included in the current study.

Seventy eight children were selected for inclusion in the present study from the larger database of parent-child dyads. The original sample of 115 was reduced to 78 due to missing data on the variables of interest to this research. The final sample of physically abused children ranged in age from 4 to 9 years, with a mean of 7.39 years ($SD = 1.57$). Children were primarily African American (76%). Table 1 shows a summary of child characteristics.

Table 1

Child Characteristics

	Number	Percent
Gender		
Male	42	54
Female	36	46
Ethnicity		
African American	59	76
Caucasian	19	24
Grade		
Pre-kindergarten	3	4
Kindergarten	21	27
First	16	21
Second	15	21
Third	13	15
Fourth	7	8
Fifth	3	4

Procedures

Participants were identified through the Department of Social Services (DSS) as having substantiated physical abuse prior to referral. Parents were informed of the study a month or more after the abuse incident in an attempt to increase the probability that any immediate crises

resulting from the abuse report had been resolved prior to data collection. Caseworkers gave parents a description of the purpose and procedures of the study. Interested parents called the research office and were screened for participation. Screenings were completed by a doctoral-level psychologist. During each screening phone interview, the psychologist collected demographic information from the parents, completed the Conflict Tactics Scale (CTS; Straus, 1990), and screened parents for exclusionary criteria of substance abuse and severe marital violence by the parent. To participate, children had to be living with their parents at the time of data collection and there could be no history of sexual abuse of the children. Those who met research criteria scheduled a data collection session at the university-based clinic.

Upon arrival at the clinic, an intake was completed in which parents were given a full description of the research project and procedures. If parents continued to express interest they signed an informed consent form. The consent form gave a complete description of data collection procedures, compensation for participation, and additional information regarding the study. Parents were informed that participation was voluntary and that they could withdraw at any time even after assessment had begun. Each parent received $75 for participation. Parents were also given a booklet of resources and the opportunity to return for feedback. Confidentiality of the participating families was maintained by assigning identification numbers to each family. All assessment data were catalogued by these numbers and stored in locked filing cabinets.

Clinic-based data collection for the larger study included numerous self-report, observational, and interview measures that were administered by teams of undergraduate research assistants under the supervision of a graduate student. Approximately six months after the family completed data collection in the clinic, school-based data were collected.

Teachers were contacted to schedule a playground observation of each child, and

undergraduate research staff traveled to the child's school to conduct the observation.

Teachers completed the Social Behavior Scale (SBS) within two weeks of the playground

observation. These school-based measures, the playground observations and the SBS, were

used in this study.

Instrumentation

     Measures of child adjustment. Level of resilience was determined based on scores

obtained on seven indicators, derived from the following measures:

     Social Behavior Scale (SBS). The SBS (Appendix A) is a 39-item teacher rating scale

of children's social adjustment, developed from three instruments that measure teacher

perceptions of the social behavior of young children. The SBS takes approximately 10

minutes to complete. Teachers were asked to rate the degree to which each statement

described the target child, using a 5-point Likert scale: 1 (*Never true*), 2 (*Rarely true*), 3

(*Sometimes true*), 4 (*Often true*), 5 (*Almost always true*). The SBS consists of seven

subscales including Prosocial Behavior (e.g., displays kind and caring behavior), Relational

Aggression (e.g., tries to harm others by telling lies), Overt Aggression (e.g., hurts or

threatens to hurt other children), Asocial Behavior (e.g., engages in solitary play and

withdraws from peers), Excluded (e.g., is shunned by others), Depressed (e.g., appears sad),

and Victimized (e.g., peers pick on child). The present study utilized the Prosocial Behavior,

Relational and Overt Aggression, Asocial Behavior, Excluded, and Victimized subscales.

     Items that comprise the Prosocial Behavior, Relational Aggression, and Overt

Aggression subscales were taken from the Children's Social Behavior Scale (Crick, 1996)

and the Preschool Social Behavior Scale (Crick, Casas, & Mosher, 1997). The Asocial

Behavior and Victimized subscales were taken without modification from the Child Behavior

Scale (Ladd & Profilet, 1996). Factor analyses (Haskett, 2001) of the SBS supported the

seven-factor structure, and internal consistency of all the subscales is good, with Cronbach's

alphas that range from .78 to .93. Although there is no published information regarding the

construct validity of the SBS, there is strong support for the validity of the CSBS (Crick,

1996), PSBS (Crick, Casas, & Mosher, 1997), and CBS (Ladd & Profilet, 1996).

Playground observations. To measure child social behavior in a naturalistic setting,

each child was observed on the school playground during a regularly scheduled recess

period. Children were observed by trained undergraduates for 30 minutes. Data were

collected in 15-second intervals by two coders trained to 80% reliability (Appendix B).

During the continuous live observation, coders observed for the first ten seconds, and then

the occurrence of any target behaviors during that interval was recorded during the next five

seconds. In each interval a maximum of one notation was made for each target behavior (i.e.,

present or absent).

There were four target behaviors that were observed: Engagement, Negative

Behavior, Rough Play, and Aggression. Engagement was defined as physical or verbal

behavior directed to another peer or group of peers that had the purpose of engaging the peer

in interaction or continuing the interaction initiated by a peer. Parameters to score this

category included proximity of the child to a peer or group of peers and active behaviors such

as talking, eye contact and/or touching. Examples of these behaviors included involvement in

group games, asking for or delivering help and laughing or smiling with peers. The second

target behavior that was observed was Negative Behavior. This category included negative

verbal expressions or physical gestures to peers not involving physical contact. Examples of

Negative Behavior included teasing, name calling, profanity, verbal or physical threats and commands. Rough Play was the third target behavior selected for coding. These behaviors included physical contact with peers of a negative connotation but without the intensity to be classified as aggressive. Examples of Rough Play that were coded included holding onto children's clothes, elbowing or shouldering and roughhousing as part of a game. Aggression was the final category selected as a target behavior. Aggression was defined as negative contact with a peer or object that included the potential for harm or damage. Behaviors included within this category were hitting, scratching and throwing objects at children. Interrater reliability of coding was determined for 25% of the observations using a second observer. Intraclass correlations using an absolute agreement definition were .80 for Rough Play, .86 for Negative Behavior, .88 for Aggression, and .95 for Engagement.

For this study, the percent of intervals in which each of the negative behavior categories (i.e., Negative Behavior, Rough Play, and Aggression) occurred were combined to increase variability in the indicator for negative social behavior; children in this sample did not engage in high rates of aggressive behavior. Then, a ratio of negative social behavior (Negative Behavior, Rough Play, and Aggression combined) to total social behavior observed (Negative Behavior, Rough Play, Aggression, and Engaged combined) was calculated. A ratio score was used instead of simple rates of Negative Behavior so that the child's score would reflect the frequency of negative behavior displayed in the context of the child's total social interaction. This provided an indication of the relative salience of the child's negative behavior. The ratio score is referred to as "Negative Social Behavior".

Measures of Protective Factors

Measure of socioeconomic status. To obtain each participant's SES level, the phone interviewer collected information to code SES using Hollingshead's Index of Social Status (1975). SES was calculated by using three factors, including marital status, the number of years of schooling completed, and current occupation. If the participant's parent was married and one spouse was working, SES was generated based on the employed parent's information. If the participant's parent was married and both spouses were working, SES was generated by adding education and occupation scores for the husband and wife, and then dividing the sum by 2.

To determine the SES score, points are awarded for years educated and status of occupation. The years of school a parent has completed are scored on a seven-point scale as follows: less than seventh grade (1); junior high school, 9th grade (2); partial high school, 10th or 11th grade (3); high school graduate (4); partial college, at least one year or specialized training (5); standard college or university graduation (6); or graduate professional training, graduate degree (7). Occupation of a person is graded on a nine-point scale. The scale was kept as close as possible to the occupational titles used by the United States Census in 1970. For example, accountants receive a score of 8, and hairdressers receive a score of 3. Thus, higher scores are associated with the index scales used for education and occupation that were validated based on data gathered and analyzed in the United States Census (Hollingshead, 1975). For most research purposes, raw scores are converted to a categorical I – V scale; however, raw scores were retained in the present study in order to maintain the maximum variability.

Measure of parental warmth. Each dyad participated in a 30-minute interaction session similar to procedures used by others (e.g., Sessa, Avenevoli, Steinberg, & Morris, 2001). Each session was comprised of three 10-minute segments. The first segment was referred to as "free play" between the dyad. Parents and children were asked to spend 10 minutes playing with each other. Age-appropriate toys and materials were provided in the playroom (blocks, paper, and markers). At the beginning of the second segment, parents were called out of the room and given brief directions for the "instructions" task. During this 10-minute session, parents asked their children to clean up the materials, draw a picture of a person, and then sit quietly while the parent read a magazine. The "teaching and frustration" segment was the last 10-minute segment. Experimenters brought two puzzles into the room with the dyad and asked the child to complete each puzzle as fast as he or she could. Parents were told to help the child, but not touch the puzzle pieces. Along with this, researchers placed a timer on the table set for 10 minutes. The entire 30-minute session was taped by a video camera hidden inside a clock in the room.

Using a modified version of the Qualitative Ratings of Parent-Child Interactions developed by Cox (Appendix C) (Cox, 1997; Paley, Cox, & Kanoy, 2001), categories of parenting behavior were rated by research assistants trained to 80% reliability with the trainer and primary coder. The four categories to be used in this study along with a brief description of each dimension follow. The Positive Regard category represents the parent's positive feelings for the child that are expressed through both verbal and physical behaviors. The Sensitivity category reflects the parent's support or responsiveness to the child's emotional and physical needs, as demonstrated by such behaviors as adapting to the child's mood and scaffolding of tasks to allow the child task mastery. The Detachment category represents the

parent's emotional and physical involvement with the child, and is reflected in behaviors such as not responding to the child's cues or vocalizations. The Flat Affect category represents the parent's animation and energy during the interaction, and is characterized by blank, impassive facial expressions and monotone vocal expressions.

For each 10-minute segment, the coder assigned a rating for each parenting category. The rating process involved two steps. Ratings for each category ranged from one to seven with a rating of "one" given for behaviors that are not at all characteristic of the category, and a rating of "seven" given for behaviors that are highly characteristic of the category. The first step in assigning ratings involved the coder viewing the 10-minute segment in its entirety and forming an initial impression of the quantity and quality of each of the categories to be rated. Coders took notes on significant behaviors that characterized the four categories. The second step involved the coder viewing the segment a second time and making finer distinctions of their impressions. Coders were encouraged to stop and rewind the tape at any point for additional viewing of relevant behaviors and clarification of scoring. This qualitative scoring method allowed the coder to take into consideration both the number of behaviors in each category as well as the intensity of the behavior. After viewing the segment twice, the coder scored each of the four categories as either "characteristic" (a 5, 6, or 7 rating) or "uncharacteristic" (a 1, 2, or 3 rating).

The categories chosen for the present study were parent dimensions selected to suggest a Nurturing Parenting Style as identified by factor analysis in a previous study (Kreig, 2001). A score for Nurturing Parenting Style was computed by adding the ratings for Positive Regard, Sensitivity, Detachment (reverse scored), and Flat Affect (reverse scored) for the "free-play" and "instruction" segments. Segment three, the "teaching and frustration"

segment, was not used in the present study because some dyads did not participate in that segment due to time constraints in the data collection session. The Nurturing Parenting Style therefore is comprised of 8 raw scores (i.e., a rating score for each of the four parenting categories for both the first and the second segments of the parent-child interaction session), and each score ranges from 1-7. Thus, Nurturing Parenting Style scores ranged from a low of 8 to a high of 56, with higher scores representing a warmer, more sensitive parenting approach.

Psychometric properties of the coding system appear to be strong. Inter-rater reliability of coding was assessed and judged to be adequate; the range of kappa coefficients for Nurturing Parenting Style variables was .73 - .85. There is also support for validity of the coding system; scores on the parenting categories were significantly related in the expected directions to measures of parental emotional health and parent-to-child Conflict Tactics Scale scores (Haskett, Smith Scott, & Sabourin Ward, 2004). Furthermore, cluster analysis of abusive parents' scores on the parenting dimensions revealed clinically meaningful subgroups of abusive parents (Haskett, Smith Scott, & Sabourin Ward, 2004).

Data Analytic Plan

The operational definition of resilience used in the present study was based largely on prior research of Cicchetti and colleagues (1993). Those investigators labeled children as resilient if they were functioning well relative to the full sample of children in their study. Likewise, in the present study, a child was labeled as resilient if he or she was functioning in the upper third of the distribution of the sample on at least four of the seven indicators. Children who obtained a score in the upper third of the distribution for an indicator were assigned a score of "1" for that indicator. Children who obtained a score in the lower two-

thirds of the distribution for an indicator were assigned a score of "0" for that indicator. Thus, each child obtained a total score ranging from 0-7. Children with scores of at least 4 were labeled "high resilient"; those with scores of 2 or 3 were labeled "medium resilient"; and those with scores of 0 or 1 were labeled "low resilient." Once children were divided into groups, chi square analyses and oneway ANOVAs were used to test whether placement into resilience groups was independent of ethnicity, gender, age, or intellectual functioning. Finally, ordinal logistic regression analyses were conducted to investigate whether or not Nurturing Parenting Style and/or SES predicted group membership.

<div align="center">Results</div>

Descriptive Statistics

Means and standard deviations for raw scores on all variables representing child adjustment were calculated for the full sample (Table 2). To summarize, teachers reported that within the school setting, most children in this sample occasionally displayed positive social behavior and rarely or never displayed negative social behavior. Playground observations further suggested that children displayed a low proportion of negative behavior while being observed playing with their peers ($M = .11$, $SD = .09$). Means and standard deviations of the variables representing the predictors for the full sample are also included in Table 2. Skewness and kurtosis values were computed to examine the distribution of the dependent variable and its predictors. The ratio of kurtosis and skewness to its standard error was used as a test of normality for each predictor. The total number of indicators was slightly positively skewed (Skew = .55, $SE = .27$) and platykurtic (Kurtosis = -.75, $SE = .54$); however these values were not found to be significantly different from a normal distribution. The predictor Nurturing Parenting Style was significantly negatively skewed (Skew = -.62,

SE = .27). Although Nurturing Parenting Style was slightly leptokurtic (Kurtosis = .47, *SE* =

.54) and socioeconomic status was slightly positively skewed (Skew = .44, *SE* = .27) and

platykurtic (Kurtosis = -.91, *SE* = .54), these values were not significantly different from a

normal distribution. An attempt was made to transform Nurturing Parenting Style into a more

normal distribution, but it was decided that the raw scores for this predictor were most

appropriate to use. It was considered acceptable to proceed with the analyses because the

assumption of normality applies only to the dependent variable (see Howell, 2007).

Table 2

Mean Raw Scores and Standard Deviations of Measures for Full Sample

Variable	*M*	*SD*	Range
Measures of Social Adjustment			
Social Behavior Scale			
Prosocial Behavior	3.46	.77	2.0-5.0
Relational Aggression	1.74	.69	1.0-4.0
Overt Aggression	1.77	.78	1.0-4.8
Asocial Behavior	1.9	.8	1.0-4.6
Excluded by Peers	1.98	.91	1.0-4.8
Victimized by Peers	1.74	.76	1.0-4.3
Playground Observation	.11	.09	.0-.5
Predictors of Resilience Group Membership			
Socioeconomic Status	30.87	13.82	11-61
Nurturing Parenting Style	27.74	3.48	16-34

Resilience Groups

As described above, each child obtained a total resilience score ranging from 0-7 based on the number of indicators for which the child was functioning in the upper third of the distribution of this sample. Children with scores of at least 4 were labeled "High Resilient" ($n = 18$); those with scores of 2 or 3 were labeled "Medium Resilient" ($n = 25$); and those with scores of 0 or 1 were labeled "Low Resilient" ($n = 35$).

Demographic characteristics of children in High Resilient (HR), Medium Resilient (MR) and Low Resilient (LR) groups are detailed in Table 3. One-way ANOVAs and Pearson chi square correlations were performed to test the strength of the relationship between the three categories of resilience and each demographic variable. A crosstabulation of the categorical variables of race and gender with resilience groups and a oneway ANOVA with the continuous variables age and KBIT score with resilience groups revealed test statistics that suggested children's placement into these three categories of resilience was independent of ethnicity, gender, age, or intellectual functioning (based on scores on the KBIT).

Table 3

Demographic Characteristics for Each of the Resilience Groups

Variable	High (*n* = 18)	Medium (*n* = 25)	Low (*n* = 35)	test statistic (F or χ^2 value)
Gender				χ^2 = 3.6ns
Male	8 (19%)	11 (26%)	23 (55%)	
Female	10 (28%)	14 (39%)	12 (33%)	
Ethnicity				χ^2 = 1.2ns
African American	14 (24%)	17 (29%)	28 (47%)	
Caucasian	4 (21%)	8 (42%)	7 (37%)	
Mean Age in Years	7.18 (19.22)	7.56 (20.37)	7.38 (18.0)	*F* = 0.31ns
Mean KBIT score	95.82 (13.12)	95.79 (10.97)	97.82 (11.27)	*F* = 0.25ns

Analysis of Predictors

To examine Hypotheses One and Two, ordinal logistic regression analyses were conducted, with resilience group as the dependent variable and the two predictors as the independent variables, tested in separate analyses. In ordinal logistic regression, the logistic regression model is used to predict the probability of membership in a category. The intent is to determine the direction of the relation between each predictor and the ordinal nature of the categorical outcome. When the response categories have a natural ordering, the Ordinal regression procedure (also referred to as Polytomous Universal Model or PLUM) is used. Ordinal logistic regression was used in this study because the dependent variable had

multiple ranked classes that were logically ordered (i.e., High, Medium, and Low

Resilience).

A major component of an ordinal regression model is the link function. The link

function is the function of the probabilities that results in a linear model in the parameters.

Five different link functions are available in the Ordinal Regression procedure; the

investigator chooses among the link functions based on the distribution of the dependent

variable. For the current study, the Negative log-log link function was selected because a

larger proportion of children were placed into the LR and MR groups, thus warranting a

Negative log-log link function (see Figure 1).

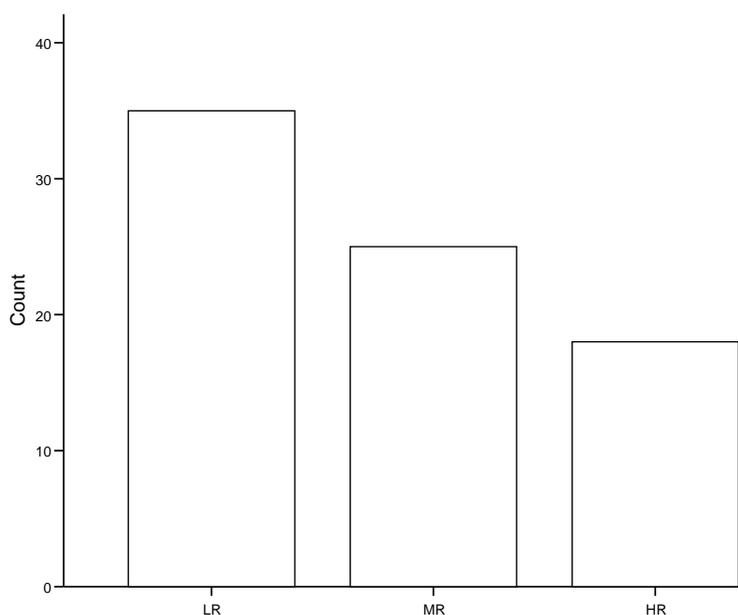Figure 1. Number of children in each resilience group.

Nurturing parenting style. For Hypothesis One, Nurturing Parenting Style was

entered in the regression as a predictor. The goodness of fit test, $\chi^2 (29, N = 78) = 35.55, p =$

.19 was nonsignificant indicating that the data and model predictions were similar and thus

the model adequately described the data. Likelihood Ratio tests were conducted to determine

the contribution of the effects of Nurturing Parenting Style to the overall model. The

Likelihood Ratio test measures the improvement in fit that the predictor variable makes

compared to the null model. It was expected that Nurturing Parenting Style would predict

group membership into one of three categories (HR, MR, and LR). This prediction was not

supported. Inclusion of the Nurturing Parenting Style variable in the model did not result in a

significant improvement over the baseline model as evidenced by the Chi-Square value: χ^2 (1,

$N = 78$) = 1.34, $p = .25$. Based on this value, the null hypothesis cannot be rejected, meaning

that knowing the value for Nurturing Parenting Style did not result in significant

improvement in prediction of resilience category membership.

Socioeconomic status. For Hypothesis Two, socioeconomic status was entered in the

regression as the predictor. The goodness of fit test, χ^2 (57, $N = 78$) = 50.85, $p = .7$ was

nonsignificant, indicating that the model adequately described the data. Likelihood Ratio

tests were conducted to determine the contribution of the effects of socioeconomic status to

the overall model. It was expected that socioeconomic status would predict group

membership into one of three categories. This prediction was not supported. Socioeconomic

status did not significantly predict group membership, χ^2 (1, $N = 78$) = 1.52, $p = .22$. Based

on this value, the null hypothesis cannot be rejected, meaning that knowing socioeconomic

status did not result in significant improvement in prediction of resilience category

membership.

Discussion

Studies of the effects of maltreatment have documented adverse consequences on

young children's physical, cognitive, psychological, and social functioning. In spite of these

overwhelming negative effects, however, some abused children appear to show little

evidence of maladjustment. Investigators in a relatively new area of research on resilient functioning of children at risk for maladjustment and psychopathology have begun seeking ways to explain why some children prevail despite a history of abuse. Such was the purpose of the current study. Specifically, the primary purpose of the current study was to explore the protective nature of certain extrinsic factors for a group of physically abused children. In particular, the present study sought to determine if extrinsic factors at the family context level, including parental warmth and socioeconomic status, could predict the level of resilient functioning of abused children.

One strength of the current study was the measurement of children's social adjustment and the formation of the resilience groups. Resilience groups were formed based on a multi-method assessment of social behavior as measured by teacher report on the SBS as well as observations on the school playground. Children were rated on the SBS subscale not only on aggression and prosocial behavior, but on exclusion and victimization by peers, and asocial behavior. Thus, an attempt was made to conduct a comprehensive assessment of the children's social behavior by which a more comprehensive reflection of children's social adjustment could be determined. Once social adjustment was calculated, resilience groups were formed using procedures that have been validated in prior work with abused children (Cicchetti et al., 1993; Flores et al., 2005).

The use of an observational technique to measure parental warmth is another strength of these methods. Observations were conducted to assess parent behavior during interactions with their children. Coders observed the interactions for 30 minutes and then scored parents on several dimensions of parenting. A recent study by Zaslow and colleagues (2006) suggests that even though several parenting methodologies (e.g., parent report, teacher report, child

questionnaire) show some value in prediction of outcomes for children, observational measures of parenting are the strongest and most consistent predictors of child outcomes. Investigators recommend that when one is attempting to predict child outcomes, it is best to include structured observational measures such as the one used in the present study.

Examination of Protective Factors

Empirical evidence has suggested that parental warmth is directly related to parent-child relationship quality, which in turn is related to children's self-esteem and social competence (Kim & Cicchetti, 2004). Children of parents with greater warmth have been found to be more well-adjusted on several indices of social adjustment than were children of parents characterized by low warmth (Haskett, Smith Scott, & Sabourin Ward, 2004). In the current study, however, parental warmth was not found to be a predictor of children's social competence. More specifically, parental warmth did not predict classification of abused children into resilience groups. One may posit that the lack of support for parental warmth as a predictor of resilience was due to limited variability on the indicator of resilience. That is, children were classified into one of three groups: high, medium, or low resilience. It is possible that if the dependent variable had been retained as a continuous variable (ranging from one to seven for each child), significant differences between children would have been found based on levels of Nurturing Parenting Style and SES. To test this, the strength of the correlation between the total raw score for resilience and scores for Nurturing Parenting Style was tested. Results were nonsignificant ($r = .17$, $p = .13$), suggesting that categorizing children into three resilience groups probably did not contribute to the lack of prediction by parental warmth.

A second plausible reason that parental warmth was not found to significantly predict resilience groups could be due to characteristics of the assessment of parental warmth. The Nurturing Parenting Style composite was based on one structured parent-child interaction in a clinic setting. Defining parental warmth on the basis of a single 30-minute interaction in a clinic setting may not yield the most valid reflection of a parent's typical pattern of interactions. It is easy to appreciate the possibility that a family on any given day could be doing far better than their norm or far worse than their usual repertoire of behavior. In fact, some researchers who found parental warmth to have a significant impact on child outcomes measured parental warmth on more than one occasion (Egeland et al., 1993; Herrenkohl et al., 1995; Kim & Cicchetti, 2004; Zhou et al., 2002).

A second limitation of the assessment of parental warmth is the setting in which it was conducted. The laboratory-based parent-child interaction might not have captured the full picture of parental warmth in daily life. Naturalistic studies of parent-child interaction in real-life situations might provide richer information on the process of family socialization and parenting practices. For example, Herrenkohl, Herrenkohl, Rupert, Egolf, and Lutz (1995) conducted observations of parent-child interactions in the home as opposed to a laboratory setting. As a result of their observations, researchers concluded that the behavioral functioning of children was most strongly differentiated by the sociocultural and family climate in which a child was raised. These investigators would argue that observing in a clinic setting would make it almost impossible to determine the family and/or sociocultural climate. Similar to the above argument, observing families in their naturalistic setting might be more likely to reflect their typical behavior, thus making it a more valid indication of the level of parental warmth. In conclusion, although a positive feature of the current study was

the use of observational data to measure parental warmth, it might have been optimal to conduct the parent-child observations at multiple times and in a naturalistic setting.

In contrast to expectations, socioeconomic status was not found to be a significant predictor of group differences in the social adjustment of abused children. More specifically, socioeconomic status did not predict classification into resilience groups. This nonsignificant finding may be due to several factors. First, the restricted nature in which SES was measured by the Hollingshead index may have impacted its validity for predicting child outcomes. The measure of socioeconomic status used in the current study may not have been a sufficiently rich indicator of actual financial resources to accurately reflect environmental conditions of the families. Many investigators who have found a significant relation between SES and outcomes of children have expanded their definition of SES to include such factors as family size, duration of poverty level, and the quality of the home environment.

One criticism of using the Hollingshead index by itself to measure SES is that it does not take into account family size. Because the income available to a child depends not only on the amount of money taken in but also on the size of the family, an adjustment needs to be made to obtain a more complete assessment of income (Acs & Gallagher, 2000). Some researchers who measure poverty often examine socioeconomic status as changes in families' income-to-needs ratio. The income-to-needs ratio represents family income relative to the number of members in the household and is commonly computed by dividing total family income by the poverty threshold for the appropriate family size. Duncan and colleagues (1994) utilized this method in calculating economic status for 985 children. Based on their calculations, in 1991 children living in a four-person household whose income totaled $41, 772 would have income-to-needs ratios of 3.0 (= $41, 772/$13, 924) and be considered non-

poor in that year; members of four-person households with a total household income of only $6, 962 would each have an income-to-needs ratio of 0.5 and be designated as poor. By definition, an income-to-needs ratio of 1.0 indicates that a family income is equal to the poverty threshold. According to researchers, direct measures of family economics, such as the income-to-needs ratio, better represent a family's economic well-being (Dearing, McCartney, & Taylor, 2001; McLoyd, 1998), and may perhaps supersede a measure such as the Hollingshead.

A second criticism of measuring SES solely with the Hollingshead index is that it represents economic information regarding a family at one point in time; it would be inappropriate to represent a lifetime of income data with one static mean (Dearing et al., 2001). Multiple-year measurements of family income are stronger predictors of child outcomes than are single-year contemporaneous measurements. For example, Blau (1999) studied the effects of parental income on children's cognitive, social, and emotional development. He concluded that the effect of current income was small and the effect of "permanent" income was substantially larger.

Measuring SES over a longer period of time has the potential to answer questions about the impact of persistence and depth of poverty. In general, children appear to be at an increasingly greater risk for negative outcomes as time spent in poverty increases. Smith and colleagues (1997) found that children who lived in persistently poor families scored 6 to 9 points lower on a variety of cognitive and language outcomes than did children who lived in families that were never poor. Children from families that were poor for some of the time, but at times were above the poverty threshold, also scored lower than those children from families that were never poor. Further, researchers found that very poor children were most

disadvantaged. Often, researchers take into account the family income-to-needs ratio and the duration of poverty to place children into several coding categories. For example, Duncan and colleagues (1994) categorized children as being poor some but not all of the time, poor all of the time, or never poor. It is recommended that future researchers examine SES longitudinally so that comparisons can be made between children who have been subject to poverty for an extended period of time to children who consistently live above the poverty line. The duration of poverty is likely to impact a child's chances of recovering from a trauma.

Finally, because SES is a proxy for other factors that impact family functioning, the Hollingshead index should not be used alone. The Hollingshead calculates SES by using three factors, including marital status, the number of years of schooling completed, and current occupation. The effects of family economics on child development are complex (Dearing, McCartney, & Taylor, 2001), and therefore can be hard to detect with one measure such as the Hollingshead. For example, the quality of the home environment explains as much as one half of the variance in associations between family income and child outcomes (Duncan & Brooks-Gunn, 2000). Knowing this, researchers interested in the impact of poverty of children are encouraged to assess several aspects of the child's environment, one of which is the quality of the home environment, when measuring socioeconomic status.

To summarize, measuring the construct of SES in a meaningful manner is a tall order. The present investigator utilized the Hollingshead index of social status to determine the level of economic support for children in this sample. This method is limited, however, due to the fact that there are many indicators of SES and the Hollingshead captures only a few of them. When examining the literature on poverty, it was found that researchers tend to collect

a wide range of information from families to determine socioeconomic status. These types of

information include (but are not limited to) family size, duration of poverty, and home

environment. Taking into account these other indicators of SES might have resulted in

improved prediction of competence among abused children in the current study.

Another consideration in interpreting findings is the characteristics of these children.

Typically, one would expect to find social adjustment problems among abused children;

however, in the current study, the children fared relatively well. For example, the possible

range for Relational and Overt Aggression as assessed by the SBS was 1-5. The mean scores

for the abused children were on the lower end of the range at 1.74 and 1.77. Also, the sample

was not observed to be highly aggressive on the playground. Thus, it may have been

somewhat artificial to divide these relatively well socially adjusted abused children into three

groups based on measures of social adjustment. It is possible that this sample of abused

children was less socially maladjusted than abused children in prior research because the

children were recruited from the general population of children involved with child

protective services following a substantiated abuse report. In contrast, samples of abused

children in prior studies were often recruited specifically for intervention, such as a summer

treatment program (Flores et al., 2005). Furthermore, all parents in this study had custody of

their children at the time of data collection. Thus, this sample might not have included many

children who experienced chronic or severe abuse that warranted intervention and/or removal

from the parents' custody.

Directions for Future Research

Future investigations of this type warrant the inclusion of a broader range of

predictors for social adjustment. The current investigator's focus was narrowed to only a few

variables that were extrinsic to the family; future research should attempt to incorporate variables across key settings or systems in which the child is surrounded. Such factors might pertain to family relations, peer relations, and community settings. By making this assessment approach more comprehensive to include a wide range of functioning for families, investigators will have a more clinically useful view of the child and ultimately will be able to provide a more suitable and effective treatment approach. This concept is supported by well-known research by Bronfenbrenner (1979), who placed child development in an ecological perspective.

In addition to examining multiple levels of influence on a child, future research will likely yield a better understanding of resilience by examining the interactions among systems. In studying human development, one has to see within, beyond, and across how the several systems interact (e.g., family, school, and economy). Protective factors for maltreated children may operate interactively. For example, parental warmth and socioeconomic status, individually, did not predict social adjustment in the current study; however, these factors might have been predictive of social adjustment had they been evaluated as moderators – meaning that an interaction existed. It is possible that parental warmth influenced social adjustment more powerfully under conditions of low SES and provided minimal influence under conditions of high SES. In other words, parental warmth may have moderated or reduced the impact of SES on abused children's social adjustment. Future researchers should be aware that when studying risk or protective factors in children, caution should be used when examining variables likely to operate interactively (Cicchetti & Cohen, 1995). Specifically, researchers that wish to expand on the current study should study the interactive

effects that parental warmth and socioeconomic status have together in predicting outcomes for children.

Finally, future researchers should modify the current study by using multiple measures of socioeconomic status collected longitudinally. Inclusion of multiple aspects of SES may provide researchers with an improved representation of resource availability and a better indication of how a particular maltreated child functions given a particular SES. Studies of SES should encompass other important aspects of economic support such as family size and duration of poverty level. Finally, because SES is likely to be a proxy for other factors that impact family functioning, researchers should attempt to measure factors associated with income, such as the home environment.

In summary, the current study was designed to investigate whether parental warmth and socioeconomic status served a protective function for a sample of abused children. Results of the present study failed to support the notion that parental warmth and socioeconomic status would predict group differences in the social adjustment of children. In spite of these results, this study did contribute to a much needed area of research. It is important for researchers to continue to investigate the phenomenon of resilience and individual differences in outcomes for abused children. The hope remains that researchers will be able to pinpoint the factors that set apart a child that prevails despite having experienced a traumatic event such as abuse versus a child that suffers. Once these factors are identified, preventative efforts can be directed toward helping those children in danger of falling behind in life. This single study was a small contribution to the literature; the investigator's hope is that this line of research will continue so that, ultimately, fewer abused children will experience the negative outcomes so often associated with maltreatment.

References

Acs, G., & Gallagher, M. (2000). Income inequality among America's children. *Assessing the New Federalism, 6,* 1-6.

Barber, M. A., & Sibert, J. R. (2000). Diagnosing physical child abuse: The way forward. *Postgraduate Medical Journal, 76,* 743-749.

Battin-Pearson, S., Newcomb, M. D., Abbott, R. D., Hill, K. G., Catalano, R. F., & Hawkins, J. (2000). Predictors of early high school drop-out: A test of five theories. *Journal of Educational Psychology, 92,* 568-582.

Blau, D. (1999). The effect of income on child development. *Review of Economics and Statistics,* 81, 261-276.

Bolger, K. E., & Patterson, C. J. (2001). Developmental pathways from child maltreatment to peer rejection. *Child Development, 72,* 549-569.

Bolger, K. E., Patterson, C. J., & Kupersmidt, J. B. (1998). Peer relationships and self-esteem among children who have been maltreated. *Child Development, 69,* 1171-1197.

Borduin, C. M., & Henggeler, N. (1981). Social class, experimental setting and task characteristics as determinants of mother-child interactions. *Developmental Psychology, 17,* 209-214.

Bradley, R. H., & Corwyn, R. F. (2002). Socioeconomic status and child development. *Annual Review of Psychology, 53,* 371-399.

Bradley, R. H., Whiteside, L., & Mundfrom, D. J., Casey, P. H., Kelleher, K. J., & Pope, S. K. (1994). Early indications of resilience and their relation to experiences in the home environments of low birthweight, premature children living in poverty. *Child Development, 65,* 346-360.

Brody, G. H., Flor, D. L., & Gibson, N. M. (1999). Linking maternal efficacy beliefs, developmental goals, parenting practices, and child competence in rural single-parent African American families. *Child Development, 70,* 1197-1208.

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.

Brown, J., Cohen, P., Johnson, J. G., & Salzinger, S. (1998). A Longitudinal analysis of risk factors for child maltreatment: Findings of a 17-year prospective study of officially recorded and self-reported child abuse and neglect. *Child Abuse & Neglect, 22,* 1065-1078.

Buchsbaum, H., Toth, S., Clyman, R., Cicchetti, D., & Emde, R. (1992). The use of a narrative story stem technique with maltreated children: Implications for theory and practice. *Development and Psychopathology, 4,* 603-625.

Cicchetti, D. (1989). How research on child maltreatment has informed the study of child development: Perspectives from developmental psychopathology. In D. Cicchetti & V. Carlson (Eds.), *Child maltreatment: Theory and research on the abuses and consequences of child abuse and neglect* (pp. 377-431). Cambridge, MA: Cambridge University Press.

Cicchetti, D. (1990). A historical perspective on the discipline of developmental psychopathology. In J. Rolf, A. Masten, D. Cicchetti, K. Nuechterlein, & S. Weintraub (Eds.), *Risk and protective factors in the development of psychopathology* pp. 2-28). New York: Cambridge University Press.

Cicchetti, D., & Cohen, D. J. (1995). Perspectives on developmental psychopathology. In D. Cicchetti & D. Cohen (Eds.), *Developmental psychopathology: Vol. 1. Theory and*

Methods (pp. 3-20). New York: Wiley.

Cicchetti, D., & Lynch, M. (1993). Toward an ecological/transactional model of community violence and child maltreatment: Consequences for children's development. *Psychiatry, 53*, 96-118.

Cicchetti, D., & Lynch, M. (1995). Failures in the expectable environment and their impact on individual development: The case of child maltreatment. In D. Cicchetti & D. Cohen (Eds.), *Developmental psychopathology: Vol. 2. Risk, disorder, and adaptation* (pp. 32-71). New York: Wiley.

Cicchetti, D., Lynch, M., Shonk, S., & Manly, J. (1992). An organizational perspective on peer relations in maltreated children. In R. Parke & G. Ladd (Eds.), *Family-peer relationships: Modes of linkage* (pp. 345-384). Hillsdale, NJ: Erlbaum.

Cicchetti, D., Rogosch, F. A., Lynch, M., & Holt, K. D. (1993). Resilience in maltreated children: Processes leading to adaptive outcome. *Development and Psychopathology, 5,* 629-647.

Cicchetti, D., & Rogosch, F. A. (1997). The role of self-organization in the promotion of resilience in maltreated children. *Development and Psychopathology, 9,* 797-815.

Cicchetti, D., & Toth, S. (1995). Developmental psychopathology and disorders of affect. In D. Cicchetti & D. Cohen (Eds.), *Developmental psychopathology: Vol. 2 Risk, disorder, and adaptation* (pp.369- 420). New York: Wiley.

Cohn, D. (1990). Security of attachment at 6 years of age and peer social competence in first grade. *Dissertations Abstracts International, 50,* 1131.

Cox, M. (1997). *Qualitative Ratings of Parent/Child Interaction*. Unpublished manual,

University of North Carolina at Chapel Hill.

Crick, N. (1996). The role of overt aggression, relational aggression, and prosocial

behavior in children's future social adjustment. *Child Development, 67*, 2317-2327.

Crick, N., Casas, J., & Mosher, M. (1997). Relational and overt aggression in preschool.

Developmental Psychology, 33, 579-588.

Crick, N., & Dodge, K. (1994). A review and reformulation of social information-

processing mechanisms in children's social adjustment. *Psychological Bulletin,

115,* 73-101.

Crittenden, P. M., & DiLalla, D. (1988). Compulsive compliance: The development of an

inhibitory coping strategy in infancy. *Journal of Abnormal Child Psychology, 5,*

585-599.

Crume, T., DiGuiseppi, C., Byers, T., Sirotnak, A., & Garrett, C. (2002). Underascertainment

of child maltreatment fatalities by death certificates, 1990-1998. *Pediatrics, 110,* 18-

24.

Curtis, W. J., & Cicchetti, D. (2003). Moving research on resilience into the 21st century:

Theoretical and methodological considerations in examining the biological

contributors to resilience. *Development and Psychopathology, 15,* 773-810.

Dearing, E., McCartney, K., & Taylor, B. A. (2001). Change in family income-to-needs

matters more for children with less. *Child Development, 72,* 1779-1793.

DeGarmo, D. S., Forgatch, M. S., & Martinez, R. C. (1999). Parenting of divorced mothers

as a link between social status and boys' academic outcomes: Unpacking the effects

of socioeconomic status. *Child Development, 70,* 1231-1245.

deMause, L. (1998). The history of child abuse. *The Journal of Psychohistory, 25.*

Dodge, K. (1983). Behavioral antecedents of peer social status. *Child Development, 54*, 1386-1399.

Dodge, K. A., Bates, J. E., & Petit, G. S. (1990). Mechanisms in the cycle of violence. *Science, 250,* 1678-1683.

Dodge, K. A., Petit, G. S., & Bates, J. E. (1994). Socialization mediators of the relation between socioeconomic status and child conduct problems. *Child Development, 65,* 649- 665.

Downey, G., & Walker, E. (1989). Social cognition and adjustment in children at risk for psychopathology. *Developmental Psychology, 25,* 835-845.

Duncan, G. J., & Brooks-Gunn, J. (2000). Family poverty, welfare reform, and child development. *Child Development, 71,* 188-196.

Duncan, G. J., Brooks-Gunn, J., & Klebanov, P. K. (1994). Economic deprivation and early childhood development. *Child Development, 65*, 296-318.

Eckenrode, J., Laird, M., & Doris, J. (1993). School performance and disciplinary problems among abused and neglected children. *Developmental Psychology, 29,* 53-62.

Egeland, B., & Abery, B (1991). A longitudinal study of high-risk children: Educational outcomes. *International Journal of Disability, Development and Education, 38,* 271-287.

Egeland, B., Carlson, E., & Sroufe, L. A. (1993). Resilience as process. *Development and Psychopathology*, *5*, 517-528.

Egeland, B., & Sroufe, L. A. (1981). Developmental sequelae of maltreatment in infancy. In R. Rizley & D. Cicchetti (Eds.), *New directions for child development:*

Developmental perspectives in child maltreatment. San Francisco: Jossey-Bass.

Elder, G., Caspi, A., & Van Nguyen, T. (1985). Resourceful and vulnerable children: Family influences in hard times. In R. Silbereisen, & H. Eyferth (Eds.), *Development as action in context* (pp. 167-186). Berline: Springer-Verlag.

Emery, R. (1989). Family violence. *American Psychologist, 44,* 321-328.

Farber, E., & Egeland, B. (1987). Abused children: Can they be invulnerable. In J. Anthony & B. Cohler (Eds.), *The invulnerable child* (pp. 253-288). New York: Guilford Press.

Finkelhor, D., & Dziuba-Leatherman, J. (1994). Victimization of children. *American Psychologist, 49,* 173-183.

Flisher, A., Kramer, R., & Hoven, C. (1997). Psychosocial characteristics of physically abused children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 36,* 123-131.

Flores, E., Cicchetti, D., & Rogosch, F. A. (2005). Predictors of resilience in maltreated and nonmaltread Latino children. *Developmental Psychology, 41*, 338-351.

Garmezy, N. (1985). Stress-resistant children: The search for protective factors. In J. Stevenson (Ed.), *Recent research in developmental psychopathology* (pp. 213-233). Oxford: Pergamon Press.

Garmezy, N., Masten, A. S., & Tellegen, A. (1984). The study of stress and competence in children: A building block for developmental psychopathology. *Child Development, 55,* 97-111.

Gilham, B., Tanner, G., Cheyne, B., Freeman, I., Rooney, M., & Lambie, A. (1998). Unemployment rates, single parent density, and indices of child poverty: Their

relationship to different categories of child abuse and neglect. *Child Abuse &*
Neglect, 22, 79-90.

Grizenko, N., & Fisher, C. (1992). Review of studies of risk and protective factors for
psychopathology in children. *Canadian Journal of Psychiatry, 37,* 711-721.

Haskett, M. E. (2001). [Factor analysis of the Social Behavior Scale]. Unpublished raw
data.

Haskett, M. E., Smith Scott, S., & Sabourin Ward, C. (2004). Subgroups of physically
abusive parents based on cluster analysis of parenting behavior and affect. *American*
Journal of Orthopsychiatry, 74, 663-686.

Haskett, M. E., & Kistner, J. (1991). Social interactions and peer perceptions of young
physically abused children. *Child Development, 62,* 979-990.

Heller, S. S., Larrieu, J. A., D'Imperio, R., & Boris, N. W. (1999). Research on resilience to
child maltreatment: Empirical considerations. *Child Abuse & Neglect*, *23*, 321-
338.

Herman-Giddens, M., Brown, G., Verbiest, S., Carlson, P., Hooten, E., Howell, E., et al.
(1999). Underascertainment of child abuse mortality in the United States. *Journal of*
the American Medical Association, 282, 463-467.

Herrenkohl, E. C., Herrenkohl, R. C., & Egolf, B. P. (1994). Resilient early school-age
children from maltreating homes: Outcomes in late adolescence. *American Journal*
of Orthopsychiatry, *64*, 301-309.

Herrenkohl, E. C., Herrenkohl, R. C., Rupert, L. J., Egolf, B. P., & Lutz, J. G. (1995). Risk
factors for behavioral dysfunction: The relative impact of maltreatment, SES,
physical health problems, cognitive ability, and quality of parent-child interaction.

Child Abuse & Neglect, 2, 191-203.

Herrenkohl, E. C., Herrenkohl, R. C., Toedter, L., & Yanushefski, A. (1984). Parent-child interactions in abusive and nonabusive families. *Journal of the American Academy of Child Psychiatry, 23,* 641-648.

Hess, R., Holloway, S., Price, G., & Dickson, W. (1982). Family environments and the acquisition of reading skills. In L. Laosa, & I. Sigel (Eds.), *Families as learning environments of children* (pp. 87-113). New York: Plenum.

Hoffman-Plotkin, D., & Twentyman, C. (1984). A multimodal assessment of behavioral and cognitive deficits in abused and neglected preschoolers. *Child Development, 55,* 794-802.

Hollingshead, A. B. (1975). *Four-factor index of social status*. Unpublished manuscript. New Haven, CT: Yale University.

Howell, D. C. (2007). *Statistical methods for Psychology*. Belmont: Thomson Wadsworth.

Huebner, C. (2002). Evaluation of a clinic-based parent education program to reduce the risk of infant and toddler maltreatment. *Public Health Nursing, 19,* 377-389.

Jaffe, P., Wolfe, D., Wilson, S., & Zak, L. (1986). Similarities in behavioral and social maladjustment among child victims and witnesses to family violence. *American Journal of Orthopsychiatry, 56,* 142-146.

Katz, L., & Gottman, J. (1997). Buffering children from marital conflict and dissolution. *Journal of Clinical Child Psychology, 26,* 157-171.

Kaufman, J. (1991). Depressive disorders in maltreated children. *Journal of the American Academy and Adolescent Psychiatry, 30,* 257-265.

Kaufman, J., Cook, A., Arny, L., Jones, B., & Pittinsky, T. (1994). Problems defining

resiliency: Illustrations from the study of maltreated children. *Developmental and Psychopathology, 6,* 215-229.

Kim, J., & Cicchetti, D. (2004). A longitudinal study of child maltreatment, mother-child relationship quality and maladjustment: The role of self-esteem and social competence. *Journal of Abnormal Child Psychology, 32,* 341-354.

Kinard, E. M. (1980). Emotional development in physically abused children. *American Journal of Orthopsychiatry, 50,* 686-696.

Kinard, E. M. (1995). Perceived social support and competence in abused children: A longitudinal perspective. *Journal of Family Violence, 10,* 73-98.

Kinard, E. M. (1998). Methodological issues in assessing resilience in maltreated children. *Child Abuse & Neglect, 22,* 669-680.

Klimes-Dougan, B., & Kistner, J. (1990). Physically abused preschoolers' responses to peers' distress. *Developmental Psychology, 26,* 599-602.

Kreig, C. (2003). *The link between parental discipline and social behavior among abused and comparison children: Moderating influences of nurturing parenting style and child gender.* Unpublished doctoral dissertation, North Carolina State University.

Ladd, G., & Profilet, S. (1996). The Child Behavior Scale: A teacher report measure of young children's aggressive, withdrawn, and prosocial behaviors. *Developmental Psychology, 32,* 1008-1024.

Levendosky, A., Okun, A., & Parker, J. (1995). Depression and maltreatment as predictors of social competence and social problem-solving skills in school-age children. *Child Abuse & Neglect, 19,* 1183-1195.

Luthar, S. S. (1993). Annotation: Methodology and conceptual issues in research on

childhood resilience. *Journal of Child Psychology and Psychiatry, 34,* 441-453.

Luthar, S. S. (Ed.). (2003). *Resilience and vulnerability*. New York: Cambridge University Press.

Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development, 71,* 543-562.

Luthar, S. S., & Cushing, G. (1999). Measurement issues in the empirical study of resilience: An overview. In M. Glantz, & J. Johnson (Eds.), *Resilience and Development: Positive life adaptations* (pp. 129- 160). New York: Plenum.

Luthar, S. S., & Zigler, E. (1991). Vulnerability and competence: A review of research on resilience in childhood. *American Journal of Orthopsychiatry, 61,* 6-22.

Main, M., & George, C. (1985). Responses of abused and disadvantaged toddlers to distress in age mates: A study in the day care setting. *Developmental Psychology, 21,* 407-412.

Mash, E. J., & Johnston, C. (1982). A comparison of the mother-child interactions of younger and older hyperactive and normal children. *Child Development, 53,* 1371-1381.

Masten, A. S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist, 56,* 227-238.

Masten, A. S., Best, K. M., & Garmezy, N. (1990). Resilience and development: Contributions from the study of children who overcome adversity. *Development and Psychopathology, 2,* 425-444.

Masten, A. S., Hubbard, J. J., Gest, S. D., Tellegen, A., Garmezy, N., & Ramirez, M. (1999). Competence in the context of adversity: Pathways to resilience and maladaptation

from childhood to late adolescence. *Development and Psychopathology, 11,* 143-169.

Masten, A. S., Morison, P., Pellegrini, D., & Tellegen, A. (1990). Competence under stress: Risk and protective factors. In A. Masten & J. Rolf (Eds.), *Risk and protective factors in the development of psychopathology* (pp. 236-256). New York, NY: Cambridge University Press.

Masten, A. S., Wright, M. (1998). Cumulative risk and protection models of child maltreatment. In B. B. Rossman & M. S. Rosenberg (Eds.), *Multiple victimization of children: Conceptual, developmental, research, and treatment issues* (pp. 7-30). Haworth Press, Inc.

McCrone, R., Egeland, B., Kalkoske, M., & Carlson, E. (1994). Relations between early maltreatment and mental representations of relationships assessed with projective storytelling in middle childhood. *Development and Psychopathology, 6,* 99-120.

McGloin, J. M., & Widom, C. S. (2001). Resilience among abused and neglected children grown up. *Development and Psychopathology*, *13*, 1021-1038.

McLoyd, V. C. (1990). The impact of economic hardship on black families and children: Psychological distress, parenting, and socioemotional development. *Child Development, 61,* 311-346.

Mercy, J. A., & Steelman, L. C. (1982). Familial influence on the intellectual attainment of children. *American Sociological Review, 47*, 532-542.

Moran, P. J., & Eckenrode, J. (1992). Protective personality characteristics among adolescent victims of maltreatment. *Child Abuse & Neglect, 16,* 743-754.

Mrazek, P. J., & Mrazek, D. A. (1987). Resilience in child maltreatment victims: A conceptual exploration. *Child Abuse & Neglect, 11*, 357-366.

National Clearinghouse on Child Abuse and Neglect Information (2004). Definitions of

    child abuse and neglect. Retrieved September 18, 2006, from

    http://www.childwelfare.gov.

Paley, B., Cox, M., & Kanoy, K. (2001). The young family interaction coding

    system. In P. Kerig & K. Lindahl (Eds.), *Family observational coding systems*, (pp.

    273-288). Mahwah, NJ: LEA.

Parker, J., & Asher, S. (1987). Peer relations and later personal adjustment: Are low-

    accepted children at risk? *Psychological Bulletin, 102,* 357-389.

Patterson, J. (2002). Understanding family resilience. *Journal of Clinical Psychology*,

    58, 233-246.

Patterson, G. R., DeBaryshe, B. D., & Ramsey, E. (1989). A developmental perspective on

    antisocial behavior. *American Psychologist, 44,* 329-335.

Perkins, D., & Jones, K. (2004). Risk behaviors and resiliency within physically abused

    adolescents. *Child Abuse & Neglect, 28,* 547-563.

Pianta, R. B., Erickson, M. F., Wagner, N., Kreutzer, T., & Egeland, B. (1990). Early

    predictors of referral for special services: Child-based measures versus mother-

    child interaction. *School Psychology Review, 19,* 240-250.

Pinderhughes, E. E., Nix, R., Foster, E. M., Jones, & The Conduct Problems Prevention

    Research Group. (2001). Parenting in context: Impact of neighborhood poverty,

    residential stability, public services, social networks, and danger on parental

    behaviors. *Journal of Marriage and Family, 63*, 941-953.

Price, J., & Glad, K. (2003). Hostile attributional tendencies in maltreated children.

    Journal of Abnormal Child Psychology, 31, 329-343.

Rogosch, F. A., Cicchetti, D., & Aber, J. (1995). The role of child maltreatment in early deviations in cognitive and affective processing abilities and later peer relationship problems. *Development and Psychopathology, 7,* 591-609.

Rudo, Z. H., Powell, D. S., & Dunlap, G. (1998). The effects of violence in the home on children's emotional, behavioral, and social functioning: A review of the literature. *Journal of Emotional and Behavioral Disorders, 6,* 94-114.

Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry, 57,* 316-331.

Rutter, M. (1990). Psychosocial resilience and protective mechanisms. In J. Rolf, A. Masten, D. Cicchetti, K. Nuechterlein, & S. Weintraub (Eds.), *Risk and protective factors in the development of psychopathology* (pp. 181-214). New York: Cambridge University Press.

Rutter, M. (1993). Resilience: Some conceptual considerations. *Journal of Adolescent Health, 14,* 626-631.

Sabourin Ward, C., & Haskett, M.E. (under review). Exploration and validation of clinically-relevant clusters of physically abused children.

Salzinger, S., Kaplan, S., Pelcovitz, D., Samit, C., & Kreiger, R. (1984). Parent and teacher assessment of children's behavior in child maltreating families. *Journal of the American Academy of Child Psychiatry, 23,* 458-464.

Salzinger, S., Feldman, R., Hammer, M., & Rosario, M. (1993). The effects of physical abuse on children's social relationships. *Child Development, 64,* 169-187.

Scarr, S., & Deater-Deckard, K. (1997). Family effects on individual differences in development. In J. Burack, D. Cicchetti, J. Weisz, & S. Luthar (Eds.), *Developmental*

psychopathology: Perspectives on risk and disorder (pp. 115-136). New York: Cambridge University Press.

Scarr, S., & Weinberg, R. (1978). The influence of "family background" on intellectual attainment. *American Sociological Review, 43,* 674-692.

Schaefer, E. (1959). A circumplex model for maternal behavior. *Journal of Abnormal and Social Psychology, 59,* 226-235.

Seligman, M. (1992). *Learned optimism: How to change your mind and your life.* New York: Pocket Books.

Sessa, F. M., Avenevoli, S., Steinberg, L., & Morris, A. S. (2001). Correspondence among informants on parenting: Preschool children, mothers, and observers. *Journal of Family Psychology, 15,* 53-68.

Shields, A., & Cicchetti, D. (1997). Emotional regulation among school-age children: The development and validation of a new criterion Q-sort scale. *Developmental Psychology, 33,* 906-916.

Smith, J., Brooks-Gunn, J., & Klebanov, P. K. (1997). The consequences of living in poverty for young children's cognitive and verbal ability and early school achievement. In G. Duncan & J. Brooks-Gunn (Eds.), *Consequences of growing up poor* (pp. 132-189). New York: Russell Sage Foundation.

Spaccarelli, S., & Kim, S. (1995). Resilience criteria and factors associated with resilience in sexually abused girls. *Child Abuse & Neglect, 19,* 1171-1182.

Straus, M. A. (1979). *Manual for the Conflict Tactics Scales.* Durham, NH: Family Research Laboratory, University of New Hampshire.

The New York Society for the Prevention of Cruelty to Children (2000). *125th*

Anniversary: 1875-2000. Retrieved October 21, 2004, from

http://www.nyspcc.org.

Thompson, M., Kingree, J., & Desai, S. (2004). Gender differences in long-term health

consequences of physical abuse of children: Data from a nationally representative

survey. *American Journal of Public Health, 94,* 599-604.

Toth, S. L., Manly, J., & Cicchetti, D. (1992). Child maltreatment and vulnerability to

depression. *Development and Psychopathology, 4,* 97-112.

Tusaie, K., & Dyer, J. (2004). Resilience: A historical review of the construct. *Holistic

Nursing Practice, 18*, 3-8.

United States Department of Health & Human Services, Children's Bureau (2004).

Chapter 2 Reports, *Child Maltreatment.* Retrieved September 18, 2006, from

http://www.acf.hhs.gov.

Valentine, L., & Feinauer, L. (1993). Resilience factors associated with female survivors

of childhood sexual abuse. *The American Journal of Family Therapy, 21,* 216-

224.

Wagner, M., Spiker, D., & Linn, M. I. (2002). The effectiveness of The Parents as Teachers

Program with low-income parents and children. *Topics in Early Childhood Special

Education, 22*, 67-81.

Walden, T. A., & Smith, M. C. (1997). Emotion regulation. *Motivation & Emotion, 21,* 7-36.

Waters, E., Hamilton, C. E., & Weinfield, N. S. (2000). The stability of attachment security

from infancy to adolescence and early adulthood: General introduction. *Child

Development, 71,* 678-683.

Webster-Stratton, C. (1990). Stress: A potential disruptor of parent perceptions and

family interactions. *Journal of Clinical Child Psychology, 19,* 302-312.

Werner, E. (1989). Vulnerability and resilience: A longitudinal perspective. In M.

Bambring, F. Losel, & H. Skowronek (Eds.), *Children and risk: Assessment,*

longitudinal research and intervention (pp. 157-172). New York: Walter de

Gruyter.

Whipple, E. E., & Richey, C. A. (1997). Crossing the line from physical discipline to child

Abuse: how much is too much? *Child Abuse & Neglect, 21,* 431-444.

White, K. (1982). The relation between socioeconomic status and academic achievement.

Psychological Bulletin, 91, 461-481.

Wind, T., & Silvern, L. (1994). Parenting and family stress as mediators of the long-term

effects of child abuse. *Child Abuse & Neglect, 18,* 439-453.

Wolfe, D. A. (1999). A developmental perspective of the abused child. In D. Wolfe's

(Ed.), *Child Abuse: Implications for Child Development and Psychopathology* (pp.

35-55). Thousand Oaks, CA: Sage Publications, Inc.

Zaslow, M. J., Weinfield, N. S., Gallagher, M., Hair, E. C., Ogawa, J. R., Egeland, B., et al.

(2006). Longitudinal prediction of child outcomes from differing measures of

parenting in a low-income sample. *Developmental Psychology, 42,* 27-37.

Zhou, Q., Eisenbergy, N., Losoya, S. H., Fabes, R. A., Reiser, M., Guthrie, I. K., et al.

(2002). The relations of parental warmth and positive expressiveness to children's

empathy-related responding and social functioning: A longitudinal study. *Child*

Development, 73, 893-915.

Ziesemer, C., Marcoux, L., & Marwell, B. (1994). Homeless children: Are they different

from other low-income children? *Social Work, 39,* 658-668.

Appendix A

Appendix A

Social Behavior Scale

Child's Name:_____   Teacher's Name: _____
Date form completed: _____   How long have you know this student? _____

Using the 5 point scale below, please indicate the degree to which each statement describes this child. Then place the completed scale in the envelope provided and mail back to Dr. Mary Haskett. Thank you.

1 = Never True 2 = Rarely True 3 = Sometimes True 4 = Often True 5 = Almost Always
                                                                                      True

1. This child is good at taking turns.	1	2	3	4	5
2. This child tells a peer that s/he won't play with that peer or be that peer's friend unless s/he does what this child asks.	1	2	3	4	5
3. This child is a solitary child.	1	2	3	4	5
4. This child hurts other child by pinching them.	1	2	3	4	5
5. This child tries to get others to dislike them by telling lies about the peers to others.	1	2	3	4	5
6. This child likes to play alone.	1	2	3	4	5
7. This child is ignored by peers.	1	2	3	4	5
8. This child verbally threatens to hit or beat up other children.	1	2	3	4	5
9. This child ruins others peer's things when s/he is upset.	1	2	3	4	5
10. Peers say mean things to this child at school.	1	2	3	4	5
11. This child pushes or shoves other children.	1	2	3	4	5
12. This child prefers to play alone.	1	2	3	4	5
13. This child verbally threatens to physically harm a child in order to get what they want.	1	2	3	4	5

14. This child tells others not to play with or be a peer's friend.   1   2   3   4   5

15. This child is helpful to peers.   1   2   3   4   5

16. This child is not chosen as a playmate.   1   2   3   4   5

17. When mad at a peer, this child keeps that peer from being in the play group.   1   2   3   4   5

18. Peers avoid this child.   1   2   3   4   5

19. This child tries to cheer up peers when they are sad or upset about something.   1   2   3   4   5

20. This child tries to dominate or bully peers.   1   2   3   4   5

21. This child doesn't have much fun.   1   2   3   4   5

22. This child is ridiculed or picked on by peers.   1   2   3   4   5

23. This child doesn't smile much.   1   2   3   4   5

24. Peers refuse to let this child play.   1   2   3   4   5

25. This child keeps peers at a distance.   1   2   3   4   5

26. This child kicks or hits others.   1   2   3   4   5

27. This child avoids peers.   1   2   3   4   5

28. This child is kind to peers.   1   2   3   4   5

29. This child tries to get others to dislike a peer.   1   2   3   4   5

30. This child is not liked much.   1   2   3   4   5

31. This child is excluded from peer's activities.   1   2   3   4   5

32. Peers say bad things about this child to other kids at school.   1   2   3   4   5

33. This child withdraws from peer activities.   1   2   3   4   5

34. This child tells a peer that they won't be invited to their birthday party unless s/he does   1   2   3   4   5

what the child wants.

35. This child gets hit or bullied at school.	1	2	3	4	5
36. This child looks sad.	1	2	3	4	5
37. This child verbally threatens to keep a peer out of the play group if the peer doesn't do what the child asks.	1	2	3	4	5
38. This child says or does nice things for other kids.	1	2	3	4	5
39. Please rate this child's <u>overall academic performance</u> this year.	A	B	C	D	F

		Sum	Mean
Prosocial	1:__, 15:__, 19:__, 28:___, 38:___,	_____/5	_____
Relational A.	2:__, 5:__, 14:__, 17:__, 29:__, 34:___, 27:___	_____/7	_____
Overt A.	4:__, 8:__, 9:__, 11:__, 13:__, 20:__, 26:__	_____/7	_____
Asocial	3:__, 6:__, 12:__, 25:__, 27:__, 33:__	_____/6	_____
Excluded	7:__, 16:__, 18:__, 22:__, 24:__, 30:__, 31:__	_____/7	_____
Depressed	21:__, 23:__, 36:__	_____/3	_____
Victimized	10:__, 32:__, 25:__		

Appendix B

Appendix B

Procedures for observations sessions

Prior to school visit:
You will be called as soon as a data collection session is scheduled. The information will also be emailed to you.

The following information will be provided:
♦ Name and subject # of the child to observe
♦ Name of the school, principal, and teacher
♦ Names of the observers who should be present
♦ Whether you are primary or reliability observer

Gather materials:
♦ Sufficient data sheets (white for primary; yellow for reliability)
♦ Clipboard and pencils
♦ Two tape players, two interval tapes, back-up batteries
♦ Your name tag
♦ Copy of teacher report forms and return envelope for teacher
♦ Sunglasses
♦ Phone numbers and directions to each school.

At the school:

When arriving at the school (10 minutes prior to scheduled observation), let the main office know you have arrived, sign in and proceed to the classroom. Make sure your name tag is on. Remind the teacher of your purpose and request the teacher report forms. If the teacher has to cancel the play session, reschedule and leave the room. Make sure to check out in the main office. Let Dr. Haskett know when the session has been rescheduled.

If the play session will occur, wait quietly back in the room until the class is ready to proceed. Ask the teacher to unobtrusively point out the child you will be observing and make sure you are clear as to which child s/he has pointed out.

Follow the classroom to the playground or the gym.

On the playground:

Put on your sunglasses. Find an unobtrusive, centrally located area in which to observe and put the headphones on. Do not engage in talk amongst yourselves. Instead fix your vision into the distance or focus on your papers. Avoid eye contact with children but do not ignore children who make direct attempts to get your attention. Estimate and record the number and ages of children present on the playground.

Continue until the data collection session is complete (30 minutes) or until the children are not longer available to observe.

If the session lasts less than 20 minutes, schedule a second session with the teacher, and inform Dr. Haskett.

After observations:
♦ If possible, thank the teacher for his/her assistance while still on the playground so you do not have to interrupt the class once they are inside.
♦ Note any irregularities in the data collection session.
♦ Go directly to the office to sign out of school.
♦ Return data to the lab within 24 hours.
♦ Report any complications to Dr. Haskett (515-1710) immediately.

This observational approach involves interval coding. There may be two coders: a primary coder and a secondary coder. The primary coder is responsible for gathering all materials (cassette recorder, interval tape, coding sheets, teacher report forms, information on the child, and directions to the school) and returning all materials to the lab within 24 hours. The secondary coder is responsible for recording the information at the school site and giving the complete form to the primary coder to return to the lab. This observation system is called a focal child system. One child, called the "target", is observed continuously for 30 minutes.

Behavior to be coded includes the following four social behaviors:

1. Engagement (ENG) Verbal or physical behavior directed to another peer or group of peers (not teachers) that has the purpose of engaging the peer in interaction or continuing the interaction begun by a peer. This may be neutral or positive behavior. Defining features of engagement include general proximity and active behavior such as touching, eye contact, talking, etc. Actively participating in a game is also included. It is not onlooker behavior such as hanging out beside a group of children (for example on the monkey bars), watching but not joining the activity.

   Examples include:
   ♦ Offer to help or request for help, sharing, providing information
   ♦ Invitation to play or response to invitation
   ♦ Playing chase or racing with another child or group of children
   ♦ Swinging or playing on monkey bards, with conversation or eye contact
   ♦ Digging a hole in the dirt with others (but only if they are working on the same hole, not if target is digging a hole beside others but not joining via eye contact or conversation)

2. Negative (NEG) Negative verbal or gestural behavior directed to another child, or saing negative things about another child. This category does not include physical contact (see RP and AGGR below).

Examples include:
- ♦ teasing ("your underwear is showing," "ha ha you dropped it")
- ♦ reprimands ("you shouldn't do that")
- ♦ commands ("command here now")
- ♦ tattle telling (even if legitimate complaint)
- ♦ threatening ("I'm gonna hit you")
- ♦ profanity
- ♦ saying mean things ("his parents are so ugly")
- ♦ instances of relational aggression ("you cant play with us")
- ♦ sticking tongues out, displaying a threatening gesture
- ♦ taunting or challenging gestures, growling

3. Rough Play (RP) Physical contact with a peer that is rough and negative but not of sufficient to be AGGR. These behaviors often occur during "roughhousing" but might occur in isolation, for example, brushing up against another child roughly while running past another child. This behavior may occur in the context of engagement, but might be coded alone if only the RP occurs in the interval

   Examples include:
   - ♦ holding onto a child's clothes
   - ♦ holding a peer tightly
   - ♦ elbowing or shouldering
   - ♦ physical contact while playing touch football or other game
   - ♦ bumping into one another

4. Aggression (AGGR) Physical contact with a peer or object that constitutes an attack with clear potential to harm OR taking something belonging to another child. This does not have to be intent (we cant guess at a child's intentions). Record even if the behavior seems 'accidental". A single behavior chain may include RP then become AGGR.

   Examples include:
   - ♦ hit, slap, scratch, pull hair, bite, kick, pinch, butt with head, head lock, twist toward the child, pulling to the ground.
   - ♦ destroying property
   - ♦ taking (or attempting to take) a toy that someone else is clearly playing with.
   - ♦ taking a toy is recorded when the object is in the hands of another child or if it is a piece of a game being played with (e.g., a ball).
   - ♦ taking articles of clothing such as shoes
   - ♦ any type of hitting even when part of a game
   - ♦ if target is holding another person, it would be aggression when the target tries to restrain the person while she or he is trying to get away

ID#_____ Date_____ Observer_____

Observation#_____ Sq. Footage_____ #/Age rage of peers_____

	Eng	Neg	Rp	Agg			Eng	Neg	Rp	Agg			Eng	Neg	Rp	Agg
1.1						11.1						21.1				
1.2						11.2						21.2				
1.3						11.3						21.3				
1.4						11.4						21.4				
	Eng	Neg	Rp	Agg			Eng	Neg	Rp	Agg			Eng	Neg	Rp	Agg
2.1						12.1						22.1				
2.2						12.2						22.2				
2.3						12.3						22.3				
2.4						12.4						22.4				
	Eng	Neg	Rp	Agg			Eng	Neg	Rp	Agg			Eng	Neg	Rp	Agg
3.1						13.1						23.1				
3.2						13.2						23.2				
3.3						13.3						23.3				
3.4						13.4						23.4				
	Eng	Neg	Rp	Agg			Eng	Neg	Rp	Agg			Eng	Neg	Rp	Agg
4.1						14.1						24.1				
4.2						14.2						24.2				
4.3						14.3						24.3				
4.4						14.4						24.4				
	Eng	Neg	Rp	Agg			Eng	Neg	Rp	Agg			Eng	Neg	Rp	Agg
5.1						15.1						25.1				
5.2						15.2						25.2				
5.3						15.3						25.3				
5.4						15.4						25.4				
	Eng	Neg	Rp	Agg			Eng	Neg	Rp	Agg			Eng	Neg	Rp	Agg
6.1						16.1						26.1				
6.2						16.2						26.2				
6.3						16.3						26.3				
6.4						16.4						26.4				
	Eng	Neg	Rp	Agg			Eng	Neg	Rp	Agg			Eng	Neg	Rp	Agg
7.1						17.1						27.1				
7.2						17.2						27.2				
7.3						17.3						27.3				
7.4						17.4						27.4				
	Eng	Neg	Rp	Agg			Eng	Neg	Rp	Agg			Eng	Neg	Rp	Agg
8.1						18.1						28.1				
8.2						18.2						28.1				
8.3						18.3						28.3				
8.4						18.4						28.4				
	Eng	Neg	Rp	Agg			Eng	Neg	Rp	Agg			Eng	Neg	Rp	Agg
9.1						19.1						29.1				
9.2						19.2						29.2				
9.3						19.3						29.3				

9.4						19.4						29.4				
	Eng	Neg	Rp	Agg			Eng	Neg	Rp	Agg			Eng	Neg	Rp	Agg
10.1						20.1						30.1				
10.2						20.2						30.2				
10.3						20.3						30.3				
10.4						20.4						30.4				

Appendix C

Appendix C

Qualitative Ratings: Parent Child Interaction At 24-36 Months of Age

Martha J. Cox (1997)

Qualitative Scales

Each set of qualitative ratings is to be based on 10-20 minutes of semi-structured observation. These ratings can be applied to a variety of challenge situations for the child and parent (i.e., tool use tasks, puzzle tasks). The scales are typically used with mothers or fathers and their children during the years 2-3. The observer should take longhand notes of the parent or child behaviors as they relate to each scale and organize the notes by coding category. It is recommended that the observer watch the tape once taking minimal notes; watch the tape a second time taking careful notes of parent and child behaviors related to the scales; score the parent variable and then watch the tape for a third time to consider those scores; and score the child variables and then watch the tape a fourth time to consider those scores.

In assigning a rating, the observer should use a two-step process (borrowing from the logic of Harter). The first step is to ask, "is this dimension characteristic (a 5 or 6 or 7 rating) or not characteristic (a 1 or 2 or 3 rating) or neither characteristic (a 4) of the person being rated?" Once this decision is made, then the rater needs to make a finer discrimination between 5, 6, or 7 and 1, 2, and 3 ratings.

Ratings for most of the scales should be based on the quality and quantity of the behavior. Thus, evaluations should be made taking into account the quality of the observed behaviors in relation to the proportion of the time they were observed.

Scaling for Coding Parent-Child Interaction

Introduction

These scales will be qualitative ratings of three 10-minute parent-child interactions. They are in adaptation of scales developed by Cox (1997) for observing parent-child behaviors for young children but are adaptable for use with older children. The scales are to be used to code behaviors from five categories of interaction; Sensitivity, Intrusiveness, Detachment/Engagement, Positive Regard for the child, Negative Regard for the child, and Flat Affect. The scales are scored on a seven point Likert type system.

The process of observation should be as follows. The observer should watch the designated 10-minute segment of the tape completely taking minimal notes relating to the chosen categories. These notes should include initial impressions of the interaction under scrutiny and significant behaviors observed that support these impressions. Subsequent to watching the tape, the observer should decide if the interaction was characteristic or not characteristic of the interaction and a preliminary score should be assigned (see scoring criteria on p. 2).

The tape should be watched a second time with careful note taking of the parent and parent-child behaviors relating to the categories. After the second viewing, a final specific score should be assigned for each category under consideration. The tape may be stopped at any time and rewound to review key segments or behaviors.

These guidelines need to be maintained throughout the project. A standard and repeatable procedure is one of the best ways to ensure reliability. As you become more familiar with the scale, the rating of behaviors will become more fluent. With practice, it will be possible to rate several categories at the same time.

The ratings should be made on both the quality and quantity of the behaviors. That is, the characteristics of the behavior should be noted in proportion of their occurrence. For example, if a parent displays a general characteristic of warmth and support for the child punctuated by one incident of irritation, that incident however discordant, should not be the sole basis for rating the parent's behavior as not characteristic of warmth and support.

Scoring

The Likert type of the scales consisting of ratings from one to seven. In assigning a number to the observed behaviors a two-step process should be employed. First, the observer should ask him or herself, "is this dimension characteristic (a 5 or 6 or 7 rating) or not characteristic (a 1 or 2 or 3 rating) or neither characteristic (a 4) of the person being rated?" Once this decision is made, then the rater needs to make a finer discrimination between 5, 6, or 7 and 1, 2, and 3 ratings. The middle number, four, will be used as midpoint determinant of the behavior to answer the question "is the category characteristic or not characteristic of the observed behavior?" The final scoring should take place after viewing the tape a second time and be reviewed during the third viewing.

Conceptual markers to use in both the initial and final assignation of numbers are the following: one indicates that the applied scale is not at all characteristic or indicative of the observed interaction, three suggests the interactionis slightly or minimally indicative of the interaction, five indicates the behaviors observed are significantly or predominantly characteristic of the interaction and seven suggests that the interactions are exceptionally indicative of the behavior category under consideration.

Scale Categories

Positive Regard for the Child:

Rationale: the category represents the parent's positive feelings towards the child as expressed during interactions with him or her. Positive feelings may be shown by speaking to the child in a worm soft tone of voice, hugging or other expressions of physical affection, an expressive face, smiling, relaxed, oriented toward the child, positive verbal behaviors shown by praising, joking, laughing, listening to the child, making eye contact when talking, watching attentively and appearing playful.

Ratings on this category are based on both the quantity and quality of positive behaviors. Quantity is simply the frequency with which representative behaviors are demonstrated. Quality refers to the intensity of the behavior and may be thought of as levels of expressiveness, enthusiasm, playfulness and or warmth.

1 = Not at all characteristic: Parent shows none of the behaviors noted above either physical or verbal. For example, the parent initiates no physical contact with the child and demonstrates no verbal affection. The parent may appear negative with the child or neutral, flat or expressionless. This rating may also be applied if the positive expression seems inappropriate to the situation (laughing at child noncompliance or giving clearly unwanted physical contact. Quality and quantity of behaviors are both nonexistent.

3 = Minimally characteristic: Parents display some positive verbal and/or physical behavior toward the child but it is minimal, weak in quality and/or infrequent in quantity. The parent may praise the child one or two times and smile infrequently with the child. The predominant impression of the interaction is neutral/disengaged, intrusive or negative.

5 = Moderately characteristic: Parents display predominantly positive behaviors toward the child with more frequent behaviors of higher quality. The sense of the interaction is clearly more positive than the 3 rating but positive regard waxes and wanes. Physical contact appears to be nurturing to the child. Praise is appropriately timed.

7 = Very characteristic: Parents are exceptionally high in physical and verbal expression of positive regard extending throughout the session. There are frequent expressions of praise, almost constant smiling and joking. Parents seem lighthearted and clearly delighted by the child.
Negative Regard for the Child:

Rationale: The category represents both the frequency and intensity of negative affect and behavior toward the child. Behaviors indicative of this category include expressions of disapproval (Not appropriate limit sitting), harsh negative tone of voice when speaking with the child, tense body and or tense facial muscle evidence of frustration with the child an/or a strained or pained expression, threatening the child and or punishment without explanation, physical roughness, and belittling the child, put downs, use of an unflattering names and sarcasm. Intrusive behaviors are scored by another category and should not be considered for this category unless there is a punitive quality to them.

Ratings on this category are based on both the quantity and quality of negative behaviors. Quantity refers to the frequency with which representative behaviors are demonstrated. Quality refers to the intensity of the behavior and may be though of as levels of tension, harshness or disapproval within the session.

1 Not at all characteristic: This rating should be assigned to parents who do not display any negative verbal or physical behaviors. No evidence of anger, frustration, disgust or dislike should be evident in parent's voice or facial expression. The parent may appear positive or expressionless and flat but not negative.

3 Minimally characteristic: This rating should be given to parents who are minimally negative with low frequency and intensity of negative expressions or behaviors. There may be instances of frustration with what the child is doing but positive and neutral expressions may also be observed.

5 Moderately characteristic: This rating should be assigned to parents who predominately display negative verbal and or physical behaviors but may display some neutral and even positive behaviors as well. Persistent low intensity negative behaviors or some evidence of high intensity negative regard are observed.

7 Highly characteristic: Feelings of negative regard are expressed strongly, or consistent levels of negative behavior are observed. The overriding affect pervading the parent child interaction is negative.

Sensitivity/Supportive Presence

Rationale: This category primarily refers to parental behaviors observed in relation to evolved free play, clean- up and puzzle solving activities. Either the parent or the child may have chosen the activity. The process after the initiation of the activity is the important point. The focus is on how the parent helps the child have positive play and learning experiences especially when the child is dealing with a difficult task or a chosen activity during the free play session. The sensitive and supportive parent shows a balance between allowing the child to play or work autonomously while maintaining a level of involvement and support hat ensures the child will succeed in and enjoy the experience. If, for example, a child is having difficulty with a task, the parent may be verbally reassuring and encouraging, may give a suggestion or hit and perhaps lean physically closer to the child. A sensitive interaction is well timed to the child's responses and appears to be in sync or appropriate with what the

child seems to need. The parent helps keep the child interested if need be and also allows for autonomy when desired by the child. A sensitive parent helps the child regulate frustration, boredom, and anger with encouragement and the parent can adapt his or her interactions to the child's mood and effort. Conversely, a parent scoring low in this category fails to provide supportive cues to the child, may appear passive, aloof and uninvolved or conversely intrusive, taking over the interaction. He or she may give the impression of greater concern for personal behavior and perceived adequacy as a parent rather than of the child's feelings or actions. The parent may appear to be performing for the camera, for example.

Ratings on this category are based on both the quantity and quality of sensitive/supportive behaviors. Quantity is simply the frequency with which behaviors are demonstrated. Quality refers to the intensity of the behavior and may be thought of as levels of verbal support, encouragement connection with the child within the session.

1 Not at all characteristic: There are not signs of parental sensitivity or support for the child. The parent is either totally intrusive or detached, aloof or unavailable. The parent does not respond appropriately to the child's verbal and physical cues and interactions are primarily ill timed or inappropriate. The parent completely fails to be supportive of the child.

3 Minimally characteristic: The parent gives some support but it is sporadic and poorly timed to the child's needs. The child may look frustrated and/or ask for help and the parent fails to respond in a brief time. The dominant mode is one of parental insensitivity i.e., intrusiveness although some positive behaviors like encouragement or praise may also be noted.

5 Moderately characteristic: The parent provides good but occasionally inconsistent support, reassurance and confidence in the child's ability during activities and tasks. The parents are however, predominantly supportive and sensitive but some supportive responses may be ill timed.

7 Highly characteristic: This parent skillfully and sensitively provides support throughout the sessions. The parent sets up the situation demonstrating confidence in the child's ability to complete the activity. If the child is having difficulty, the parent finds a way to encourage whatever effort the child makes. Although inadequate efforts may be rejected, this is done with sensitivity and confidence with the child. This rating should be assigned to parents who are exceptionally sensitive. Interactions with the child are characteristically well timed and appropriate.

Detachment/Disengagement

Rationale: This category represents the level of parental interest and emotional involvement with the child as they play together or work to complete the assigned tasks. The detached parent seems unaware of the child's need for interaction and does not respond to the child's looks, cues or vocalizations. The parent may sit quietly aloof not paying attention to the child and there seems to be little relationship between the child's behavior and the parent's response to it. The child may initiate conversation for example and the parent does not respond or responds inappropriately. The parent's behavioral timing seems out of synchrony

with the child's affect and behavior. Simply allowing the child to complete the puzzle or paly by him or herself is not necessarily a sign of detachment. This may be appropriate if the child is doing well and is happy and the parent checks in with the child visually. The detached parent seems passive, emotionally uninvolved, bored, and enthusiastic about the child is doing. Behaviors suggestive of detachment may include facing away from the child without attempting to visually check in, infrequent eye contact or conversation, not responding to the child's vocalization and or smiles, and ignoring what the child is doing. Being intrusive and even negative is not being detached.

Ratings on this category are based on both the quantity and quality of negative behaviors. Quantity is simply the frequency with which behaviors are demonstrated. Quality refers to the intensity of the behavior and may be thought of as levels of indifference and a lack of involvement within the session.

1 Not at all characteristic: This rating should be given to parents who display no detachment or underinvolvement. When interacting with the child, the parent is clearly emotionally involved. These parents may be sensitive to the child's needs or intrusive as rated by other categories.

3 Minimally characteristic: This rating should be assigned who display minimal detachment. They may briefly look away from what the child is doing or not respond to everything the child says. While the parent is sometimes uninvolved, he/she is clearly more involved than not.

5 Moderately characteristic: This rating should be given to parents who appear predominantly detached. They are observed to be verbally and or physically aloof from the child, facing away more often than being oriented to the child and frequently not responding to the child's conversation. The parent is relatively more uninvolved than involved.

7 Highly characteristic: This rating should be assigned to parents who are so detached that it seems worrisome. The child sits without parent attention almost the entire time even when the parent is in close proximity. The parent may move away from the child or withdraw emotionally.

Intrusiveness

Rationale: A parent scoring high in this category lacks respect for the child as an individual and fails to recognize or understand the child's need for autonomy and independence. The parent interferes with the child's needs desires, interests or actual behaviors and dominates or leads the interaction. Setting appropriate behavioral limits for the child with directives is not necessarily intrusive. Intrusiveness may be reflected by a parents' failure to follow the child's lead in interactions. Choosing the activity during play sessions is intrusive. Intrusiveness can also occur in a physical manner grabbing the child's hands and placing them somewhere else or inappropriate affection such as hugging or kissing that interferes with the child efforts. The parent may be verbally intrusive by imposing directions or not allowing the child to make suggestions or pursue independent efforts. It is also important to observe the context of

parental intrusion referring to child behaviors that precede them and the child's responses to the behaviors. What may seem intrusive to the coder may not be to the child. These context clues are highly subjective, however, and if clear evidence of parental intrusion is present it should be scored as such.

Ratings on the category are based on both the quantity and quality of intrusive behavior. Quantity is simply the frequency with which behaviors are demonstrated. Quality refers to the intensity of the behavior an dmay be thought of as levels of intrusiveness and parental control within the session.

1 No intrusiveness: No signs of intrusiveness are present. The parent may be involved with the child yet continue to give sensitive encouragement while allowing the child to choose activities and decide how to complete them. The parent may alternatively, appear totally uninvolved with the child and appear detached or withdrawn. In either case, the parent does not impose directives or suggestions on the child unless the child needs or asks for that direction. If directives or suggestions are given, it is a manner showing patience and respect for the child. A parent may also offer the child help and let the child decide to accept or reject it. If requested, the parent will allow the child to work alone.

3 Moderately low intrusiveness: There is some evidence for intrusiveness but it is not pervasive. The parent may initially choose the play activity but then allow the child to take the lead in play. The instances that do occur are of low intensity and may not interfere materially with the child's need for autonomy. Directives may be poorly timed, for example.

5 High intrusiveness: There are clear incidents of intrusiveness throughout the sessions and it is clear that the parent's agenda has precedence over the child's needs and interests. There may be either some high intensity interactions or persistent low level intrusive interactions such as frequent but not constant suggestions as to how activities should proceed. For example, the parent may physically direct behavior more than once or may appear uninvolved for long periods but whenever there is an interaction appear consistently intrusive.

7 Very high intrusiveness: The parent is highly intrusive. The parent's runs the show and almost constantly intervenes inappropriately without cues from the child with a stream of directives and suggestions. Highly intrusive parents seem to react to their own schedule rather than basing their actions upon the needs of the child. The parent is domineering and may demonstrate power assertive techniques to get the child to comply either with verbal commands or physical directives.

Flatness of Affect
Rationale: This category represents the parent's level of animation in face and voice. Flatness is exhibited by blank impassive facial expressions and monotone verbal expressions. It is marked by a lack of animation or apparent energy. Parents how display intrusive and negative verbal behaviors or expressions with their children are not flat. Also if the parent is not expressing much verbal animation but is watching the child with interest, it is a sign that the parent's affect may not be flat. The parent may simply be reserved. This category

assesses the parent's overall demeanor not just animation with the child. Behaviors are rated not what is being said.

Ratings on this category are based on both quality and quantity of flat behaviors. Quantity is simply the frequency with which behaviors are demonstrated. Quality refers to the intensity of the behavior and may be though of as levels of flatness or blankness.

1 Not at all characteristic: This rating should be assigned to parents who exhibit no flatness. There is consistent animation in the parent's demeanor, behaviors, and voice.

3 Minimally characteristic: This rating should be given to parents who exhibit some flatness. The parent is usually animated but there is some time when facial expression is blank and impassive and the voice is monotone.

5 Moderately characteristic: This rating should be assigned to parents how are predominately flat. Infrequent periods of animation may alternate with more clear and prolonged periods of flatness.

7 Highly characteristic: There is a consistent absence of animation in expression and or voice.

Scoring Sheet for Parent Child Interaction

Name_____   Date_____ Segment 1 2 3
Parent ID#_____   Child ID # _____

1. Positive Regard   Notes:

1
2
3
4
5
6
7

2. Negative Regard   Notes:

1
2
3
4
5
6
7

3. Sensitivity/Support   Notes:

1
2
3
4
5
6
7

4. Disengagement/Engagement   Notes:

1
2
3
4
5
6
7

5. Intrusiveness   Notes:

1
2
3
4
5
6
7

6. Flat Affect   Notes:

1
2
3
4
5
6
7