CHILD PHYSICAL ABUSE: AN ANALYSIS OF SOCIAL COGNITION
AND OBJECT RELATIONS

DISSERTATION

Presented to the Graduate Council of the University of North Texas in Partial Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

By

Robert N. Freedendfeld, B.A., M.S.
Denton, Texas
May, 1994
CHILD PHYSICAL ABUSE: AN ANALYSIS OF SOCIAL COGNITION
AND OBJECT RELATIONS

DISSERTATION

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

By

Robert N. Freedenfeld, B.A., M.S.
Denton, Texas
May, 1994

This study compared the social cognition and object relations of 39 physically abused children to a clinical group of 39 children with no recorded history of abuse. Subjects ranged in age from 6 to 16 years. TAT stories were analyzed through the use of the Social Cognition and Object Relations Scales (SCORS; Westen et al., 1985) which assesses four dimensions of object relations. As predicted, a history of physical abuse was found to be associated with a more malevolent object world, a lower level capacity for emotional investment in relationships and moral standards, and less accurate, complex, and logical attributions of causality in understanding human interaction. These object relations impairments were demonstrated to reflect both a typical level of pathological functioning, as well as a propensity for more grossly pathological object relations. Results are discussed in terms of their clinical, diagnostic, and theoretical implications.
TABLE OF CONTENTS

LIST OF TABLES .................................................. vi

Chapter

I. INTRODUCTION ................................................. 1
   The Prevalence of Physical Abuse
   Surveys
   Reports of Abuse to Public Agencies
   Demographic Characteristics of Physically Abused Children
   Consequences of Child Physical Abuse
   Review of the Initial Effects of Child Physical Abuse
   Objective Measures of Symptoms
   Studies on the Interpersonal Functioning of Abuse Victims
   Research Findings Using Projective Measures
   The Effects of Physical Abuse on Adults Abused as Children
   Psychoanalytic Theories of Child Physical Abuse
   The Dynamics of Parent-Child Relationships
   The Effects of Physical Abuse on Victims’ Object Relations
   The Thematic Apperception Test
   Object Relations Theory
   Social Cognition and Object Relations Scales (SCORS)
   Complexity of representations of people
   Affect-tone of relationship paradigms
   Capacity for emotional investments in relationships and moral standards
   Understanding of social causality
   Purpose and Significance of the Study
   Specific Hypothesis

II. METHOD .......................................................... 88
   Subjects
   Test Measures
   Nontest Measures
   Procedure

III. RESULTS ....................................................... 93

iv
Description of Physical Abuse Group
Preliminary Analyses
Analysis of Hypotheses
Post Hoc Analyses

IV. DISCUSSION ................................. 98
   Conclusions
   Limitations

APPENDICES ................................. 113

REFERENCES ................................. 125
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Comparison of Groups on Age, Intelligence, and Race</td>
<td>118</td>
</tr>
<tr>
<td>2.</td>
<td>Correlations Among Scales of the SCORS for Mean Scores with Standard Deviation on Diagonal for Abuse and Nonabuse Groups</td>
<td>120</td>
</tr>
<tr>
<td>3.</td>
<td>Correlations Between Intelligence, Mean Word Count, and Mean Scores for Scales of the SCORS</td>
<td>121</td>
</tr>
<tr>
<td>4.</td>
<td>Correlations Between Intelligence, Mean Word Count, and Percentage of Level-1 Scores for Scales of the SCORS</td>
<td>122</td>
</tr>
<tr>
<td>5.</td>
<td>Mean Scores and Adjusted Mean Scores Across Scales of the SCORS for Abuse and Nonabuse Groups</td>
<td>123</td>
</tr>
<tr>
<td>6.</td>
<td>Percentage of Level-1 and Adjusted Percentage of Level-1 Scores Across Scales of the SCORS for Abuse and Nonabuse Groups</td>
<td>124</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION

Violence towards children has manifested in every conceivable manner: physically, emotionally, through neglect, by sexual exploitation, and by child labor. Physically abusive treatment, in particular, has often been culturally sanctioned throughout history for the discipline or education of children, the pleasing of certain gods, the expelling of evil spirits, or as a suitable cure for unruly child behavior (Radbill, 1987).

Physical abuse of children is by no means a recent phenomenon and is not considered to be culturally specific (Wolfe, 1987). Radbill (1987) traces the roots of child abuse to past societies in which children had no rights and the infant “was a nonentity and could be disposed of with as little compunction as for an aborted fetus” (p.3). He describes a tradition in British New Guinea in which an infant is taken to the banks of a stream and its lips are moistened with water. If the baby does not accept the water it is thrown into the stream to die. In other societies a newborn’s fitness to live would be determined by plunging it into an icy river. In Germany, this would be done to test its hardiness and to “harden” the child. In Greek society a weak, premature, or deformed infant was likely to be
strangled when the mother was not looking. This would be done to keep the infant from growing up and passing his/her defects to his/her offspring.

It was not until the early part of the twentieth century that legal and social precedents for intervention on behalf of maltreated children slowly became established. The first of these precedents was the passage of the Social Security Act in the 1930's which made child protection a public responsibility. This governmental recognition of abuse spurred research investigations that established, for the first time, that some types of physical injuries to children were the result of willful trauma inflicted by their parents (Caffey, 1946; Silverman, 1953). The scientific community, lead by Kempe, Silverman, Steele, Droegenmueller, and Silvers' (1962) publication on the "battered child syndrome," began to take an interest in and define child abuse and its sequelae. During the 1980's, public awareness of child abuse continued to increase as more social agencies were founded specifically to deal with such issues. More money was invested in research and scientific journals were created specifically to address abuse (e.g., Child Abuse and Neglect, The Journal of Interpersonal Violence). Now, in the 1990's a national crisis has been decreed by various social and professional agencies, including the American Psychological Association and the Federal Government. Child abuse has been considered
to have climbed to epidemic proportions as many studies over the last 25 years have documented the often alarming and controversial prevalence of physical abuse.

As society's recognition of child physical abuse has emerged over the last three decades the need for effective psychological treatment of abuse victims has grown more urgent. The purpose of this study is to assist mental health professionals in their understanding and identification of physically abused children through the investigation of victims' responses to a commonly used psychological test.

The Prevalence of Physical Abuse

Information on the prevalence of child physical abuse comes from a wide variety of sources including public agencies, hospitals, police reports, and national surveys. As a result, statistics on the frequency of abuse often vary greatly depending on the sampling methodology, the criteria for reporting abuse, and the definition used to identify when abuse has occurred. Research that employs data collected through survey and interview techniques often produces substantially different results from that based on reports of abuse to public agencies.

Surveys

Differences in frequency rates among surveys are often accounted for by variability in definitions and methodology. One of the highest rates of abuse among the surveys was
obtained by Gelles (1978) through use of a very broad
definition of abuse (any act of violence toward a child).
He found that 73 percent of a random sample of 2,143
American families admitted to at least one violent act
towards their children in the year they were surveyed, 1976.

Using a more conservative definition, lower rates of
abuse were found in a 1975 study of violence against
children by Straus (1979). Through phone interviews, data
were collected on 1,146 families with children between the
ages of 3 to 17 years. Child abuse was defined as "an
attack by a parent involving punching, kicking, biting,
hitting with an object, 'beating up,' or using a knife or
gun" (p.213). On this basis Straus (1979) concluded that
14 percent of American children (approximately 6.5 million
children) in the U.S. are physically abused each year.

Still lower rates of abuse were found by Gil (1966) by
employing an indirect methodology in gathering frequency
data. This study provides one of the earliest estimates of
the incidence of physical abuse and comes from a nationwide
survey by the National Opinion Research Center (NORC) of the
University of Chicago in 1965 (Gil, 1966). The survey
defined child abuse as "an occurrence in which a caretaker,
usually an adult, injures a child not by accident but in
anger or deliberately" (Gil & Noble, 1979, p.159). The
sample consisted of 1520 respondents, 21 years or older,
chosen randomly from across the United States. Forty-five
respondents replied affirmatively to a questionnaire when asked if they had personal knowledge of families within which an incident of child abuse had occurred during the preceding year. From these results the authors extrapolated to the entire nation and estimated that there were between 2.53 and 4.07 million cases of physical child abuse during that year. Abuse of children is often something parents are less willing to admit to or display around others (Gelles & Straus, 1987). As a result, this indirect method of compiling data may have underestimated actual prevalence, as respondents may not have always witnessed "typical" family behaviors.

More recently, Wolfner and Gelles (1993) found even lower abuse rates. Through phone interviews, in 1985, they sampled 6,002 households in which a child of 18 years or younger was living. Physical abuse was defined as an act "carried out with the intention, or perceived intention, of causing physical pain or injury to another person" (p.199). Results were categorized into acts of minor violence (e.g., pushing, grabbing, slapping) and severe violence (e.g., hitting, kicking). They found that approximately 7 percent of the children in these households experienced one or more abusive incidents during the survey year, with 6 percent of the events categorized as minor incidents of abuse and 1 percent as major incidents of abuse. The authors attributed the lower rates of abuse relative to other studies by citing
methodological differences (i.e., phone interview), definitional disparities, and the possibility that respondents are becoming less willing to disclose abuse due to increased social vigilance.

**Reports of Abuse to Public Agencies**

Overall, reports of child abuse to public agencies have risen dramatically over the last 25 years, though they consistently report lower rates of abuse than survey studies. The American Humane Association (AHA) collects and combines statistics from child protective services in the United States. Its statistics reflect the number of reported child abuse and neglect cases filed in a given year. In the seven year period from 1976 to 1983, the AHA found a 142 percent increase in child maltreatment reporting. In an earlier study, Gil (1970) reviewed every available case of child physical abuse reported to public agencies in the United States through legal channels in 1967 and 1968. He discovered that there were 9,563 reports received in 1967 and 10,931 received in 1968. Thirteen and sixteen years later, reports from the American Humane Association (AHA) in 1981 and 1984 showed figures much higher than those reported by Gil (1970). In 1981, the AHA estimated that approximately one million reports of child maltreatment were reported, of which approximately 250,000 cases were physical abuse (AHA, 1984). In 1984, abuse statistics increased to an estimated 1.7 million filed
reports of child abuse and neglect (AHA, 1986). Of those reported, approximately 25 percent or 425,000 had suffered some sort of physical injury. The rise in reports of physical abuse to public agencies has been attributed to a more accurate identification system (Justice & Justice, 1990), an increase in public awareness (Iverson & Segal, 1990), and even speculation that violence towards children is increasing (Lovens & Rako, 1975).

Depending on the methodology and definitional criteria used, yearly incidence estimates of abuse can range greatly from 6.5 million (Straus, 1979) to 250,000 (AHA, 1984). Studies that utilize data from public agencies generally report lower abuse rates than those obtaining data from surveys because they only include cases in which physical injuries are produced (Straus, 1979). Nevertheless, there is general agreement that prevalence rates reported in all studies of child abuse are underestimates and the true prevalence of abuse is even more startling (Geraldo & Sanford, 1987; Helfer & Kempe, 1987).

As a review of prevalence data suggests, methodological issues should be an important consideration in child abuse research. Authors have proposed definitional and design criteria that should be followed when doing research in this area. Straus, Gelles, and Steinmetz (1980) propose a narrower definition of abuse that is much more limited and objective. They suggest using definitions based more on
acts of physical violence and less on immediate effects of harm to a child. Additionally, definitions of abuse are subject to cultural and political biases (e.g., some groups promote abortion as child abuse). Korbin (1980) recommends that the definition of abuse be based on culturally normal standards not subject to divergent cultural or political ideology.

Iverson and Segal (1990) emphasize more rigorous design strategies. They warn that researchers should be wary of confounding variables (e.g., social economic status, race, gender, age, Intelligence Quotient) that can distort results, and encourage use of the statistical techniques (e.g., analyses of covariance, partial correlations) that can account for confounds. They suggest the use of large samples to reduce the influence of uncontrolled variables which are often related to abuse such as family chaos and emotional abuse. Finally, they recommend using comparison groups which are as similar as possible, except for the variables of interest (e.g., physical abuse). The study of abuse has many inherent difficulties, but methodological rigor can improve studies and increase the validity of findings.

Studies that examine demographic characteristics of physically abused children tend to vary less than research on prevalence figures, as demographic data may be less affected by reporting criteria and abuse definitions.
Demographic Characteristics of Physically Abused Children

Findings tend to show that males are abused more often than females until adolescence, when abuse to females outnumbers that of males. For example, Gil (1970) found that slightly more than half the children reported as abused were boys, except in the teenage years where girls accounted for over two thirds of cases. Geraldo and Sanford (1987) came to a similar conclusion. Two recent studies, which did not consider age as a variable, found males to be the prominent victims. Jones and McCurdy (1992) compiled nationwide demographic characteristics of 2814 maltreated children of which 829 were found to be physically abused. Of those, 54 percent were male. Similarly, Wolfner and Gelles (1993) found that male children were more often physically abused than female children at a rate of about 2 to 1.

Though there have been conflicting findings (Gil, 1970), studies tend to show that infants have the lowest rates of abuse and school age children tend to have the highest. The average age of children reported to public agencies in 1981 was 7.2 years of age (AHA, 1981). On the other hand, Wolfner and Gelles (1993) found that preschoolers (3 to 6 years of age) had the highest rate of abuse as compared to infants and teenagers, though they did find that the second highest abused group was school age children between 7 and 12 years of age. Further support
that school age children have the highest rates of abuse comes from Jones and McCurdy (1992), who found that children between the ages of 6 and 12 years had the highest rate of physical abuse (36%), followed by teenagers (30%).

Studies that have investigated race as a factor in abuse also produce conflicting findings. Gil (1970) found that 76 percent of his sample of physically abused children were non-white. In partial agreement with this study, Wolfner and Gelles (1993) found African-Americans to have the highest rate of severe violence towards children when compared to Caucasians and Hispanics. They also found the differential rate of minor violence between Caucasian and African-American caretakers to be nonsignificant. Hispanic respondents had a significantly lower rate of minor violence than the other two ethnic groups. In contrast, the American Humane Association (1984) found that 68 percent of their sample of physically abused children were Caucasian, 22 percent African-American, and 8 percent Hispanic. Similarly, Jones and McCurdy's (1992) sample of abused children tended to be Caucasian (50.5%) as opposed to African-American (26.7%) or other (20.7%). One other study (Straus, 1979) did not find a significant difference in abuse rates between African-American and Caucasian families. Further study needs to be done to better understand the relationship between race and physical abuse.
One of the most consistent findings in the literature is that abuse often occurs in lower socio-economic groups. Gil (1970) found that over 37 percent of the families in this study were receiving public assistance. Similarly, the AHA's data (AHA, 1984) showed that of the families in which abuse took place, 43 percent were on public assistance. In Straus's (1979) sample of 1,146 families, the child abuse rate in families where the father was a manual worker was 41 percent higher than in families in which the father was a white-collar worker. In addition, families that had an annual income under $6,000 exhibited a 61 percent higher rate of abuse than other families. Similarly, Jones and McCurdy (1992) found that 47 percent of the abusive families had annual incomes below $15,000. Interestingly, Wolfner and Gelles (1993) found no significant difference among socioeconomic groups with respect to instances of minor violence (a broader definition of abuse). In agreement with other studies, however, they did find that poorer families (annual income below $10,000) reported 1.5 times more severe violence towards their children than more affluent families. Geraldo and Sanford (1987) in their literature review discovered that SES was related to rates of physical child abuse but concluded that "low socioeconomic groups are probably over-represented in officially reported cases due to their increased likelihood of being reported" (p. 139).
Most studies show that children's caretakers are most commonly the perpetrators of physical abuse, particularly female parent-figures. According to Gil (1970), in nearly 50 percent of cases, a mother or stepmother was the perpetrator compared to about 40 percent in which the father was the perpetrator. In addition, over 70 percent were abused by a biological parent and 14 percent by a stepparent. Similarly, the AHA (1984) found that 95 percent of perpetrators were parents. Straus (1979) found that 64 percent of perpetrators were women, mothers of the children. Interestingly, whereas Wolfner and Gelles (1993) found that women caretakers reported a higher rate of minor violence towards their children, there was no significant difference between women and men for the rate of severe violence.

A review of these studies makes apparent the need to specify definitional variables of physical abuse and sampling criteria. Overall, these studies suggest that the typical physical abuse victim is of school age (6 to 12 years) and male, until the adolescent years when females are more likely to be victimized. The child probably lives in a family that is in a lower socio-economic class and is likely abused by a female caretaker, most often his or her mother.

Consequences of Child Physical Abuse

Studies have documented the deleterious effects of physical abuse on the development of children, many of which extend into adulthood. Many of the physical effects of
abuse are obvious, such as fractures, bruises, or brain
damage. Psychological correlates, such as interpersonal
difficulties, and pathological personality development, are
often more difficult to identify. Research on the
psychological effects of child physical abuse can be divided
into studies that examine the short-term consequences of
abuse on children (under 18 years of age) and those that
explore effects sustained into adulthood. The following
will review the effects of physical abuse in each of these
two age groups.

**Review of the Initial Effects of Child Physical Abuse**

Research on children and adolescents that focuses on
the initial effects of abuse will be defined as reactions
which occur within two years of the last abusive episode
(Browne & Finkelhor, 1986). The literature on the initial
effects of childhood physical abuse can be organized into
three types of studies. The first type of study identifies
symptomatology, impaired performance, and deviant behavior.
This type of research utilizes measures such as behavioral
checklists, performance measures, and various standardized
objective personality measures. A second area of research
pursues an understanding of the interpersonal dynamics
within the families of abused children, and between abused
children and their peers. These studies primarily use
observational methods to collect data. A third group of
studies investigates internal psychological processes such
as fantasy, mental representations, and emotional development. This type of research often utilizes projective techniques. While each of these areas of study has various methodological advantages and disadvantages, all make distinctive contributions to the growing literature on physical abuse.

**Objective measures of symptoms.** Objective measures used in child abuse research include behavioral checklists, aptitude tests, and various personality inventories. The use of objective measures offers researchers a quick and economical way to survey a wide range of symptoms and behaviors (Sattler, 1988). Objective measures are useful for researchers who employ correlational methodologies to understand abnormal behavior and experiences (Pogue-Geile & Harrow, 1984). One common study in the abuse literature is the search for empirical support of psychiatric syndromes and disorders among maltreated children. These studies explore relationships between symptoms of abuse, often differentially manifested across types of abuse (e.g., physical abuse, neglect), and objective diagnoses and classifications of childhood disorders. Researchers utilizing this methodology conceptualize findings based on psychological theories that strive to be empirically rigorous and behaviorally descriptive (e.g., behavior theory, social learning theory).
Disadvantages in using objective measures such as behavior checklists and aptitude tests are that they are often sensitive to respondent bias and misperceptions (Sattler, 1988) as well as to faking and malingering (Anastasi, 1982). Additionally, findings centered around isolated pathological behaviors and symptoms may only provide a narrow understanding of a person’s experience, as "frequencies of specific behaviors in isolation tell us little about the actual disorder" (Campbell, 1984, p. 326). Nevertheless, studies which utilize objective measures in the area of child abuse are generally consistent in their findings. Such research has shown that abused children are academically and intellectually impaired, suffer from depression, anxiety, and low self-esteem, and exhibit various externalizing disorders (Ammerman, Cassisi, Hersen, & Van Hasselt, 1986).

Studies utilizing objective measures conclude that physically abused children exhibit lower intellectual and academic functioning than nonabused children, often leading to diagnoses of mental retardation and learning disability. Early studies on physically abused children were able to identify intellectual deficits in victims even though comparison groups were rarely employed. In one such study, Elmer and Gregg (1967) found that 57 percent of their sample of 22 severely abused children had Wechsler Intelligence Scale for Children (WISC; Wechsler, 1949) Full Scale IQ
scores below 80. In two studies which also lacked comparison groups, Martin (1972), and Morse, Sahler, and Friedman (1970) found that 33 percent and 42 percent, respectively, of their samples of physically abused children had IQ scores in the mentally retarded range of intellectual functioning. Though these early studies had methodological shortcomings, several later studies have verified these findings by use of suitable comparison groups. Sandgrund, Gaines, and Green (1974) compared Full Scale WISC IQ's of 60 physically abused, 30 neglected, and 30 nonabused control children. Groups were matched on age, sex, and SES. They found that while abused and neglected children did not differ significantly from one another, both maltreated groups achieved significantly lower IQ's than controls. Similarly, Hoffman-Plotkin and Twentyman (1984) evaluated 14 abused, 14 neglected, and 14 control children (ages 3 to 6 years) on the Stanford-Binet Intelligence Scale (Terman & Merrill, 1960) and Peabody Picture Vocabulary Test (PPVT; Dunn, 1965). No differences were found between groups on age, race, sex, or SES. As predicted, they found that the maltreated groups did not differ significantly from one another, but did differ from controls on all three measures of intellectual functioning. Average Stanford-Binet IQ's of abused, neglected, and control children were 79, 83, and 102 respectively. Overall, studies have found that IQ scores tend to be depressed, and range from levels of mental
retardation to low normal functioning (Ammerman et al., 1986) among samples of physically abused subjects.

In addition to intellectual deficits, abused children have been found to be at greater risk for poor academic achievement (Ammerman et al., 1986). Salzinger, Kaplan, and Artemyeff (1983) compared 30 abused children with 26 neglected and 48 nonmaltreated children on the Wide Range Achievement Test (WRAT; Jastak & Jastak, 1965) and other measures of classroom performance. Compared to their nonabused counterparts, abused and neglected children were performing 2 or more years below grade level on tests of verbal and mathematical abilities. Furthermore, one-third of the abused and neglected children were failing one or more subjects and/or had been placed in special education classes. Intelligence testing data have clearly indicated that physically abused children are at higher risk for intellectual and academic problems. Though theories have been proposed to account for these impairments, including increased rates of CNS damage (Brandwein, 1973) and environmental impoverishment (Elmer, 1977), more research is necessary to clarify the relationship between abuse and intelligence.

Much of the research on abused children which utilizes standardized objective measures has been devoted to the investigation of psychopathology. Such studies have documented symptoms such as depression, hopelessness, and
low self-esteem among victims of physical abuse. These findings have led some authors to propose a learned helplessness model in which to view depression among abuse victims. Using self-report measures including the Children’s Depression Inventory (CDI; Kovacs, 1981) the Bellevue Index of Depression (BID; Petti, 1978), the Hopelessness Scale for Children (HPLS; Kazdin, French, Unis, Esveldt-Dawson, & Sherick, 1983), the Self-Esteem Inventory (SEI; Coopersmith, 1967) and the Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983a), Kazdin, Moser, Colbus, and Bell (1985) studied 33 physically abused and 46 nonabused children admitted to an inpatient facility. Compared to nonabused controls, subjects in the physical abuse group were found to have significantly higher levels of depression, lower self-esteem, and more negative expectations of the future. In support of Kazdin et al. (1985), Allen and Tarnowski (1989) hypothesized that abused children suffer a type of depression described by learned helplessness theory. They administered the Child Depression Inventory (CDI; Kovacs & Beck, 1977), the Piers-Harris Children’s Self-concept Scale (PHCSC; Piers & Harris, 1969), the Hopelessness Scale (HPLS; Kazdin, French, Unis, Esveldt-Dawson, & Sherrick, 1983), and the Nowicki-Strickland Locus of Control Scale (LCS; Nowicki & Strickland, 1973) in a comparison of 18 physically abused and 18 nonabused children, ages 7 to 13 years. Results confirmed their
hypothesis as the abused children exhibited significantly higher rates of depression and hopelessness, had lower self-esteem, and experienced an external locus of control.

In addition to depression and hopelessness, a robust finding in the literature has been the prevalence of externalizing disorders in physically abused children (Ammerman et al., 1986). Externalizing disorders include hyperaggressiveness, acting out, hyperactivity, conduct problems, and delinquency. In one study of externalizing behavior, Kolko, Kazdin, Thomas, and Day (1993) found externalizing behaviors to be associated with victim potential. A sample of 162 pairs of mother/maternal guardian-child dyads were assessed using parental-report measures of their child’s behavior. Measures included the CBCL (Achenbach & Edelbrock, 1983a), the Interview for Antisocial Behavior (IAB; Kazdin & Esveldt-Dawson, 1986), the Child Depression Inventory (CDI; Kovacs, 1981), the Emotionality, Activity, Sociability, and Impulsivity-Temperament Scale (EASI; Buss & Plomin, 1975), The Hopkins Symptom Checklist-90 (SCL-90; Derogatis, Lipman, & Covi, 1973), the Parenting Behavior Inventory (PBI; Schaefer, 1965), the Family Environment Scale (FES; Moos, Insel, & Humphrey, 1974) and the Children’s Life Events Inventory (CLEI; Chandler, Million, & Shermis, 1985). Children were administered a modified Youth Self-Report (YSR; Achenbach & Edelbrock, 1983) and the Children’s Action Tendency Scale
(CATS; Deluty, 1979). Using the Child Abuse Potential Inventory (CAP; Milner, 1986), families were classified into high, moderate, and low risk for physical abuse. Results indicated that children in high risk families engaged in diverse oppositional-aggressive behaviors and serious delinquent acts, as well as emotional outbursts/irritability. The children also had more problems in conduct and hyperactivity compared to the other two groups. Additionally, these children exhibited more symptoms of depression and low self-esteem, and were thought to be at increased suicide risk. In addition to findings of externalizing disorders using self- and parent-reports, measures of peer-reports have also documented aggressive acting-out by physically abused children. Kaufman and Cicchetti (1989) studied 70 children with a history of maltreatment and 67 matched nonabused children referred by social workers from public and private service agencies to a six week day camp setting. Measures included a behavior rating questionnaire and individual interviews with the children. Physically abused children were found to have scored significantly higher than other maltreated and control group children on peer-rated aggression.

In some children, chronic acting-out and aggressive behavior result in problems with legal authorities and incarceration. In a study of 100 adolescents brought to a juvenile detention center, 84 had been physically abused
prior to the age of 6, and 92 had been maltreated or sexually abused during the past 18 months (Steele, 1976).

In another study, Lewis and Shanok (1977) examined the medical records of matched samples of delinquent and non-delinquent males and females. They found a higher incidence of physical abuse among delinquent (8.6%) as compared to control (1.0%) subjects.

Through the use of various standardized objective personality measures researchers have shown that physical abuse victims manifest significantly more symptoms and pathological behaviors associated with certain childhood psychological disorders than nonabused children. Livingston (1987) sampled 100 consecutive admissions to a child psychiatric unit and found that 15 had been physically abused and 13 sexually abused. The Diagnostic Interview for Children and Adolescents (DICA; Herjanic, 1977) was used as an objective measure of childhood psychological disorders. In comparison to the sexual abuse and nonabuse group, the physical abuse group manifested significantly more symptoms of conduct disorder.

In addition to conduct disorders, there have been findings to support the diagnosis of Post-Traumatic Stress Disorder (PTSD; Diagnostic and Statistical Manual of Mental Disorders-III-R [DSM-III-R], 1987, pp. 247-251) among many physically abused children. Hillary and Schare (1993) sampled 19 sexually and physically abused teenage boys using
the Minnesota Multiphasic Personality Inventory (MMPI, Hathaway & McKinley, 1943), the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), and the State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, & Lushene, 1970). A comparison group was not used. Results showed the subjects to be mildly depressed as well as moderately anxious. The authors argued that, although the abused subjects in their study did not manifest symptoms similar to adult PTSD, they did show clinical symptoms of childhood PTSD. In another study that supports PTSD in abused children, Kiser, Heston, Millsap, and Pruitt (1991) assessed 163 children and adolescents consecutively admitted to a day treatment program. Forty were found to have a history of physical abuse and 25 a history of sexual abuse. Assessment devices consisted of the CBCL (Achenbach & Edelbrock, 1983a), the YSR (Achenbach & Edelbrock, 1983b), the Personality Inventory for Children (PIC; Lachar & Gdowski, 1979), the Family Environmental Scale (FES; Moos & Moos, 1986), and the Family Adaptability and Cohesion Scales III (FACES III; Olson, Portlier, & Lave, 1985). Results indicated that 55 percent of both abuse groups developed clinical symptoms characteristic of Post Traumatic Stress Disorder (PTSD). Children who did not develop PTSD symptoms were found to exhibit more depression and externalizing behaviors, including delinquency and aggression, and more problems overall compared to a non-victimized group.
Research that employs standardized objective measures to study physical abuse has produced several empirical models to explain the etiology and effects of abuse on its victims. The psychopathological model of abuse postulates that the parent who abuses suffers from a psychiatric illness that accounts for his/her maltreating a child (Kempe, et al., 1962; Steele & Pollack, 1968). The two major types of pathology generally mentioned in this context are psychotic disorders and severe antisocial personality disorders. Additionally, less severe forms of psychopathology have been described in connection with abusive parents including an inability to deal with stress (Milner & Wimberly, 1980), a personal history of childhood abuse (Gelles, 1973; Helfer, 1980), and having negative expectations of one's child (Larrance & Twentyman, 1983). Through pathological behaviors and interactions, parents pass on to their children various psychopathological disorders and symptoms such as those previously reviewed.

The social learning model of abuse (Straus et al., 1980; Gelles, 1983) theorizes that children learn violence and other maladaptive behaviors through early models of behavior. This theory addresses the importance of family in the early learning of violent behavior, and points out that violence is commonplace in our society. Violence and conflict is perpetuated in a family when the rewards for
violence in the home are perceived to be higher than the
costs (Gelles, 1983).

Kolko et al. (1993), and Kaufman and Cicchetti (1989)
base some of their findings on Social Cognitive Theory
(Bandura, 1986; Patterson, 1986). Low self-esteem and
aggressive peer relations among physical abuse victims are
considered a consequence of modeled behavior by abusive
parents (Kolko et al., 1993). Abused children perpetrate
these pathological learned behaviors because of their
negative expectations about self and personal efficacy with
others. This leads to failures in social relationships and
promotes unfavorable self-fulfilling prophecies (Kaufman &
Cicchetti, 1989).

Research on depression and hopelessness in physically
abused children has promoted a learned helplessness model of
behavior. Allen and Tarnowski (1989) propose that learned
helplessness in abused children develops as a result of the
noncontingency between child behavior and violent parental
response. Many abused children are thought to perceive
such child-parent interactions as independent of their
behavior. As a result of noncontingent violent behavior,
and attributions that are internal, global, and stable,
learned helplessness and depression follow.

A proposed criticism of these empirically based
theories is that they do not take into account children's
developmental levels at the time of trauma (Straus, 1988).
The basic premise of attachment theory is that early experiences with caregivers are very important in terms of the child’s development of positive relationships with others and contentment in his or her social environment (Ainsworth, 1980). Through observational methods, researchers can explore parent-child relationships in abusing households and investigate the impact abuse has on peer and nonparental adult interactions. The predominant observational method used in attachment research is the strange situation paradigm (Ainsworth, Blehar, Waters, & Wall, 1978). The strange situation paradigm assesses the quality of attachment, typically by subjecting an infant to a new room and a female stranger, both with and without the mother present, and noting the child’s reaction. Data are collected through observer ratings. A potential problem with observational designs is that researchers may be encouraged to identify behaviors based on the ease with which they can be observed and recorded, thus ignoring difficult to record behaviors (Sattler, 1988). Other potential disadvantages of observational methods include the impact of the presence of an observer on the environment under study (Sattler, 1988), and rater bias (Anastasi, 1988).

Using this paradigm, various relational disturbances have been documented in families in which a child is being physically abused. Abuse victims in these families have
been found to have insecure attachments with caregivers and display more stranger anxiety and distress. Additionally, families in which abuse takes place have been shown to be less cohesive, and engage in fewer interactions than nonabusive families. In a review of the attachment literature, Iverson and Segal (1990) report that approximately 75 percent of abused infants in most research samples are classified as insecurely attached when using the strange situation paradigm (Ainsworth et al., 1978). One of the most common observations of parent-child dyads is that abused infants cling to their mothers and/or display negative affect toward their caregivers significantly more often than nonabused controls. When studied longitudinally, those abused children showing early attachment problems were more likely to reveal declining developmental abilities over the first two years of life, especially in critical areas of speech, language, and social interaction (Egeland & Farber, 1984; Egeland & Sroufe, 1981). In a representative study on mother-child attachment, Browne and Saqi (1988) video-taped 23 abusing mothers and their infants and 23 matched control mother-infant pairs. A strange situation procedure was employed in which mother and child are filmed alone, mother and infant are joined by stranger, infant and stranger are left alone, and mother and infant are reunited. Results showed that 70 percent of the abused infants were insecurely attached to their mothers in comparison with 26 percent of
the non-abused infants. Abused children were found to have reduced interaction with and visual interest in the stranger, and showed more anxiety than controls upon the stranger's presence. Furthermore, abused children were found to be more aggressive and distressed upon separation from mothers. Upon mothers' return, children were found to greet her with more distress, and continue with anxiety and poor interaction upon her return in the presence of the stranger. The authors concluded that these patterns of mother-infant interaction set up intense attachment and overdependence which lends itself to poor social development.

Observations of interactions in abusive families have shown that family members interact less often, have lower family cohesion, and display more negative affect and less support toward each other than nonabusing families. Utilizing naturalistic observations, Burgess and Conger (1978) observed interactions among 17 abusive, 17 neglectful, and 19 nonabusive families in their homes during structured tasks. They found that abusive families interacted with each other less frequently than controls. Abusive mothers showed fewer verbal interactions both in general and during interactions with their children, and displayed less positive behaviors toward their children than the other groups. In a large study of families, Mollerstrom, Patchner, and Milner (1992) investigated
interpersonal functioning of families in the U.S. Air Force. They collected data from 376 abusive parents identified by the CAP Inventory (Milner, 1986) and compared them to 148 nonabusive parents. Of the 376 parents in the experimental group, 204 were known to have physically abused their children. Assessment included the FES (Moos & Moos, 1986), a measure of parental perceptions of conjugal and nuclear family environments, and The Index of Marital Satisfaction (IMS; Hudson, 1982). Similar to the findings of Burgess and Conger (1978), results indicated that physical abuse potential was positively related to family conflict, and inversely related to family cohesion and expression. In addition, marital satisfaction was found to be inversely related to child abuse potential. The authors concluded that family commitment, help, and support tend not to be found in those subjects with elevated CAP scores.

Research has shown that the pathological attachments of physically abused children extend beyond the family, to peers and non-parental adults. In a theoretical paper, Stroufe and Fleeson (1987) argue that children's early attachment experiences with caregivers shape future experiences with others. Through the process of congruence, the individual continues or reestablishes relationships that are congruent with his or her past relationship experiences. It is theorized that physically abused children form future relationships that are shaped in part by their inappropriate
knowledge of sex-role expectations, power assertion, emotional rejection, or other experiences that interfere with the establishment of positive supportive relationships (Stroufe & Fleeson, 1987). These concepts have been supported in studies that have found physically abused children to be socially isolative and withdrawn, exhibit more externalizing behaviors, show less sensitivity to others, and display less prosocial behaviors. In a study that used observer ratings to investigate interactions among peers, Jacobson and Straker (1982) studied 19 physically abused children in a school environment and compared them to 38 nonabused children. Interactions between peers were rated along nine dimensions using video-taped behavioral observations during free-flowing social interaction in a playroom. Consistent with findings from other research, these results indicated that abused children were less socially interactive, and interacted in a "less imaginative and sustained fashion with less enjoyment" (p.325).

Salzinger, Feldman, Hammer, and Rosario (1993) used peer-ratings to study 87 physically abused children and 87 matched nonabused classmates. Children rated themselves and their classmates on six items pertaining to interactions. Structured interviews were also conducted to assess peer relationships. Results showed that abused children, as rated by peers, were viewed as meaner and more likely to start fights, and as showing less cooperation and leadership
than other classmates. Children who were abused received significantly lower social status ratings among peers (e.g., more often rejected, less likely to be best friends). Abused children were found to ascribe significantly more negative qualities to their classmates and value their relationships with other classmates more negatively and less positively. Haskett and Kistner (1991) utilized peer ratings, teacher ratings, and behavioral observations in a study of 14 physically abused and 14 nonabused children enrolled in day-care centers. They found that the abused children were significantly more withdrawn. When they did interact with their peers their behavior was found to be significantly more aggressive than nonabused controls. Teachers rated the abused children as expressing significantly more externalizing behaviors, and their peers viewed them as less desirable playmates. In addition, they found a positive correlation between age and negative interactions with peers in the abused group.

In an interesting area of study, researchers have investigated abuse victims' sensitivity to other peoples' emotions and their willingness to engage in prosocial behavior. Findings have been relevant to both theories of attachment and social-cognitive models of behavior. Studies have indicated that abused children perform significantly lower than nonabused controls on measures of affective and cognitive role-taking, social sensitivity, and the ability
to discriminate emotions in others (Wolfe, 1987). In a study of social sensitivity, George and Main (1979) observed 10 abused and 10 nonabused matched control toddlers. They found that no abused child exhibited a concerned response at witnessing distress (e.g., crying, fearful) of another toddler, whereas the nonabused children responded with a concerned expression to one-third of distress events. Furthermore, the abused children not only failed to show concern, they actively responded to distress in others with fear, physical attack, or anger. Abused children more frequently assaulted their peers, and harassed and assaulted their caretakers verbally and nonverbally. The authors concluded that the children appeared to bear a strong behavioral resemblance to their parents regarding their tendency to isolate themselves, to respond aggressively in various circumstances, and to respond with anger and aversion to the distress of others.

Theories of attachment and observational studies of children add another dimension to the growing understanding of physical abuse victims and their families. Research addressing the interpersonal correlates of abuse indicates that children who are physically abused are more likely than nonabused children to exhibit dysfunctional interpersonal behavior. Despite these findings, there is still a question about the specific causes of these differences between abused and nonabused children (Iverson & Segal, 1990).
final area of research on abused children attempts to answer such questions by employing a methodology different from categorizing or observing symptoms and behavior.

**Research findings using projective measures.**

Projective tests commonly used in child abuse research include drawings and apperceptive techniques. The hypothesis underlying projective testing assumes that the way in which an individual perceives and responds to test material will reflect fundamental aspects of his or her psychological functioning (Anastasi, 1988). Researchers utilize projective testing to promote understanding of the general dynamics and unconscious processes of personality, which represent the theoretical framework of psychodynamic theory. According to this theoretical perspective, subjects are assumed to project their characteristic thought processes, needs, anxieties, and conflicts on to ambiguous test materials. By this process of assessment, projective techniques are thought to focus on the whole personality as opposed to objective measures which measure specific traits or attitudes (Exner, 1986). Among the advantages of projective measures are a lower susceptibility to faking and malingering, and a lack of structure which makes them inherently interesting and promotes rapport (Anastasi, 1988). General criticisms of projective techniques include inadequate standardization and normative data, difficulty developing accurate scorer reliabilities, inadequate
validation studies, and a sensitivity to situational variables such as stress, sleeplessness, etc., which can alter test performance (Groth-Marnat, 1991).

Relatively few studies in the abuse literature utilize projective techniques as compared to objective and observational measures. Results from these studies show that physically abused children manifest higher rates of insecurity and inadequacy, increased fantasy aggression, less empathy, and more emotional conflict than nonabused children. Additionally, abuse has been associated with less psychological organization and impaired object relations.

Three studies have employed various drawing tasks to investigate the effects of child physical abuse. Results have revealed various deficits in ego functioning and psychopathology among abuse victims. Conclusions are difficult to make since the three studies differed in scoring criteria and interpretive scheme. Using the House-Tree-Person (H-T-P) test, Blain, Bergner, Lewis, and Goldstein (1981) investigated the drawings of 32 physically abused children, 32 nonabused but disturbed children, and 45 normal controls. When compared to the other two groups, abused children's drawings had significantly more houses that had smoke coming from their chimneys and an absence of windows. In addition, human figures had no feet, had disproportionate head sizes, and exhibited differences in the size of their legs or arms. The authors speculated that
these differences in drawings could be valuable in identifying physically abused children. Using the Draw-A-Person (DAP; Machover, 1949) test, Hjorth and Harway (1981) compared the human figure drawings of 30 physically abused adolescents to a matched group of 30 nonabused adolescents. They found drawings of the abused children to be characterized by significantly less erasure; an absence of clothing, fingers, and detail; less symmetry; and more flexible arm position than nonabused controls. Using an interpretive scheme from Wyosocki and Wyosocki (1973), the authors concluded that abuse victims suffered from significantly more insecurity, inadequacy, withdrawal, and interpersonal problems than nonabused children. In another study of children's drawings, Harper (1991) used a projective technique called "The World Test" (Buhler & Carrol, 1951) which instructs children to draw "a world of their choice" (p.91) in a sand tray. Four groups of 40 children, each matched for age and sex, made up physically abused, sexually abused, physically and sexually abused, and nonabused groups. Findings showed that the physically abused group drew worlds that were significantly less organized and more action-oriented than the other groups. These subjects often drew worlds filled with conflict and chaos (i.e., wars, fights, and sudden disasters). Qualitatively, observers noted that 50 percent of the physically abused children found the interpersonal context
of the play situation anxiety-provoking. The authors concluded that for physically abused children, "people are seen as menacing and are not associated with gratification" (p.96).

Most of the studies that employ projective techniques with physically abused children use apperceptive tasks (e.g., Thematic Apperception Test, TAT; Murray, 1943, Child Apperception Test, CAT; Bellak, 1986). These tasks elicit stories through the use of pictures that depict ambiguous social situations. Apperceptive tests are particularly good for assessing interpersonal relationships and psychological dynamics since "subjects are likely to provide considerable access to cognitive and affective-motivational patterns related to interpersonal functioning in intimate relationships" (Westen, 1991; p.56).

Stories elicited from physically abused children have revealed more interpersonal difficulties, less empathy and sensitivity to others, and a poorer overall emotional adjustment than those from nonabused children. Additionally, 3 of 4 studies have shown abused children to manifest more fantasy aggression. Reidy (1977) studied physically abused (n=20), neglected (n=16), and normal (n=22) children referred by public agencies for family services. Each child was administered cards 13B, 7GF, 3GF, 10, 6GF, and 13MF from the TAT as a measure of aggressive imagery. Stories were rated by judges for aggressive
content using the Hafner and Kaplan (1960) aggression scoring system. In addition, the Behavior Problem Checklist (BPC; Quay & Peterson, 1967) was completed by the children and their teachers, and observers rated subjects in free play. Compared to the other groups, the physically abused children displayed significantly more fantasy aggression in TAT stories, and engaged in significantly more aggressive behavior as reported by the BPC and free-play observations. Similar findings were revealed by Kinard (1980) in a comparison of 30 physically abused children with a matched group of 30 nonabused controls. Tests administered included the Rosenzweig Picture-Frustration Study (Rosenzweig, 1948), the Piers-Harris Children’s Self-Concept Scale (Piers & Harris, 1969) and The Task of Emotional Development (TED; Cohen & Weil, 1971), a projective test in which children tell stories about a series of 12 pictures. Findings indicated that the abused children were significantly more sad, unhappy, and poorly behaved than the nonabused children. Additionally, abused subjects were found to be more extrapunitively aggressive, and have more difficulties in socializing with their peers and in separating from their mothers.

In contrast, Straker and Jacobson (1981) found no significant differences between 19 abused and 19 nonabused children on two projective measures examining aggression (Rosenzweig Picture Frustration Study; Rosenzweig, 1948,
CAT; Bellak, 1986). The CAT was scored using a scale developed by Haworth (1963) to obtain a measure of emotional adjustment. To explain their nonsignificant findings the authors hypothesized that tasks which measure fantasy aggression may not be adequate to reveal abused children's poor inhibitory mechanisms for aggression. A related explanation may be that CAT stimuli are not sensitive to aggression. Reidy (1977) and Kinard (1980) found increased fantasy aggression in abused children by using the TAT which depicts humans in social interaction. By picturing humans interacting, the TAT may be more realistic than the CAT, and thus more emotionally arousing for abused children. Abused children did differ from controls on measures of empathy and emotional adjustment (Sraker & Jacobson, 1981). The authors concluded that abused children are not exposed to parents that "demonstrate empathic responses to others in distress or who would provide the nurturant relationship that is the context within which the learning of empathy takes place" (p.764).

One final study examined the development of children's concept of interpersonal relations with peers and adults. Dean, Malik, Richards, and Stringer (1986) examined 39 maltreated and 60 nonmaltreated children between the ages of 6 and 14 years. The maltreated group contained children who were physically abused, sexually abused, and neglected. Children were asked to tell stories about kind or unkind
initiatives from child to child, adult to child, or child to adult interactions, and then tell what the recipient would do next. Results supported their hypothesis that maltreatment alters children's perception of their interpersonal relationships with peers and parents. Maltreated children produced story themes in which parents were justified in treating them unkindly because they invariably deserved to be punished. Children 6 to 8 years of age told significantly more stories in which there was an inequality in parent-child relationships, with adults seen as more unresponsive to children. In themes of peer relations, maltreated male interactions were found to be nonreciprocal, and showed less of a concern with interpersonal mutuality and sensitivity to others. Additionally, older male maltreated children (12 to 14 years of age) emphasized aggression in their stories. There were no significant effects across type of maltreatment in any of the analyses. The authors concluded that the ways in which children represent their interpersonal relationships could explain why abused and maltreated children have difficulty forming quality relationships with others and are prone to repeat abuse with their own children.

Two studies investigated the mental representations of physically abused children from stories elicited by the TAT. Mental representation is an organizing principle most relevant to object relations theory. A mental
representation is a pattern of relationships that includes a mental image of self (self representation) and of others (object representation) (Greenberg & Mitchell, 1983). These self and object representations are theorized to be based on past relationships with significant others and influence how a person experiences interpersonal relationships (Greenberg & Mitchell, 1983). Using the TAT (Murray, 1943) and the Piers-Harris Self-Concept Scale (Piers & Harris, 1969), Stovall and Craig (1990) explored the mental representations of 20 physically abused, 20 sexually abused and 20 nonabused but distressed females between the ages of 7 and 12 years. They used 5 TAT cards (1, 2, 4, 7GF, and 13MF), selected for their capacity to elicit interpersonal themes. Two scoring systems were utilized to objectively score the TAT for object relations: The Internalized Object Relations Scale (Taylor and Franzen, 1986) and a scale developed by Aron (1949). Findings showed no significant differences between the object relations of the two abuse groups; however the abuse groups differed from the nonabused children. Results indicated that physically abused children were more likely to describe others nonpsychologically (i.e., principally in terms of actions and behaviors). Their representations of others were typically described with less specificity and complexity and were less frequently seen as well functioning or intact. Interpersonal interactions were more likely to be seen as transient, temporary, and impersonal. They also
found that abused children tended to split off from consciousness the more negative perceptions of self and others. The authors concluded that the mental representations of abused children are significantly different than those of nonabused children. Since all three groups came from distressed families, these researchers attributed this difference to abuse experiences and not to the distress of a chaotic home environment.

In another study, Westen, Ludolph, Block, Wixom, and Wiss (1990) investigated the object relations of 36 female adolescent inpatients. Subjects were administered 6 TAT cards: 1, 2, 3, 4, 13MF, and 15. Stories were objectively scored using the Social Cognition and Object Relations Scales (SCORS; Westen, Lohr, Silk, Kerber, & Goodrich, 1985). This system measures four dimensions of object relations: affect-tone of relationship paradigms, complexity of representations of people, capacity for emotional investment in relationships and moral standards, and understanding of social causality. Thirteen variables of parental pathology and traumatic childhood experiences (e.g., parental psychiatric illness, childhood sexual abuse) were compared across these four dimensions. Subjects with a history of physical abuse were separated into two subgroups: 1) mother physically abusive, and 2) psychological father physically abusive. Results showed that both groups had significantly lower mean scores on affect-tone of
relationship paradigms, a measure of the affective quality of representations of people and relationships, compared to other groups of adolescents with traumatic childhood experiences. The data also showed that among physical abuse victims, maternal abuse was associated with a higher percentage of pathological responses (level 1) on scales that measure affect-tone, complexity of representations, and understanding of social causality. According to the authors, a surprising result was that maternal abuse was associated with significantly more high-level responses (level 4 and 5) on complexity of representations. Additionally, paternal abuse was associated with fewer high-level responses on affect-tone. These results need to be considered as preliminary due to the small number (n=4, physically abused by mother; n=13, physically abused by father) of subjects in these subgroups of physical abuse victims. In addition, problems in design such as reliance on retrospective data for group assignment, no clear definition of abuse, limited age range, and inclusion of only female subjects makes comparisons with other studies difficult.

Findings of deficits in ego functioning, impaired interpersonal relationships, and pathological object relations using projective measures have contributed to psychodynamic theories of child physical abuse. Psychodynamic theory can be quite useful in understanding
the effects of physical abuse on children for several reasons. First, it places abuse in the context of developmental processes (Tuohy, 1987). Second, psychodynamic theory focuses on unconscious intrapsychic processes which can add profoundly to the understanding of abuse victims. Lastly, a psychodynamic understanding of abuse can enhance treatment by providing conceptual tools to analyze families and understand transference and counter-transference issues that arise in therapy (Tuohy, 1987). To further explain these concepts, various psychodynamic theories of child physical abuse will be reviewed later in this chapter.

Studies across three divergent areas of research methodology have shown that physical abuse of children and adolescents has significant, immediate impact on victims' behaviors and psychological functioning. Each area of research and theory has its strengths and weaknesses, but all contribute to an understanding of the profound effects of abuse. Because of methodological problems which include use of heterogeneous subject samples, failure to match subjects on relevant variables and the use of psychometrically weak devices, however, Ammerman et al. (1986) have determined that definitive conclusions about the effects of abuse on children are not possible at this time. They suggest that future research on physical abuse which consider these methodological problems is greatly needed.
The effects of childhood physical abuse are often not confined to the years immediately following victimization. Psychological problems that result from parental mistreatment during childhood may lead to long-term, developmental impairments that persist into adulthood (Wolfe, 1987). A review of the literature on adults who were physically abused as children can provide a broader and deeper understanding of the psychological sequelae suffered by victims of child abuse.

**The Effects of Physical Abuse on Adults Abused as Children**

Much of the literature on effects of physical abuse has focused on the short-term consequences among child victims. Thus, long-term consequences have not been as thoroughly explored. Few books and theoretical papers consider the topic of long-term effects and only very recently has a review article been published examining the long-term consequences of physical abuse (Malinosky-Rummell & Hansen, 1993). Most of the long-term studies have concentrated on the investigation of aggression in adults. Writers in this area describe a "cycle of violence" (p. 50) and an "intergenerational transmission of violence" (p. 65) among abuse victims to support assumptions that abused children become abusive parents (Kaufman & Zigler, 1987) and/or engage in later delinquent, criminal, and violent behavior. Research has found relationships between a personal history of childhood abuse and later adult abuse of children, abuse
in marriages and dating relationships, violence among criminal and noncriminal populations, and violence in psychiatric patients. Additionally, abused adults have been found to have higher rates of substance abuse problems, personality disorders, and self-injurious and suicidal behaviors.

Studies have found higher rates of parental physical abuse among adults with a history of such abuse. Estimates of the number of abused children that become abusive parents range from 7% to 70% depending on the research methodology used (Malinosky-Rummel & Hansen, 1993). In two of the most recent reviews of the literature on violence in abused adults, Kaufman and Zigler (1987) and Widom (1989a) agreed that approximately one third of physically abused or neglected children become abusive parents.

In addition to being abusive towards their children, adults with early histories of abuse have been found to commit more violent acts towards their partners in intimate relationships, such as marriage and dating. In Straus, Gelles, and Steinmetz's (1980) survey of 1,146 American homes, men who had been physically abused in childhood had twice the rate of violence towards their wives as nonabused men. Though physical abuse in childhood has been found to be related to spouse abuse in men, most studies do not find a relationship between childhood abuse in women and the likelihood to become involved in abusive relationships.
Rosenbaum and O'Leary (1981) administered questionnaires to abusive couples, to couples receiving psychological counseling for marital problems without reported violence, and satisfactorily married couples. They found that husbands in abusive relationships had experienced significantly more physical abuse as children than the other two groups. This finding did not hold true for abused wives.

Several studies have demonstrated a relationship between childhood physical abuse and dating violence. Using self-reports from college students, Laner and Thompson (1982) found that students abused as children were significantly more often abused in relationships and were significantly more violent towards their dating partners than nonabused students. More recently, Riggs, O'Leary, and Breslin (1990) found that child physical abuse and parental marital violence was significantly positively correlated with dating violence in male and female college students. Marshall and Rose (1990), using multiple regression analysis, found that factors such as gender and life stressors were also influential in dating violence. Among their findings was that childhood physical abuse predicted dating violence by and against females in dating relationships. This relationship did not hold true for males.
Other research that investigates the relationship between violence and a history of child abuse has found violent criminals to have a higher prevalence of abuse. Through questionnaires, Sack and Mason (1980) found that convicted male felons reported a substantially higher rate of childhood physical abuse than non-incarcerated males. Similarly, Widom (1989b) used a prospective cohorts design to trace the records of 908 cases of abuse and neglect substantiated by court proceedings in a metropolitan area between 1967 and 1971, and compared them to a control group of 667. Results showed that the abuse/neglect group had significantly higher rates of arrests for criminal offenses and violent crimes.

Not surprisingly, studies have found that violent criminals often have been the victims of multiple forms of abuse. In addition to physical abuse, violent offenders frequently have long histories of severe psychological and sexual abuse. Ressler and Burgess (1985) explored the early abuse histories of 31 murderers who were part of the Federal Bureau of Investigation’s study of sexual homicide and crime scene patterns. Thirteen of the 31 murderers reported physical abuse in their histories, 23 reported psychological abuse, and 12 reported a history of childhood sexual abuse. Relationships were found to be strongest for males. The authors concluded that their findings support some aspects of the cycle-of-violence hypothesis.
Violent behavior towards others has also been found to be prevalent in noncriminal populations with child abuse histories. For instance, Briere and Runtz (1990) found a relationship between violence and abuse in college students. They administered a questionnaire to 277 female undergraduates and found that physically abused female subjects reported significantly more aggression towards others as compared to their physically and sexually abused counterparts. Additionally, aggression in abused adults has been found in studies of psychiatric patients. Rosenbaum and Bennett (1986) compared 6 homicidal depressed patients to nonhomicidal patients drawn from a caseload of 120 patients treated over the course of 5 years. Findings showed that the homicidal depressed patients were significantly more likely to have been physically abused as children than the nonhomicidal group. In one other study, Yesavage et al. (1983) utilized questionnaires of childhood discipline and observational measures of current aggression to study 100 schizophrenic inpatients. They found that a history of severe parental discipline was significantly positively related to observed inpatient assaults and other measures of dangerousness.

Though aggression and criminal behavior is often cited as the major consequence of child abuse in adults, studies have also shown that abused adults suffer a greater number of emotional problems than do adults without a history of
abuse. Child physical abuse has been shown to relate to a variety of problems in adulthood including somatization, anxiety, depression, paranoid ideation, psychosis, and dissociation (Malinosky-Rummel & Hansen, 1993).

Psychiatric patients have been found to have an unusually high incidence of childhood abuse. In a study of 100 consecutive psychiatric admissions, Jacobson and Richardson (1987) found that 57 percent reported a history of either physical or sexual abuse. Using the Symptom Checklist (SCL-90-R; Derogatis, 1983), Swett, Surrey, and Cohen (1990) found that 48 percent of 125 males consecutively admitted to a psychiatric outpatient clinic reported histories of sexual and/or physical abuse. Thirty-five percent reported a history of physical abuse only. Mean scores on the SCL-90-R global severity index were significantly higher for those with reported histories of abuse than for those with no such history.

Psychiatric patients who were abused as children have been found to manifest higher rates of substance abuse and personality disorders. In their review, Malinosky-Rummell and Hansen (1993) found that patients with substance abuse problems reported a higher incidence of physical abuse as children than the general population, with estimates ranging from 13 to 35 percent depending on the type of data collection procedure used. Brown and Anderson (1991) explored physical and sexual abuse histories in 1,040
consecutive inpatient psychiatric admissions and found that 18 percent of the patients interviewed reported histories of abuse. Among those abused, ten percent reported a history of physical abuse, 9 percent a history of sexual abuse, and 3 percent reported combined abuse. As compared to the other abuse groups and patients who were not abused, patients with histories of physical abuse had significantly higher rates of DSM-III-R diagnoses of past and current alcohol use disorders, and a higher prevalence of illicit drug use. Personality disorders were found to be diagnosed significantly more frequently in abuse groups, with Borderline Personality Disorder accounting for 48 percent of all Axis II diagnoses among the abused patients.

Higher rates of personality disorder diagnoses have also been found among outpatient adults with abuse histories. Raczek (1992) found that twice as many subjects in an outpatient psychiatric clinic with histories of physical and sexual abuse received diagnoses of personality disorders compared to an outpatient nonabused group. The most common personality disorders in the abuse group were borderline, paranoid, and antisocial. Lastly, Chu and Dill (1990) found that adults abused as children suffered significantly more dissociative symptoms as measured by the Dissociative Experience Scale (DES; Bernstein & Putnam, 1986) than a nonabused group. This study sampled 98
consecutive female admissions to an inpatient psychiatric hospital.

Adults physically abused as children have also been found to engage in more self-injurious and suicidal behaviors. In a retrospective chart review, Kroll, Stock, and James (1985) found that a group of physically abused alcoholic men had a higher incidence of suicide attempts than a matched alcoholic comparison group. Using self-report questionnaires and multiple regression analysis, Bryer, Nelson, Miller, and Krol (1987) found that physical or sexual abuse accounted for a significant proportion of the variance in suicidal ideation, gestures, and attempts in a group of female inpatients. Briere and Runtz (1988) found that self-reported physical abuse by mothers was associated with increased suicidal ideation.

There is no question that child physical abuse has profound psychological effects on children and adults. A review of the literature has shown that both children and adults with histories of abuse are at greater risk for emotional disorders, aggressive and violent behavior, and interpersonal problems. Psychoanalytic theories of child physical abuse can provide an understanding of the psychological dynamics between abusive parents and their children, and provide a deeper understanding of how abuse affects the psychological functioning of children and adults.
Psychoanalytic Theories of Child Physical Abuse

Psychoanalytic theory is well suited for the study of child physical abuse as it provides a "humanizing perspective on child maltreatment by placing it in the context of developmental processes" (Tuohy, 1987, p. 26). Object relations theory offers a psychoanalytic understanding of how people attach and separate from each other as a function of their unconscious self-other representations and schemata (Arcaya & Gerber, 1990). Object relations theorists have focused on the dynamics between parent and child in abusive relationships and the effects of abuse on the psychological functioning of its victims.

The Dynamics of Parent-Child Abusive Relationships

Arcaya and Gerber (1990) explain physical abuse in families as the intergenerational transmission of repetitive parental violence. They explain that through pathological development, adults abused as children become parents with negative self-representations such as being unlovable, contemptible, and repulsive. As a result of such pathological development, the abused adult frequently suffers from personality deficits including unsatisfied dependency longings, impaired impulse control, poor self-concept, disturbances in identity formation, and frequent use of externalization and projection. Since abusive parents have not resolved their own traumatic past, they are
chronically tormented by recurring anger, defensiveness, and a readiness to act out, particularly with hard to manage children (Arcaya & Gerber, 1990). Within this perspective, physical abuse is considered a way for adult abusers to manage chronic feelings of worthlessness, guilt, helplessness, and inadequacy.

Various primitive defensive operations apparent in the abusive parent contribute to the maltreatment of their children (Arcaya & Gerber, 1990). Intense negative affects such as guilt, anxiety, and shame are managed "by repudiation and objectification into foreign elements (i.e., the feelings are not a part of me, they are part of my child)" (Arcaya & Gerber, 1990, p. 621). Typical defenses used to accomplish this are splitting and projective identification. Splitting is a defense "whose effect is to divide or polarize experience in an attempt to make it tolerable or acceptable to the self... (and) is employed when the ego is incapable of identifying with those aspects of its experience which are unconsciously represented as bad or unworthy" (Arcaya & Gerber, 1990, p.621). Thus, splitting is the inability for the ego to integrate good and bad representations into ambivalent and realistic representations of self and other. By separating good and bad representations, painful affect is eliminated from consciousness.
Another important defense mechanism in the intrapsychic dynamics of abusive parents is projective identification. Projective identification is characterized by unconscious displacement of unacceptable aspects of the self into others in such a way as to elicit these aspects in someone else (Ogden, 1982). In the phenomenon of physical abuse, the child is not only seen as having the parent's disowned characteristics such as hostility or defiance, but is manipulated into manifesting these same behaviors. Through emotional and behavioral manipulation and projection by the parent (e.g., repetitively telling the child that their worthless) a child may display negative behaviors (e.g., pouting, anger, disobedience), thus justifying the parent's actions of harsh or abusive discipline in order to control or suppress the remnants of the same inclinations in themselves. As a result of these defensive maneuvers, abusers see their discipline as justified. Through a distorted perception of reality their own aggression is not perceived as inappropriate (Arcaya & Gerber, 1990).

Focusing on early attachment, Fraiberg (1975) describes the abusive mother-child relationship as a dyad in which the mother does not form an attachment to her infant. A failure to form an attachment with the mother is seen as threatening the development of a healthy ego in the young infant. Fraiberg (1975) theorizes that parents who abuse their children have lost affective ties with their own early
trauma through repression and isolation of affect, and therefore, are, compelled to repeat their early abusive histories. As a result of poor attachment, the infant's object relatedness is extremely tenuous, as normal ego functions developed during the early months of life are compromised.

The experience of abuse in infancy can be compared with Freud's concept of "traumatic neurosis and the breaching of the stimulus barrier" (Green, 1983, p.232). Normally the mother acts as a supplementary barrier for her infant, acting as ego to protect her child from overwhelming stimuli which can produce psychological trauma. In the abuse situation, the mother not only fails to act as a barrier for her child, but contributes to, or allows another to contribute to, the trauma of abuse. As a result the "receptive, defensive, and integrative functions of the ego are overwhelmed, rendering the child helpless..." (Green, 1983, p.232). Green (1983) and Fraiberg (1975) both theorize that abusive parents, often abused as children, have developed maladaptive defenses which block attachment to their child. Impaired attachment then negatively affects ego functioning in the developing infant. The child's subsequent impairments in object relations further strains the attachment with parents as affective regulation and cognitive impairments make parenting even more frustrating.
The Effects of Physical Abuse on Victims' Object Relations

The trauma of abuse has deleterious effects on the object relations of the developing infant. According to Fairbairn (1943), the child has a need to maintain an ideal image of his/her abusive parent (i.e., the abusing object). In order to maintain and protect this ideal image in the midst of parental abuse, the abused child splits off the rejecting and abusive attributes of the abusing object and internalizes the object's badness (e.g., rejection & abuse). In so doing, the child protects the abusing object's idealized image and assumes the blame for the abuse. The child preserves the idealized image of the object at the cost of impaired integration of good and bad object representations which takes place in normal development. The child identifies with the abuser by rejecting his/her own vulnerability, dependency, and need for a good object, just as the abuser rejected those needs (Seinfeld, 1989). Fairbairn (1943) points out that the child feels secure in believing that if he/she were only to become good, then the parent would love the child and stop abusing him/her.

Seinfeld (1989) theorizes that victims who experience the rejection and sadism of abuse lack the nurturance, empathy, and support in which to develop self- and object-representations receptive to positive affects and experiences (e.g., soothing, comfort). Such structural deficits produce youngsters who lack the positive object
experience to take in good objects and "result in the child actively rejecting the child's own need for good objects out of loyalty and connection with the bad object" (Seinfeld, 1989, p.44). In order to remain loyal to the abusive and rejecting object, the child rejects the dependency and vulnerability of the good object image and identifies with the idealized abusive and rejecting object (Fairbairn, 1943). As a consequence of the internalized abusive object relationship, the child manifests abusive object relations in interpersonal relations (Guntrip, 1969). The child expects relationships to be painful and abusive, and goes on to provoke peers and authority figures into the same abusive relationship as with the original abusive object. The child victim continues to identify with the internal rejecting object and rejects any good objects that offer support, empathy, or nurturance which threatens to awaken dependency needs (Seinfeld, 1989). These children reject their own autonomy strivings, as it implies separating from the internal bad object. Their capacity for mature and invested relationships with others is thus impaired.

Abuse victims' internalized object relations are conceptually similar to Kernberg's (1975) description of the adult borderline personality organization (Seinfeld, 1989). Victims' emotional functioning is typified by poor interpersonal functioning, as they manifest poor impulse control, poor judgment, poor anticipation of consequences,
and a predominance of primitive defenses such as splitting and projective identification. Reality testing is generally intact, although abuse victims are often prone to dissociative episodes and psychotic-like experiences (Chu & Dill, 1990).

Psychoanalytic theories have greatly broadened our understanding of the impact of child abuse on victims' emotional functioning. As reviewed previously, research with projective techniques has provided validation and further refinement of psychoanalytic theories of abuse. One very useful projective technique in the study of object relations is the TAT.

The Thematic Apperception Test

The Thematic Apperception Test (TAT, Murray, 1938) is an often used and valuable tool in personality assessment (Piotroski, Sherry, & Keller, 1985). Developed by Henry Murray and his staff at the Harvard Psychological Clinic (Murray, 1938), the TAT consists of 19 achromatic cards containing ambiguous pictures, and one blank card. The respondent is asked to make up a story to fit each picture, telling: 1) what led up to the event shown in the picture, 2) what is happening at the moment, 3) what the characters are feeling and thinking, and 4) what the outcome is. Through Murray's system of interpretation (Murray, 1943), the examiner determines the "hero" in the story and then analyzes the content of the story according to Murray's list
of "needs" and "press." Analysis of the stories gives the interpreter "some of the dominant drives, emotions, sentiments, complexes and conflicts of a personality" (Murray, 1943, p. 1), and is able to "expose the underlying inhibited tendencies which the subject, or patient, is not willing to admit, or can not admit because he is unconscious of them" (Murray, 1943, p. 1). Other systems of interpretation have been developed since Murray's publication of the instrument (e.g., Aron, 1949; Bellak, 1954; McClelland, Atkinson, Clark, & Lowell, 1953; Pine, 1960).

Westen et al. (1985) have devised a scoring system which rates TAT stories along various dimensions of object relations and social cognitions. The TAT is a useful source of psychoanalytic data and it:

is particularly good for assessing object relations because the stimulus is ambiguously social, and subjects are likely to provide enough detail in describing characters and relationships as to provide considerable access to cognitive and affective-motivational patterns related to interpersonal functioning in intimate relationships. (Westen, 1991, p.56)

Since physical abuse takes place in the context of relationships, often significant relationships, the TAT can be a valuable source of object relations data. In order to
understand the diagnostic utility of this scoring system with respect to physical abuse victims, a review of object relations theory would be useful.

Object Relations Theory

One of the basic tenets of object relations theory is the supposition that the infant is born in a state of psychological non-organization and non-integration (Fantz, 1966). Since organizing tendencies and capabilities are considered intrinsic to the neonate’s functioning (Horner, 1984), the infant naturally begins a process of organizing its experiences into meaningful patterns. This process of organization is fundamental to the structure of the ego and the development of the self.

One of the basic patterns organized during the first months of life is that of the self or self-representation. Another basic and central pattern is that of the object or object-representation. The term object-representation refers to internal, affectively charged mental schemata of significant external objects encountered in reality (Sandler & Rosenblatt, 1962). The object is a mental representation of a significant person, usually the primary mothering person or persons, but can also include tangible items, such as a pacifier or the mother’s breast.

Mental representations are encoded in multiple representational modes in which "a person has numerous associatively connected representations of aspects of
significant others, including general semantic or propositional knowledge about them as well as visual, tactile, auditory, and olfactory representations" (Westen, 1990, p. 687). Thus, representations of significant others (e.g., mother) include linguistically encoded memories (e.g., mother was a loving person) and related sensory representations (e.g., mother was warm, soft, smelled nice, had a soothing voice, etc.) of early experiences with that person.

Object-relations theory describes the structural and dynamic relationships between self- and object-representations. Object relations "refers, most broadly, to the cognitive, affective, and motivational processes mediating interpersonal functioning, and to the enduring patterns of interpersonal behavior that draw upon these intrapsychic structures and processes" (Westen, 1990, p. 670). These intrapsychic structures (i.e., the mental representations of self and object) determine in a fundamental way how the individual experiences the external world and relates with others.

Classic psychoanalytic theory posits that psychological development occurs primarily during the first three years of life (e.g., Mahler, 1966; Kernberg, 1984). More contemporary psychoanalytic and developmental literature, though, tends to support the continuation of development throughout childhood and adolescence (Westen, 1990). Though
object relations theorists tend to differ over the specifics of their developmental models, development can be most broadly conceptualized as comprised of four separate but interdependent dimensions (Westen et al., 1985).

First, early object relations development is characterized by increasing self and object differentiation, and an eventual increase in the integration and complexity of representations as a child matures (Westen et al., 1985). During the first months of life, the infant is in an undifferentiated state in which self- and object-representations are merged, and the child does not differentiate self from other (i.e., the child does not recognize mother as a separate object). Jacobson (1954) proposes that self- and object-representations become differentiated through "gratifying and frustrating experiences in the mother-child dyad" (Blanck & Blanck, 1986, p.8). Early experiences of the gratifying (good) and the frustrating (bad) mother help the child to differentiate basic affects. These affective states are an essential element of the relationship with the object. In fact, Kernberg (1975) considers painful and pleasurable affects as the major organizers of good and bad internalized object relations.

Mahler, Pine, and Bergman (1975) propose a model of development in which differentiation and integration of mental representations takes place through three major...
phases: the autistic phase, the symbiotic phase, and the phase of separation-individuation. During the autistic phase (birth through two months), the child is in a state of primary narcissism (Freud, 1894) in which life is centered around the newborn’s attempt to reduce tension or unpleasure. The infant is only concerned with the satisfaction of its needs (tension reduction), and lacks the capacity to relate to external objects. In this objectless state, the infant is not connected to the outside world, and has not begun to organize its experiences.

At the end of the second month, the stage of symbiosis begins. Through experiences with the mother (e.g., the breast) and personal physiological processes (e.g., urination, sneezing), the infant tries to rid itself of unpleasureable tension. Through this tension relief the child learns to differentiate between two affective experiences, “a ‘pleasurable’/‘good’ quality and a ‘painful’/‘bad’ quality of experience” (Mahler et al., 1975, p.43). At this point, the infant has begun a rudimentary organization of experiences; however, self and object remain undifferentiated.

During the fifth or sixth month of life, the process of separation-individuation begins, which Mahler describes as “the psychological birth of the individual” (Mahler et al., 1975, p. 3). A major accomplishment of this stage is the differentiation of self- and object-representations.
Successful resolution of this stage involves the establishment of a sense of separateness from the object, and an increasing complexity of the child's inner world. The child recognizes mother as separate from itself, and seeks increasing autonomy as self and object boundaries are established.

During the initial stages of separation-individuation, good and bad experiences of the self and object are not yet integrated. The child either experiences the mother as frustrating and bad, or as gratifying and good, but cannot see her simultaneously as being both bad and good. Similarly, the child experiences the self as either "bad me" or "good me," but has not integrated these selves. Eventually, patterns of good and bad self- and object-representations are integrated into a total object-representation. This developmental achievement marks the formation of integrated self- and object-concepts in which ambivalent feelings can be experienced (i.e., the ability to experience self and others as possessing both good and bad qualities). Object constancy is established as a stable concept of self and object emerges and the child attains a sense of his or her own individuality. Gradually, self- and object-representations become more complex and integrated as the child matures.

A second dimension of object relations is the affective coloring of the object world which underlies interpersonal
functioning (Westen et al., 1985). The concept of affect-tone has been used by theoreticians to understand patients with severe personality disorders, particularly borderline personality disorder (Kernberg, 1975; Masterson, 1981). In Kernberg’s (1975) theory of object relations, the affective context in which self- and object-representations form greatly influences how we respond to and what we expect from others in relationships (e.g., malevolence or benevolence).

Kernberg (1975) theorizes that there are three components of the psychic structure which reflect the interaction of the infant with the "human object" (p. 140), the mother. "These configurations consist of three component parts: an image of the object; an image of the self; and an affective coloring determined by the drive derivative active at the time of the interaction" (Greenberg & Mitchell, 1986, p. 330). Kernberg (1975) proposes that the role of drive is to provide affective coloring for internalized interactions. "Good" or positive affective states are associated with libidinal drive derivatives, while "bad" or negative affective states are associated with aggressive drive derivatives. Kernberg (1975) theorizes that the developmental failure to integrate both good (libidinal) and bad (aggressive) self- and object-representations results in a "general lack of neutralization of instinctual energy" (Kernberg, 1985, p. 147), and an ensuing disturbance in object relations.
In patients with severe psychopathology (e.g., borderline personality disorder), integration of libidinal and aggressive drives has not occurred, resulting in splitting of self- and object- representations. Fueled by intense, unneutralized aggression, objects take on a negative affective coloring. Persons with such an impairment in object relations come to expect malevolence from others, as they anticipate relationships to be painful and threatening (Westen et al., 1985). Kernberg (1975) views the malevolent object world of patients with borderline personality disorders as mainly a projection of intense aggression. Masterson (1981) theorizes that early empathic failures by the infant’s primary caretaker can result in a person that "remains fearful of a withholding, malevolent, abandoning object who can leave the person helpless, empty, profoundly alone, and abandoned" (Westen et al., 1985, p. 17).

A third dimension of object relations development involves:

a developmental movement from a need gratifying pattern of emotional investment in people (often referred to as narcissistic) in which relationships with others are valued primarily for the gratification, security, or benefits they afford, to mature object relations based on mutual love, respect, and concern for others who are
valued for their specific attributes. (Westen, 1991, p. 59)

Mahler et al.'s (1975) model of development describes the infant as being in a narcissistic state during the first months of life. During this state of primary narcissism, the child expects its needs to be immediately and suitably satisfied by the mothering object. Kohut (1968) points out that the realities of life create numerous disappointments with the mothering experience for any child. Through these disappointments, the child experiences frustration, anger, and finally depression over the loss of this symbiotic state. With normal development, the child’s grandiosity is eventually modified, and the state of primary narcissism ends. Through a developing self-representation, the child becomes less self-involved, and realizes that others exist in the world and have their own needs and feelings. At this point, more mature and mutual relationships can be established in which the needs of others are recognized and considered.

Related to the ability to emotionally invest in relationships is the capacity to "invest in moral values, prohibitions, and ideals that provide meaning to life and may take precedence over one's own wishes and impulses, even when these are strongly aroused" (Westen et al., 1985, p. 21). This notion of social responsibility and moral values comes from Freud's (1933) theory of superego development.
The superego, characterized as an internalized psychic structure which governs guilt and moral reasoning, forms as a resolution of the Oedipus complex (Freud, 1933). During the pre-oedipal period, the child experiences moral demands as external to him/herself (e.g., a wish to please and obey mother). As the Oedipal phase is resolved, morality becomes an inner matter, and the "external restraint is internalized and the super-ego takes the place of the parental agency and observes, directs and threatens the ego in exactly the same way as earlier the parents did with the child" (Freud, 1933, p. 57).

Kernberg (1984) regards the capacity to experience guilt as a developmental achievement. As with the ability to emotionally invest in relationships and care for others, the capacity to invest in moral values goes beyond simply a knowledge of social rules, and requires an affective-motivational investment in them (Westen et al., 1985). Normal superego development allows individuals to express authentic investments of love towards others, devoid of "ruthless exploitation and manipulation" (Kernberg, 1984, p. 278), and experience concern and interest in conventional values and social rules. Kernberg (1984) proposes that individuals with impairments in superego functioning, such as those with borderline and narcissistic disorders, are able to rationalize immoral behaviors and maintain "an affective discontinuity that protects them from anxiety or
guilt and from any identification of moral values" (Kernberg, 1984, p. 284).

A final dimension of object relations, more cognitive in nature, has been relatively underemphasized by psychoanalytic researchers and theorists (Westen, 1990). Westen (1991) reviews research which suggests a number of developmental shifts in the way children infer causality in the social realm. These include increasing complexity, abstractness, and accuracy; a focus on internal psychological processes rather than on surface-level, observable, behavioral causes; and an understanding of unconscious processes as a child matures (Westen, 1991). As an example of impaired object relations along this dimension of understanding social causality, Westen (1991) points to the frequently inaccurate attributions made by borderline patients, and posits a "borderline attributional style, characterized by egocentric attributions, expectations of malevolence in intimate relationships, tendency to make peculiar and inaccurate attributions, and tendency to make affect-centered attributions (attributions that are congruent with mood or affective valence of representations—i.e., affect-driven attributions)" (Westen, 1991, p.446).

In an attempt to clarify the development of cognitive structures within psychoanalytic theory, Lerner and Lerner (1985) integrate Piaget’s cognitive psychology with Mahler’s theory of object relations development. Mahler et al.
(1975) theorize that the final phase of psychological development, object constancy, is achieved during the third year of life. They note that this phase is "characterized by unfolding of complex cognitive functions: verbal communication, fantasy, and reality testing" (Mahler et al., 1975, p.117). At this time there is a growing capacity to hold representations relatively stable in the face of disparate drive states (e.g., even though I am mad at mother I know she loves me). Furthermore, a growing ability for reality testing is characterized by an increasing capability to learn from consequences and distinguish means from ends (Lerner & Lerner, 1985). This period of life is analogous to Piaget's (1937) stage of tertiary circular responses which occurs late in the sensorimotor period (approximately 2 years of age). During this phase of cognitive development there is an achievement of object permanence, significant progress in the understanding of the separation of means from ends, and an increased understanding of causality (Lerner & Lerner, 1985). The child is engaged in experiments on his/her environment in order to understand how things and events work, and begins a rudimentary understanding of time and space.

In time, the child develops the ability to represent events symbolically, less egocentrically, and more complexly (Lerner & Lerner, 1985). With normal development, an ability to understand cause and effect relationships both in
the environment and within him/herself emerges (Westen et al., 1985). This ability to think symbolically and less egocentrically leads to the capacity to take other peoples’ perspectives, and to make inferences as to others’ feelings and actions. Additionally, the individual is able to understand that his/her motivations mediate his/her own actions, which are governed by complex thoughts, feelings, and conflicts.

In summary, object relations is a multidimensional phenomenon which encompasses different psychological functions and structures. Through early relationships with significant others, experiences are organized into meaningful patterns of self- and object-representations. Four interrelated but distinct aspects of object relations can be theorized (Westen et al., 1985):

1) Development of self- and object-representations are characterized by increasing differentiation in which self and object are experienced as separate entities. As a child matures, representations gradually become integrated and more complex. With increasing complexity comes the ability to integrate ambivalent (i.e., good and bad) representations.

2) Patterns of self- and object-representations form within an affective context. This affective coloring will influence what one expects from present and future interpersonal relationships.
3) Development proceeds from a need-gratifying pattern of relationships with others to mature object relations based on mutual love, respect, and concern for others. Associated with this developmental progression is the ability to control one's wishes and impulses, and consider social responsibility and moral values. Divestment of the early narcissistic state entails the ability to invest emotionally in relationships and in the moral standards of society.

4) Inferences regarding causality in the social realm are based on complex cognitive functions associated with development of self- and object-representations. With development, patterns of experience become increasingly complex, abstract, and accurate. Social causality becomes focused more on internal psychological processes rather than on external, behavioral causes, and on the understanding of unconscious processes.

The Social Cognition and Object Relations Scales (SCORS)

Westen et al. (1985) have developed a system for assessing individual differences with respect to object relations and social cognition using TAT responses. This four scale system utilizes research in the area of developmental social cognition to support and broaden object relations concepts. The four scales are: 1) complexity of representations of people (CR), 2) affect-tone of relationship paradigms (AT), 3) capacity for emotional
investment in relationships and moral standards (CEI), and
4) understanding of social causality (USC). The scales are
conceptualized as measuring four interrelated but distinct
aspects of object relations (Westen, 1991). Each of the
four dimensions, summarized in Appendix A, is assessed along
a 5-point scale. Except for AT, these scales are
hypothesized to measure developmental aspects of object
relations and social cognition, where level-1 represents the
least mature level of functioning and level-5 the most
mature.

The scoring system yields a measure of not only average
or typical object relations functioning along each of the
four dimensions, but the propensity for more pathological or
primitive functioning as well (Freedenfeld, 1992). Support
for these two measures comes from the idea that various
aspects of object relations, as measured by TAT responses,
are likely to differ in maturity and quality within the same
individual at various times (Westen, 1990). This
variability of functioning is assumed to be caused by the
pull of various situations portrayed among the TAT cards
(i.e., what the situation represents for a particular
individual). A measure of pathological functioning is
useful in that it could reflect a potential level of
functioning in certain situations or at various times.

This system assesses working representations, that is
concepts of self and others in action (Westen et al., 1985).
Additionally, the working representations measured are representations of specific others and not of relationships. The following sections will discuss the theoretical bases for these scales, and their significance to research and theory on physical abuse.

**Complexity of representations of people (CR).** The conceptualization of the CR scale is derived from a general agreement among psychoanalytic theorists with respect to several assumptions (Westen et al., 1985). These assumptions state that the development of representations is characterized by increasing differentiation, followed by a gradual process of increasing complexity and integration, and an eventual integration of ambivalent or multivalent representations. Westen (1991) summarizes scale CR as being "designed to assess the extent to which the subject clearly differentiates the perspectives of self and others and recognizes the complexity of the personality dispositions and subjective experiences of the self and others" (p. 58).

Westen et al. (1985) review research in developmental psychology which supports the object relations concept of the development of complexity among self- and object-representations. Research shows that representations of self in the preschool years "tend to be concrete, transitory, relatively unorganized, and often contradictory" (Westen et al., 1985, p. 14). By childhood, there tends to be progressively more psychological statements about people
than simple descriptions of actions or physical attributes. In adolescence, the focus moves from unidimensional descriptors of others to more complex statements about personality, and the subsequent recognition of unconscious personality processes. Additionally, an achievement of early adolescence is the ability to understand that one can experience two opposing feelings simultaneously (Harter, 1983).

CR is one of three scales which is hypothesized as a developmental dimension of object relations (i.e., lower levels of the scale reflect more primitive aspects of development). At the lowest level of the scale, stories reflect characters which are not clearly differentiated from each other, lack boundaries, or confuse each others point of view. At more mature levels, characters are described in more complex ways, with some elaboration of internal processes and enduring qualities. At the highest levels, characters are described as having complex motives and subjective states, or possessing mixed feeling or attributes.

Research on physically abused children demonstrate impaired development in the area of complexity of representations of people. Studies of interpersonal functioning have shown that abused children have difficulty differentiating emotions in others, and display problems in describing the subjective states of others (Wolfe, 1987).
Research with the TAT has found that victims develop representations which are less complex and integrated. Stovall and Craig (1990) found that abused children describe representations of others with less specificity and complexity, and have problems integrating the more negative and positive perceptions of self and other. Using the SCORS with TAT data, Westen et al. (1990) found physical abuse to be associated with more poorly differentiated responses, as reflected by a higher percentage of lower level scores on scale CR. Finally, psychoanalytic theorists propose that abuse victims are more likely to utilize more primitive defenses such as splitting and projective identification (Arcaya & Gerber, 1990; Seinfeld, 1989). Such defenses are theorized to arise from a developmental failure to integrate ambivalent representations (Arcaya & Gerber, 1990).

The literature supports the notion that physically abused victims lack the development of well differentiated, complex, and integrated self- and object-representations. Thus, it is likely that physical abuse victims will produce TAT stories which show a more primitive level of complexity of representations of people compared to nonabused subjects.

Affect-tone of relationship paradigms (AT). The AT scale is based on the psychoanalytic assumption that mental representations form within an affective context. This affective coloring of representations, ranging from malevolent to benevolent, is theorized to underly
interpersonal functioning. From a social cognitive view, "this can be understood as the affective quality of interpersonal expectancies, i.e., the extent to which the person expects relationships to be painful and threatening, or pleasurable and enriching" (Westen et al., 1985, p. 17).

Research supporting this scale stems mostly from psychoanalytic studies measuring affective qualities of human figures on projective tests. Research with the Rorschach Inkblot Test (Rorschach, 1942) has found greater malevolent responses in borderline subjects (Lerner & St. Peter, 1984; Stuart, Westen, Lohr, Benjamin, Becker, Vorus, & Silk, 1990), paranoid schizophrenics (Blatt, Brenneis, & Schimek, 1976), and depressives (Blatt, 1974). Studies in developmental psychology have found hostile or malevolent attributions in aggressive boys (Dodge & Somberg, 1987), distressed marital couples (Fincham, Beach, & Baucom, 1987), trauma victims (Janoff-Bulman, 1989), and abusive mothers (Larrance & Twentyman, 1983).

The scoring of scale AT does not reflect movement along a developmental continuum, but rather the affective quality of representations. At the lowest level of the scale, characters are seen as abused or abusers, victims and victimizers. The social world is viewed as unambiguously malevolent or overwhelmingly painful. Increasing levels of the scale are associated with depictions of characters and situations that have a less negative tone and a broader
range of affective expectations. At Level 5, relationships between characters are seen as predominantly positive and enriching.

The literature on childhood physical abuse support the idea that victims have experienced extreme trauma and malevolence which subsequently affects their perceptions of the world and interactions with others. Studies have found that abused children are more likely to develop symptoms of PTSD (Hillary & Schare, 1993; Kiser et al., 1991) and other forms of psychopathology (Ammerman et al., 1986), hold more negative expectations of the future (Allen & Tarnowski, 1989; Kazdin et al., 1985), and are more likely to exhibit aggressive and violent behavior (Haskett & Kistner, 1991; Kaufman & Cicchetti, 1989; Kolko et al., 1993; Salzinger et al., 1993).

Projective measures have shown that abused children view the world as filled with conflict and chaos (Harper, 1991), exhibit more fantasy aggression (Reidy, 1977), and have expectations of abuse in their relationships (Dean et al., 1986). Westen et al. (1990) found that a history of physical abuse had its greatest impact on scale AT, suggesting that victims develop a malevolent object world. Psychoanalytic authors support the idea that abuse is associated with the establishment of more negative representations (Arcaya & Gerber, 1990), expectations of future pain and abuse (Seinfeld, 1989), and involvement in
future abusive relationships (Guntrip, 1969; Seinfeld, 1989).

Review of the physical abuse literature demonstrates that victims have suffered extensive trauma from such abuse. As a result, their object world is negatively colored by experiences of malevolent and painful relationships. It is therefore expected that physically abused children will produce TAT stories characterized by a more negative affect-tone than a nonabused group.

Capacity for emotional investment in relationships and moral standards (CEI). The development of scale CEI is based on the psychoanalytic concept of a:

devolutional movement from a need-gratifying pattern of emotional investment (often referred to as "narcissistic"), in which relationships with others are valued primarily for the gratification, security, or benefits they afford, to mature object relations based on love, respect, and concern for others who are valued for their specific attributes" (Westen et al., 1985, p. 20).

The development of mature patterns of emotional investment in relationships entails three developmental achievements (Westen et al., 1985). First, is the ability to regulate emotional investment in relationships, so that individuals neither invest intensely and prematurely into relationships nor withdraw defensively. Second, is the ability to invest
in others for their unique attributes. Lastly, is the ability to manage one's own wishes and impulses in order to invest in moral values, prohibitions, and ideals. Scale CEI assesses an individual's emotional investment in relationships and moral standards rather than simple cognitive awareness of them.

Westen et al. (1985) cite developmental and cognitive-developmental theory to support the conceptualization of this scale. They draw upon research on children's concepts of friendship, justice, convention, authority, and morality (Damon, 1977; Rest, 1983; Selman, 1980; Shantz, 1983). This research is considered relevant even though the literature suggests a much longer maturational process than described by psychoanalytic theory, which proposes that need gratifying object relations are obtained by the end of the oedipal period (Westen, 1991).

Scoring of the CEI scale reflects maturational development in the ability to invest emotionally in others and in morals. At the lowest level of the scale, characters are seen as existing only in relation to themselves and in terms of their own gratifications. Rules and authorities are not considered or are seen as obstacles. At intermediate levels, characters begin to recognize the needs of others, and rudimentary investments in relationships occur. A knowledge of right and wrong is apparent in stories with an increasing emotional investment in doing
what is right. At the highest level of scale CEI, characters treat themselves and others as ends rather than means, and attempt to achieve autonomous selfhood within the context of real involvement with and investment in others. Characters have a commitment to social rules and standards, but do not see rules as absolute. There is a sense in stories that rules and authorities can be changed because they conflict with carefully considered ideals.

Studies on child abuse victims have demonstrated impaired family and peer interactions. Abusive families have been shown to engage in decreased interactions between family members (Burgess & Conger, 1978), and have more family conflict and less family cohesion and support (Mollerstrom et al., 1992). Abused children have been shown to demonstrate insecure attachments with caregivers (Browne & Saqi, 1988; Iverson & Segal, 1990). Abused children are less socially interactive with peers (Jacobson & Straker, 1992), and place a more negative value on relationships (Salzinger et al., 1993). Additionally, abused children have been found to have less emotional investment in others and in social rules. Research shows that abused children have less social sensitivity (Wolfe, 1987), less concern for others (George & Main, 1979), and are overly represented among incarcerated juveniles (Lewis & Shanok, 1977; Steele, 1976).
Research utilizing projective stories has shown that abused children are nonreciprocal in relationships, display less concern and sensitivity to others (Dean et al., 1986), and expect relationships to be transient, temporary, and impersonal (Stovall & Craig, 1990). Supported by research, psychoanalytic theory proposes that failure of the mother to form an attachment with the abused child threatens the development of healthy object relations (Fraiberg, 1975). Furthermore, early abusive experiences are presumed to retard the developing capacity for mature and invested relationships with others (Seinfeld, 1989).

A review of the abuse literature demonstrates that victims have problems in interpersonal relationships, and reduced emotional investment in others and in social rules. As a result, TAT stories of physically abused children are expected to reflect an impaired capacity to invest emotionally in relationships and moral standards when compared to a nonabused group.

Understanding of Social Causality (USC). The development of scale USC is based on research and clinical experience of patients with profound psychopathology (Westen et al., 1985). The ways in which these patients interpret interpersonal events tend to be quite idiosyncratic. For example, Westen (1987) has speculated about a "borderline attributional style," characterized by egocentric attributions, expectations of malevolence in relationships,
tendencies to make peculiar and inaccurate attributions, and tendencies to make affect-centered attributions. Affect-centered attributions are those which are not cognitively based, but are congruent with capricious affect or mood. Scale USC was designed to assess the logic, complexity, and accuracy of an individuals attribution's of interpersonal events.

Conceptualization of scale USC is supported by social-cognitive research on the development of social causality in children (Chandler, Piaget, & Koch, 1978; Piaget, 1926; Selman, 1980; Shantz, 1983). This research suggests a number of developmental shifts in the way children infer causality in the social realm. These developmental shifts include increased complexity, abstractness, accuracy, internality (a focus on internal psychological processes rather than on surface-level, observable, behavioral causes), and an understanding of unconscious processes.

Scale USC is a developmental measure of object relations. At Level 1, stories are grossly illogical or noncausal. There is either no indication of how behaviors, feelings, and situations emerge, or the understanding is illogical. At more mature levels, attributions of characters' feeling, thoughts, and behaviors are explained and logical, but not complex. At the highest level, characters are portrayed with complex thoughts, feelings, and conflicts. Subjects are able to make inferences about
complex psychological processes mediating characters’ actions.

Few studies in the physical abuse literature have addressed the concept of an understanding of social causality. However, there is evidence that abused children do make illogical and unsophisticated attributions of causality. Studies on interpersonal functioning of victims have demonstrated that abused children have difficulty understanding others’ thoughts and feelings (Wolfe, 1987) and respond inappropriately and illogically to others in distress (George & Main, 1979). Studies using the TAT with physically abused children have found that victims are more likely to describe others nonpsychologically and less complexly, while focusing less on internal processes (Stovall & Craig, 1990). Westen et al. (1990) showed that physical abuse among adolescents was associated with more grossly illogical responses (higher percentage of lower level scores on scale USC) as compared to subjects with other types of early trauma.

Studies of physically abused children have shown that victims make attributions of others that are less accurate, complex, and logical. As a result, it is expected that physically abused children will produce TAT stories with a more primitive understanding of social causality than will nonabused children.
Purpose and Significance of the Study

Psychoanalytic object relations theory and projective techniques can offer insight and understanding into the effects of child physical abuse. The purpose of this study is twofold: first, to strengthen the diagnostic ability of the TAT in identifying child victims of abuse; and second, to further the theoretical understanding of physical abuse victims by use of object relations concepts. More specifically, this investigation will 1) explore the relationship between four dimensions of object relations theory and victims of child physical abuse; 2) validate and extend the results of Westen et al. (1990) on an outpatient population of both males and females, using a larger sample, with a greater age range; and 3) attempt to cross-validate the SCORS with physically abused children. Results of this study will enhance understanding of the psychological sequelae of childhood physical abuse, and may contribute to the development of appropriate diagnostic and therapeutic techniques.

Hypotheses

The Social Cognition and Object Relations Scales (SCORS; Westen et al., 1985) assess four dimensions of social cognition and object relations (scales CR, AT, CEI, and USC) from TAT responses. The abuse literature suggests that physical abuse is associated with impairments in victims' object relations. Studies have demonstrated that
victims lack the development of well differentiated, complex, and integrated self- and object-representations; experience the world as threatening and malevolent; have difficulty investing emotionally in interpersonal relationships and social standards; and make attributions of others that are inaccurate, noncomplex, and illogical. Subsequently, two hypotheses were made, as well as a proposal for exploratory analysis.

1) The first hypothesis investigated average or typical object relations functioning between the two groups through the use of mean scores calculated for each of the four scales of the SCORS (Westen et al., 1985). It was hypothesized that the abuse group would obtain significantly lower mean scores than a comparison group of nonabused children on each of the four object relations scales.

2) The second hypothesis investigated differences in the propensity for pathological functioning for each of the two groups by examining the percentage of level-1 scores across the four object relations scales. It was hypothesized that the abuse group would produce significantly more pathological (level-1) responses on each of the four scales of the SCORS (Westen et al., 1985) compared to a group of nonabused children.

3) Few studies have examined gender differences with respect to physical abuse. An exploratory analysis was conducted to investigate whether abuse had a differential
effect across victim gender. Additionally, an exploratory analysis was performed to investigate whether perpetrator gender had any differential effect on victims' object relations development.
CHAPTER II

METHOD

Subjects

Subjects were 39 physically abused children and 39 children with no documented history of abuse evaluated at the Dallas Child Guidance Clinic (DCGC), an out-patient clinic which specializes in the evaluation and treatment of children and families in Dallas, Texas. Physically abused subjects had been referred for evaluation and/or treatment by the state's Department of Human Services (DHS) or the child's school following disclosure or substantiation of physical abuse. Physical abuse was defined as an act in which an adult caregiver injures a child not by accident, but deliberately or in anger (Gil & Noble, 1979). Abuse status was determined from social and family histories, assessment reports, treatment notes, and DHS findings in each subject's case file. Nonabused subjects were referred for evaluation and/or treatment of various behavioral and emotional problems such as depression ($n = 30$), hyperactivity ($n = 7$), conduct problems ($n = 13$), learning disabilities ($n = 6$), and school problems ($n = 19$). The two groups were matched for gender (males, $n = 24$; females, $n = 15$). Subjects were excluded if there was evidence of psychosis, gross neuropathology, or IQ below 70 contained in
their clinic files. Subjects were also excluded if a history of abuse could not be reliably determined from case files or if testing records were incomplete.

The abuse group ranged in age from 6 years, 6 months, to 16 years, 3 months, with a mean age of 12 years, 0 months. Twenty-five of the victims were Caucasian, 6 African-American, 6 Hispanic, and 2 other. The nonabuse group ranged in age from 6 years, 1 month, to 16 years, 7 months, with a mean age of 12 years, 2 months. Twenty-one of these subjects were Caucasian, 9 African-American, and 9 Hispanic.

**Test Measures**

Data utilized in this study were archival in nature, and included TATs and WISC-Rs. All tests were administered at DCGC by clinical staff having completed at least a master’s degree in psychology with formal coursework in psychological testing. All testing was supervised by a licensed clinical psychologist.

Object relations was assessed from TAT responses using a scoring system developed by Westen et al. (1985). This system assesses four dimensions of object relations: 1) complexity of representations of people (CR), 2) affect-tone of relationship paradigms (AT), 3) capacity for emotional investment in relationships and moral standards (CEI), and 4) understanding of social causality (USC). Each
dimension is assessed along a 5 point Likert-scale, with level 1 considered relatively primitive and level 5 mature.

These scales have been validated on a number of samples. The measures have been able to differentiate adults (Westen, Lohr, Silk, Gold, & Kerber, 1990) and adolescent (Westen, Ludolph, Lerner, Ruffins, & Wiss, 1990) borderline patients from psychiatric and normal comparison subjects. Sexually abused children and adolescents have been distinguished from nonabused clinical controls using these scales (Ornduff, Freedenfeld, Kelsey, & Critelli, in press). Additionally, Schneider (1990), using these dimensions to assess psychotherapy transcripts, found increases on scales CR and CEI over the course of brief psychoanalytic psychotherapy and at followup.

In normal samples, Barends, Westen, Byers, Leigh, and Silbert (1990) found the scales to correlate with similar object relation scales derived for other forms of narrative data such as early memories, psychiatric interviews, and psychotherapy transcripts. They additionally found significant correlations between the four scales and validated instruments such as Blatt, Wein, Chevron, and Quinlan's (1979) measures of complexity and affective quality of parental representations applied to descriptions of significant others, and Loevinger's (1976) Test of Ego Development. Additionally, these scales were able to predict social adjustment in both clinical and nonclinical...
samples, as measured by Weissman's Social Adjustment Scale (Weissman & Bothwell, 1976). Westen, Klepser, Ruffins, et al. (1991) found developmental differences between second and fifth graders, and between early and late adolescents on scales CR, CEI, and USC but not AT, supporting the hypothesized developmental nature of three of the four scales. Another study found a systematic relationship between object relations assessed in adolescence and several developmental history variables such as disrupted attachments in childhood (Westen et al., 1990).

Non-Test Measures

The following demographic variables were collected from subjects case files: race of victim, perpetrator sex, perpetrator role, disposition of the victim, and family structure. Perpetrator relationship was defined as the type of relationship the perpetrator had with the victim at the time of the abuse (e.g., biological parent, step-parent). Disposition of the victim indicated what happened to the victim (e.g., put into foster care) immediately following discovery/disclosure of the abuse. Family structure indicated whether or not the family was intact (i.e., both biological parents in the home) at the time of the abuse.

Procedure

Names were removed from all data to insure confidentiality. Object relations was assessed from responses to 5 TAT cards: 1, 2, 3BM, 17BM, and 18GF. These
cards are a subset of Bellak's (1986) recommended standard set, and were chosen based on their 100% representation in subjects' protocols. Mean word counts were calculated for each subject by counting the number of words per story and averaging across the five cards.

For purposes of independent scoring, TAT records were photocopied, transcribed, and divided into individual stories. Two doctoral students in clinical psychology who trained extensively using detailed scoring manuals rated the stories. Stories were provided to raters on separate pages and randomized across all subjects. Each story was coded independently by the two raters on each of the four scales. Raters were kept blind as to the abuse status of each subject. Adequate interrater reliability ($r \geq .80$) was established prior to commencement of ratings.
CHAPTER III

RESULTS

Description of Physical Abuse Group

Subjects in the physical abuse group had a mean age of 12 years, 0 months (n = 39, S.D. = 30). Thirty-six cases were reported as ongoing (occurring more than once), while 3 were reported as isolated incidents. A majority of the subjects had documented reports of recent or past incidents of bruising (n = 13), burns (n = 4), or lacerations (n = 5), and/or had received medical attention (n = 3) as a result of abuse. Following discovery of abuse, 24 of the victims were removed from the home, and 15 remained in the home.

The perpetrator was most commonly a biological parent (n = 26) or step-parent (n = 7). In 19 of the cases the perpetrator was male, while in 13 of the cases the perpetrator was female. The remaining 7 cases consisted of both males and females as perpetrators. A majority (n = 32) of the abusive families were not intact at the time of abuse.

Preliminary Analyses

Comparisons were made between the physical abuse group and nonabuse group on the following dependent variables: age, (t(76) = .40, ns); Verbal I.Q. (t(76) = .34, ns); Performance I.Q. (t(76) = .37, ns); Full Scale I.Q. (t(76) =
.33, ns); race ($\chi^2(3) = 3.55$, ns); and family structure ($\chi^2(1) = 2.42$, ns). As shown in Table 1 (Appendix B), the groups did not differ significantly on any of these variables.

Interrater reliabilities were computed using Pearson correlations, with the Spearman-Brown correction formula to correct for multiple coders. Corrected reliabilities were: CR, $r = .92$; AT, $r = .94$; CEI, $r = .91$; and USC, $r = .91$.

Pearson correlations were computed between each of the four object relations scales (see Table 2, Appendix B). As expected, low to moderate degrees of association were observed, suggesting that the scales are measuring interdependent but distinct aspects of object relations.

Due to the hypothesized developmental nature of object relations, and the possible influence of intelligence and verbal productivity on scale scores, Pearson correlations were computed for mean scores (see Table 3, Appendix B) and percentage of level-1 scores (see Table 4, Appendix B) on each of the four object relations scales and mean word count, age, and Full Scale I.Q. Significant correlations were observed between scale scores and the variables age and mean word count, warranting their inclusion as covariates in the analyses. Neither mean nor percentage level-1 scores were found to correlate significantly with Full Scale I.Q.
Analysis of Hypotheses

To test the first hypothesis that mean scores across the four scales would be significantly higher in the abuse group as compared to the nonabuse group, a Multivariate Analysis of Covariance (MANCOVA) was used. Mean scores were computed by averaging scale scores between raters and across cards for each subject. The MANCOVA was performed with abuse history as the grouping variable and mean scores across the four scales as the dependent variables. As a result of significant correlations with the four scales, mean word count and age were entered as covariates. Results showed a significant main effect of group with Wilks' Lambda $= .78$, $F(4,71) = 5.15$, $p < .001$, indicating that the abuse group obtained lower mean scale scores than the nonabuse group. The calculated effect size of this difference was $r = .47$ (Rosenthal & Rosnow, 1991). Age made significant adjustments to all four scales, while mean word count made significant adjustments to scales CR and CEI. Adjusted means are displayed in Table 5 (Appendix B).

Subsequent univariate analyses across the four scales (see Table 5, Appendix B) showed significant differences on scales AT ($F(1,74) = 11.19$, $p = .001$), CEI ($F(1,74) = 9.56$, $p = .003$), and USC ($F(1,74) = 7.28$, $p = .009$). No significant difference was observed for scale CR ($F(1,74) = .05$, ns). Alpha levels were adjusted by use of the Sime's procedure (1986) to maintain alpha at .05. Thus, the first
The hypothesis was partially supported as subjects in the abuse group obtained significantly lower mean scores than the nonabuse group on three of the four object relations scales.

The second hypothesis, which stated that percentage of level-1 scores would be significantly higher in the abuse group, was similarly tested with a MANCOVA. Percentage of level-1 scores were computed by summing the frequency of level-1 scores for each scale between the two raters and across the five cards. Given the correlations presented in Table 4 (Appendix B), mean word count and age were included as covariates. Results showed a significant main effect of group with Wilks' Lambda = .80, $F(4,71) = 4.42$, $p < .01$, indicating that the abuse group obtained a higher percentage of level-1 scores than the nonabuse group. The calculated effect size of this difference was $r = .45$ (Rosenthal & Rosnow, 1991). Age made significant adjustments to scales AT and USC and mean word count made significant adjustment to scale USC. Adjusted means are shown in Table 6 (Appendix B).

Univariate analyses (see Table 6, Appendix B) showed significant differences on scales AT ($F(1,74) = 11.33$, $p = .001$, CEI ($F(1,74) = 4.87$, $p = .03$), and USC ($F(1,74) = 9.24$, $p = .003$). Analysis of Scale CR did not yield a significant difference ($F(1,74) = 1.04$, $p = .31$) between the groups. Alpha levels were adjusted by use of the Sime's procedure (1986) to maintain alpha at .05. Thus, the second
hypothesis was found to be partially supported as the abuse group obtained a significantly higher percentage of level-1 scores than the nonabuse group across three of the four object relations scales.

**Post Hoc Analyses**

Exploratory analyses were performed to investigate object relations development with respect to victim and perpetrator gender. To explore the relationship between object relations development and victim gender, a MANCOVA was performed with victim gender as the grouping variable and mean scores across the four scales as dependent measures. Age and mean word count were entered as covariates. Results revealed no significant main effect with Wilks' Lambda = .88, $F(4, 35) = 1.22$, ns, across the four scales.

To explore the relationship between object relations development and perpetrator gender a MANCOVA was performed with perpetrator gender as the grouping variable and the four scales as dependent variables. Age and mean word count were entered as covariates. Results showed no significant main effect with Wilks' Lambda = .82, $F(4,35) = .82$, ns, across the four scales.
CHAPTER IV

DISCUSSION

The present study has demonstrated the ability of the TAT to differentiate a group of physically abused children from a group of nonabused children on three dimensions of object relations and social cognition. Using the SCORS (Westen et al., 1985) to assess children's TAT stories, a history of physical abuse was found to be associated with a more malevolent object world, a lower level capacity for emotional investment in relationships and moral standards, and less accurate, complex, and logical attributions of causality in understanding human interaction. These object relations impairments were demonstrated both on mean scores, reflecting typical pathological functioning, as well as percentage of level-1 scores, indicating a propensity for more grossly pathological representations.

The first hypothesis that mean scores for the physical abuse group would be significantly lower on all four scales was partially supported. Similarly, the second hypothesis that percentage of level-1 scores would be significantly higher for the abuse group was also partially supported. Predicted to show more pathological scores among victims, scale CR was the only scale which did not successfully
differentiate the groups on either mean scores or percentage of level-1 scores.

The finding that abuse victims exhibit significantly more pathology (both on mean and percentage level-1 scores) on scale AT confirms similar results by Westen et al. (1990). These findings support the view that victims of physical abuse perceive the world and their relationships as malevolent and capricious, filled with victims and victimizers. Furthermore, they have a tendency to retrieve more pathological representations in which the world is seen as overwhelmingly painful and tremendously threatening. This malevolent affective coloring (Kernberg, 1974) of victims' object world is likely the result of a history of profound abuse, aggression, sadism, and exploitation (McCarthy, 1990; Tuohy, 1987) by parental objects.

Subsequent relationships are potentially affected through internalization of early abusive objects (Guntrip, 1969), such that "patients who view the object world as filled with victims and victimizers, and who expect abuse in relationships, do so in part because that is what they actually experienced in childhood" (Westen, 1990, p. 685). The internalization of abusive, malevolent objects leaves victims prone to a repetition of early abusive relationships and to unconsciously incite abusive relationships with others. According to Seinfeld (1989), "the youngster who has internalized the abusive object relationship will
provoke peers and authority figures into the same abusive relationship as the original abusive object" (p. 43).

The concept of internalized malevolent object relations could explain findings in both the child and adult abuse literature. These studies have shown that child victims of abuse manifest negative expectations of the future (Allen & Tarnowski, 1989; Haskett & Kistner, 1991), increased aggression towards others (Kaufman & Cichetti, 1989; Kazdin et al., 1985; Kinard, 1980; Salzinger et al., 1993), and view relationships with others less positively (Salzinger et al., 1993). Additionally, studies show that adults abused as children tend to become involved in subsequent relationships typified by malevolence and violence. A history of child physical abuse has been found to be associated with higher incidences of spousal abuse (Rosenbaum & O'Leary, 1981, Straus et al. 1980) and criminal behavior (Sack & Moran, 1980, Widom, 1989b), as well as abuse perpetrated against their own children (Kaufman & Zigler, 1987).

In addition to the development of malevolent mental representations, abused children were found to have significantly lower mean and higher level-1 scores on scale CEI. These findings reflect an egocentric view of the world, as well as a propensity for the activation of representations which generate profound self-preoccupation and self-gratification (Westen et al., 1985).
Theoretically, the profound self-preoccupation found among abuse victims in this study can be related to a failure for the abused child to successfully modify infantile states of grandiosity and narcissism (Kohut, 1971). This developmental failure likely stems from abusive attachments with parents who are unable to provide the empathy, emotional involvement, nurturance, and support (Seinfeld, 1989) necessary for a healthy cohesive self (Kohut, 1971), and the development of concern for others and moral and social values (Kernberg, 1984). These impaired early attachments have been found quite consistently in the abuse literature (Iverson & Segal, 1990) which has documented children's insecure attachments with caregivers (Browne & Saqi, 1988; Iverson & Segal, 1990), less interaction among family members (Burgess & Conger, 1978), and less family cohesion and support (Mollerstrom et al., 1992). Additionally, object relational concepts of emotional investment in people and moral standards can be used to explain findings in the abuse literature which show physically abused children to have less social sensitivity (Wolfe, 1987), less concern for others (George & Main, 1979), and an increased likelihood of incarceration in children (Lewis & Shanok, 1987), and adults (Sack & Mason, 1980; Widom, 1989b).

Physically abused children were also found to have pathological representations on a third dimension of object
relations, typified by more difficulty making sense of the world, particularly the world of relationships. In addition, abuse subjects were found to have a higher percentage of illogical attributions which can profoundly affect their ability to make sense of others actions (Westen et al., 1985). A poor understanding of social causality is theorized to arise in children with a history of social learning in which parental actions are erratic and "whose 'internal working models' of the attachment do not permit them to know which way to act... and what to expect" (Westen et al., 1990, p. 1066). Such distortions of interpersonal transactions (McCarthy, 1990) are typical in the abusive parent-child dyad. Splitting, projection, and projective identification by abusive parents (Arcaya & Gerber, 1990) make their thoughts, feelings, and actions unpredictable and confusing for the abused child. Such lack of consistency and predictability in early relationships can lead to subsequent developmental deficits in the developing child's interpretation of social causality. These deficits include problems distinguishing means from ends, difficulty learning from experience (Lerner & Lerner, 1985), poor judgment, and poor anticipation of consequences (Seinfeld, 1989).

Deficits in the understanding of social causality can be used to explain findings in the abuse literature which show that abused children have more difficulty discriminating
thoughts and feelings in others (Wolfe, 1987) and have reduced social sensitivity to peers (George & Main, 1979).

Findings for scale USC are partially supported by Westen et al. (1990) which found a higher percentage of illogical attributions made by children who were victims of maternal abuse, but not abuse by father-figures. Additionally, Westen et al. (1990) did not find mean scores on scale USC to significantly distinguish physically abused subjects from other subjects with traumatic childhood experiences. As with scale CEI, design problems in Westen et al. (1990) make comparisons difficult.

Findings in this study did not support the hypothesis that scale CR would be significantly more pathological in the abuse group. Significant differences were not found between groups on either mean scores or percentage of level-1 scores. The abuse group scored low, though, when compared to Westen et al.'s (1991) sample of nonclinical fifth graders (a younger, and theoretically less developed group on average than the present sample). When compared to this normal sample, all scales are observed to be lower in the present sample of abused children. This may suggest that while deficits in the ability to see self and others in complex psychological ways are not idiosyncratic of abuse victims, it is affected to some extent within clinical groups of children.
The finding that scale CR does not discriminate abused children from a nonabused clinical group is interesting when relationships among the four scales are considered. Intercorrelations between scales show CR to be the only scale not significantly correlated with AT, the most affectively loaded scale. This would suggest that scales AT and CR are orthogonal, AT being the most affectively loaded of the four scales and CR the most cognitively loaded. Cognitive processes related to scale CR include the ability to differentiate representations of self from other, and recognize that other people’s perspectives are different from one’s own. Such findings may suggest that trauma associated with physical abuse has less impact on certain aspects of victims’ cognitive functioning and more impact on victims’ affective functioning. In order to clarify the meaning of these findings, future research on victims’ object relations would need to address the differential impact of abuse on victims’ cognitive and affective functioning.

Differential effects of abuse across victim and perpetrator gender were explored in post hoc analyses. Findings showed that male and female victims were not significantly different in their level of object relations. Additionally, no significant difference was found among victims when perpetrators were male, female, or both. These results suggest that gender differences among victims and
perpetrators have no significant impact on object relations development. This finding is interesting in light of Westen et al.'s (1990) exploratory research which found maternal variables associated with childhood trauma to be more predictive of object relations difficulties in adolescents than paternal variables. Although these results appear to conflict with findings in the current study, both studies are exploratory and future research which directly studies gender differences and object relations development is warranted.

One intriguing finding in the present study is that age was found to significantly correlate with all four object relations scales. That is, as age increased, scores across all four scales increased. These results bring into question the developmental nature of scale AT which is theorized to be nondevelopmentally related (Westen et al., 1985). Research which has directly assessed the developmental nature of the four scales with school-aged children has found AT to be the only scale not associated with age (Westen et al., 1991). Such divergent results are difficult to explain. Given the inconsistencies in findings and the relative recency of the scoring system, further research is needed to clarify the "different cognitive and affective processes that may operate independently and have different developmental antecedents" (Westen et al., 1991, p. 407).
A further implication of the finding that age correlates with the scales is that psychological development goes well beyond the first five years of life. Although psychoanalytic theorists emphasize the preoedipal years, most theorists agree that development continues beyond this period. Findings from the present study would support the view that development continues on beyond the preoedipal period, at least until early adolescence.

In addition to the assumption that the majority of psychological development is preoedipal, many psychoanalytic theorists presume that object relations develop along a single continuum or developmental line (e.g., Gunderson, 1984; Masterson, 1981). The underlying assumption of the SCORS (Westen et al., 1985) is that object relations develop along several interdependent but distinct developmental lines. The present study has shown that childhood trauma does not necessarily lead to an overall disturbance in object relations. That is, different aspects of object relations can be affected by the trauma of abuse, while other aspects remain relatively unaffected. This multidimensional nature of object relations is important to consider when understanding the effects of physical abuse. For example, in the present study, three dimensions of object relations appear to be affected by a history of abuse, while the ability to view self and others in complex psychological ways remains relatively unaffected.
Conclusions

The findings in this study suggest a relationship between a history of physical abuse and impairment in three areas of object relations and social cognition. These results offer an important contribution to the child physical abuse literature which draws few conclusions and lacks sufficient theoretical links across broad areas of research. Additionally, since these findings are based on clinical as opposed to research data, they can offer clinicians important therapeutic and diagnostic information for use in work with children.

The present study has several relative strengths when compared to other studies within this area of research. Since this study utilized archival data, a relatively large sample of abused children with a broad age range was collected. This represents an improvement over the number of abused subjects collected in other investigations of object relations which used the TAT to study physically abused children (Stovall & Craig, 1990, \( n = 20 \); Westen et al., 1990, \( n = 17 \)). An additional strength of the present study is the use of age and verbal productivity as covariates in the data analyses (Ornduff et al., in press). This represents a potential improvement in design over studies which have used the SCORS (Westen et al., 1985) with TAT data (i.e., Westen et al., 1990). Additionally, the calculation of effect sizes demonstrates that the present
findings are practically important as well as statistically significant. Derived from the reported effect sizes, the binomial effect-size displays (BESD; Rosenthal & Rosnow, 1991) of 47% for mean scores, and 45% for percentage of level-1 scores, represent meaningful group differences in object relations.

Findings of this study have important implications for the treatment of physically abused children. Goals of psychotherapy would include modifying patients’ distorted perceptions of self and other. Victims need to understand and alter their malevolent and illogical perceptions of the world. Abuse victims should be helped to recognize the maladaptive patterns and interpersonal dynamics of abusive relationships. Dealing with such issues could positively affect their capacity to emotionally invest in future relationships, and avoid a potential cycle of violence. Therapists need to be aware of possible transference issues centering around expectations of pain and abuse in relationships. Additionally, clinicians should be sensitive to the difficulties victims may have in emotionally investing in treatment and establishing trust.

Findings also support the utility of the TAT in identifying and diagnosing children who have been abused. The dimension of affect-tone of relationship paradigms has shown a consistent pattern of findings across studies that have used the SCORS (Westen, et al., 1985) to study abuse
victims. This variable has successfully differentiated sexual abuse victims from nonabused children (Freedenfeld, 1992; Ornduff et al., in press) and adolescents (Westen et al., 1990) on TAT stories, and has been shown to differentiate sexually abused from nonabused subjects on early memories (Nigg et al., 1991).

Past and present findings suggest that the TAT should be considered a valuable and important part of any assessment in which abuse is suspected. More research is needed in this area in order to strengthen the TAT's diagnostic ability. Future studies might explore the possibilities of developing cut scores for mean and percentage of level-1 scores which would be indicative of abuse. Additionally, the present study offers a structural analysis of personality. Subsequent research might investigate the content of TAT stories to better understand symbolic representations of themes, characters, and the world view of abuse victims. Future research might also explore the ability of specific cards to activate representations and themes associated with abuse history. Such an understanding could improve the TAT’s ability to elicit idiosyncratic responses from abuse victims which would improve its diagnostic ability.

Finally, findings from this study add to the discriminative and construct validity of the SCORS (Westen et al., 1985). Along with it’s ability to differentiate
groups of abuse victims, this scoring system has been able to distinguish borderline patients from psychiatric and normal subjects in adolescents (Westen, Lohr et al., 1990) and adults (Westen, Ludolph et al., 1990). In addition, the SCORS (Westen et al., 1985) has been effective in assessing object relations from other forms of narrative material including psychotherapy transcripts, early memories, and interview data (Westen, Lohr, Silk, Gold, et al., 1990; Westen, Ludolph, Lerner, et al., 1990).

In conclusion, the present study has shown that a clinical group of physically abused children can be differentiated from a nonabused clinical group through an investigation of object relations and social cognition. These findings have been shown to arise independently of age and verbal productivity.

Limitations

It is important to note the limitations of this study. Since the stories were archival, they were administered by examiners without regard to the current scoring system. As a result, there was a lack of sufficient prompting by test administrators. It is likely that with more prompting, specific for the SCORS (Westen et al., 1985), richer stories and a broader sample of subjects' psychological functioning would arise. While more prompting could have potentially increased the power of the present findings, the fact that differences emerged through ordinary clinical use of the TAT
makes this scoring system potentially useful for the clinician.

Another limitation in this study is that certain important variables related to abuse were not collected. Such variables include age of onset, duration, and severity of abuse. These variables are often difficult to obtain and reliably collect but would further understanding of the effects of abuse on victims psychological functioning.

Finally, certain limitations should be noted about the scoring system used. A number of problems have surfaced over the course of studies which have utilized the SCORS (Westen et al., 1985; see Westen, 1993 for a more detailed discussion). First, the scoring system lacks a measure of thematic content which is an important dimension of object relations. Second, the scales represent composite dimensions of object relations and may obscure subdimensions which make up each individual scale. For example, scale CEI is composed of two highly related dimensions: a commitment to relationships and a commitment to values and moral standards. Further research into the multidimensional nature of object relations could clarify the finer distinctions within scales. Finally, possible metric differences among the scales may limit their comparability along developmental dimensions. For example, it is not known whether the degree of pathology suggested by a level 1 score on scale AT is equal to the degree of pathology of a
level 1 score on any of the other three scales. The author has attempted to deal with deficiencies in the scale with a recent revision and a newly devised Q-sort procedure (SCORS-Q; Westen, 1993).
Summary of the Social Cognition and Object Relations Scales

(SCORS; Westen et al. 1985)

<table>
<thead>
<tr>
<th>Complexity of Representations of People</th>
<th>Affect-tone of Relationship Paradigms</th>
<th>Capacity for Emotional Investment</th>
</tr>
</thead>
</table>

**Definitions**

This scale measures the extent to which a subject clearly differentiates the perspective of self and other; sees self and others as having stable, enduring, multidimensional dispositions; and sees self and others as psychological beings with complex motives and subjective experiences.

This scale measures the affective quality of representations of people and relationships. It attempts to assess the extent to which the person expects from the world, and particularly from the world of people, profound malevolence or overwhelming pain, or views social interaction as basically benign and enriching.

This scale measures the extent to which others are treated as ends rather than means, events are regarded in terms other than need-gratification, moral standards are developed and considered, and relationships are experienced as meaningful and committed.

**Level-1**

Lack of clear differentiation between characters; boundary confusion; confusion of points of view.

World is viewed as tremendously threatening and overwhelmingly capricious and painful; malevolent representations. Primary concern is gratification of needs; profound self-preoccupation; rules and authorities are seen as obstacles.

**Level-2**

Characters are separate but unidimensional; focus on physical description or action; fluid characterization.

World is viewed as hostile, capricious, empty or painful, but not overwhelming. Limited investment in people, relationships and moral standards; gratification is primary aim.
### Complexity of Representations of People

<table>
<thead>
<tr>
<th>Level-3</th>
<th>Level-4</th>
<th>Level-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple elaboration of mental life; some sense of continuity over time of attitudes or dispositions.</td>
<td>Mixed representations which are seen as mildly negative.</td>
<td>Needs and wishes of others are considered stereotypic concern for others; rules are respected but not invested in.</td>
</tr>
<tr>
<td>Characters are seen as having complex subjective states, enduring characteristics or mixed emotions or attributions.</td>
<td>Mixed representations; as a whole interpersonal relations are seen as neutral or mixed.</td>
<td>Characters are seen as being able to invest in relationships and moral standards; commitment to abstract ideals.</td>
</tr>
<tr>
<td>Characters possess enduring and momentary traits states; complex motives and conflicts; mixed feelings or attributes.</td>
<td>On the whole, relationships with others are seen as positive.</td>
<td>Autonomous selfhood in the context of committed relationships; rules are not taken as absolute but are carefully considered.</td>
</tr>
</tbody>
</table>
Definition

This scale measures the extent to which attributions of the cause of people's actions, thoughts, and feelings are logical, complex, and psychologically minded.

Level-1

A lack of understanding of causality in the social realm.

Level-2

Rudimentary understanding of social causality; actions are explained by simple stimulus-response causality; minor logic errors.

Level-3

Understanding of multidirectional causality; rudimentary understanding of the role of the role of thoughts, feelings, in mediating action.

Level-4

Basic understanding of the role of psychological events in influencing thoughts, feelings, behaviors, and interpersonal interactions.

Level-5

Understanding that feelings and behaviors are caused by psychological processes; understanding of unconscious motivations.
Table 1

Comparison of Groups on Age, Intelligence, and Race

AGE (Months)

<table>
<thead>
<tr>
<th>Abused (n=39)</th>
<th>Nonabused (n=39)</th>
<th>t-value</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>S.D.</td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>120</td>
<td>4.76</td>
<td>122</td>
<td>4.75</td>
</tr>
</tbody>
</table>

INTELLIGENCE (WISC-R)

<table>
<thead>
<tr>
<th>VIQ</th>
<th>PIIQ</th>
<th>FSIO</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>S.D.</td>
<td>Mean</td>
<td>S.D.</td>
<td>t-value</td>
<td>df</td>
</tr>
<tr>
<td>94.1</td>
<td>11.46</td>
<td>95.1</td>
<td>13.17</td>
<td>.34</td>
<td>76</td>
</tr>
<tr>
<td>100.5</td>
<td>13.70</td>
<td>101.6</td>
<td>13.54</td>
<td>.37</td>
<td>76</td>
</tr>
<tr>
<td>97.2</td>
<td>11.70</td>
<td>98.1</td>
<td>11.98</td>
<td>.33</td>
<td>76</td>
</tr>
</tbody>
</table>

Table Continues
<table>
<thead>
<tr>
<th>Race</th>
<th>Abused</th>
<th>Nonabused</th>
<th>Chi-Square</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
<td>25</td>
<td>21</td>
<td>3.55</td>
<td>3</td>
</tr>
<tr>
<td>African-American</td>
<td>6</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>6</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2

Correlations Among Scales of the SCORS (Westen et al., 1985) for Mean Scores with Standard Deviation on the Diagonal for Abuse and Nonabuse Groups

<table>
<thead>
<tr>
<th></th>
<th>CR</th>
<th>AT</th>
<th>CEI</th>
<th>USC</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR</td>
<td>.23</td>
<td>.08</td>
<td>.15 *</td>
<td>.29 **</td>
</tr>
<tr>
<td>AT</td>
<td>.52</td>
<td>.19 **</td>
<td>.19 **</td>
<td></td>
</tr>
<tr>
<td>CEI</td>
<td></td>
<td>.27</td>
<td>.17 **</td>
<td></td>
</tr>
<tr>
<td>USC</td>
<td></td>
<td></td>
<td>.22</td>
<td></td>
</tr>
</tbody>
</table>

CR=complexity of representations of people; AT=affect-tone of relationship paradigms; CEI=capacity for emotional investment in relationships and moral standards; USC=understanding of social causality.

* p < .01, ** p < .001
Table 3

Correlations Between Intelligence, Mean Word Count, Age and Mean Scores for Scales of the SCORS (Westen et al., 1985)

<table>
<thead>
<tr>
<th></th>
<th>CR</th>
<th>AT</th>
<th>CEI</th>
<th>USC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal I.Q.</td>
<td>.13</td>
<td>.16</td>
<td>.17</td>
<td>.09</td>
</tr>
<tr>
<td>Performance I.Q.</td>
<td>-.04</td>
<td>-.12</td>
<td>.03</td>
<td>.01</td>
</tr>
<tr>
<td>Full Scale I.Q.</td>
<td>.07</td>
<td>-.17</td>
<td>.12</td>
<td>.07</td>
</tr>
<tr>
<td>Mean Word Count</td>
<td>.19**</td>
<td>-.02</td>
<td>.21**</td>
<td>.16**</td>
</tr>
<tr>
<td>Age</td>
<td>.32*</td>
<td>.27*</td>
<td>.28*</td>
<td>.39**</td>
</tr>
</tbody>
</table>

CR=complexity of representations of people; AT=affect-tone of relationship paradigms; CEI=capacity for emotional investment in relationships and moral standards; USC=understanding of social causality.

* p < .01, ** p < .001
Table 4
Correlations Between Intelligence, Mean Word Count, Age and Percentage of Level-1 Scores for Scales of the SCORS
(Westen et al., 1985)

<table>
<thead>
<tr>
<th></th>
<th>CR</th>
<th>AT</th>
<th>CEI</th>
<th>USC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal I.Q.</td>
<td>.03</td>
<td>.07</td>
<td>-.17</td>
<td>-.01</td>
</tr>
<tr>
<td>Performance I.Q.</td>
<td>.04</td>
<td>-.02</td>
<td>-.08</td>
<td>-.03</td>
</tr>
<tr>
<td>Full Scale I.Q.</td>
<td>.04</td>
<td>.03</td>
<td>.17</td>
<td>-.02</td>
</tr>
<tr>
<td>Mean Word Count</td>
<td>-.05</td>
<td>.01</td>
<td>-.23*</td>
<td>.15</td>
</tr>
<tr>
<td>Age</td>
<td>-.04</td>
<td>-.26*</td>
<td>-.18*</td>
<td>-.24*</td>
</tr>
</tbody>
</table>

CR=complexity of representations of people; AT=affect-tone of relationship paradigms; CEI=capacity for emotional investment in relationships and moral standards; USC=understanding of social causality.
* p < .05
Table 5

Mean Scores and Adjusted Mean Scores Across Scales of the SCORS (Westen et al., 1985) for Abuse and Nonabuse Groups

<table>
<thead>
<tr>
<th></th>
<th>Abused</th>
<th>Nonabused</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td>Adj. X</td>
<td>X</td>
<td>Adj. X</td>
</tr>
<tr>
<td>CR</td>
<td>2.07</td>
<td>2.08</td>
<td>2.10</td>
<td>2.09</td>
</tr>
<tr>
<td></td>
<td>0.05</td>
<td>1.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AT</td>
<td>2.64</td>
<td>2.65</td>
<td>3.01</td>
<td>3.01</td>
</tr>
<tr>
<td></td>
<td>11.19**</td>
<td>1.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEI</td>
<td>1.69</td>
<td>1.70</td>
<td>1.93</td>
<td>1.90</td>
</tr>
<tr>
<td></td>
<td>9.56*</td>
<td>1.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USC</td>
<td>1.87</td>
<td>1.89</td>
<td>2.00</td>
<td>1.99</td>
</tr>
<tr>
<td></td>
<td>7.28*</td>
<td>1.74</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CR=complexity of representations of people; AT=affect-tone of relationship paradigms; CEI=capacity for emotional investment in relationships and moral standards; USC=understanding of social causality.

* p < .01, ** p < .001
Table 6

Percentage of Level-1 and Adjusted Percentage of Level-1 Scores Across Scales of the SCORS (Westen et al., 1985) for Abuse and Nonabuse Groups

<table>
<thead>
<tr>
<th></th>
<th>Abused</th>
<th>Nonabused</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td>Adj. X</td>
</tr>
<tr>
<td>CR</td>
<td>4.62</td>
<td>4.59</td>
</tr>
<tr>
<td>AT</td>
<td>18.21</td>
<td>18.18</td>
</tr>
<tr>
<td>CEI</td>
<td>44.62</td>
<td>44.18</td>
</tr>
<tr>
<td>USC</td>
<td>18.46</td>
<td>18.50</td>
</tr>
</tbody>
</table>

CR=complexity of representations of people; AT=affect-tone of relationship paradigms; CEI=capacity for emotional investment in relationships and moral standards; USC=understanding of social causality.

* p < .05, ** p < .01, *** p < .001
REFERENCES


*Journal of Projective Techniques, 18.*, 279-293.

*Journal of Nervous and Mental Disorders, 174.*, 727-735.


Jacobson, A., & Richardson, B. (1987). Assault experiences of 100 psychiatric inpatients: Evidence of the need for


borderlines, major depressives, and normals:Analysis of
Rorschach human figure responses. *Journal of Personality
Assessment, 55*, 296-314.

of physically and sexually abused latency-aged females.
*Child Abuse and Neglect, 14*, 233-242.

Straker, G., & Jacobson, R. S. (1981). Aggression,
emotional maladjustment, and empathy in the abused child.
*Developmental Psychology, 17* (6), 762-765.

Straus, M. A. (1988). *Abuse and victimization across the
lifespan.* Baltimore: The Johns Hopkins University
Press.

Straus, M. A. (1979). Family patterns and child abuse in
a nationally representative American sample. *Child Abuse
and Neglect, 3*, 213-225.

closed doors: Violence in the american family.* Garden

histories and psychiatric symptoms among male psychiatric
outpatients. *American Journal of Psychiatry, 147* (5),
632-636.

Publishers Inc.


Children at different developmental levels are thought to experience their maltreatment in qualitatively different ways, and consequently, suffer from a distinctive array of symptoms (Shirk, 1988). According to this theory, physical abuse causes enduring psychological effects by disrupting mastery of critical developmental tasks. This causes a "domino effect" as the original trauma sets into motion a sequence of events across developmental periods that lead to various maladaptive outcomes (Shirk, 1988). Future research with empirically based models of physical abuse needs to expand the understanding of victims’ experience and take into account children’s critical areas of development, such as attachment, self-control, and moral and social judgments.

Studies on the interpersonal functioning of abuse victims. Research which explores the interpersonal functioning of abused children and their families generally utilizes observational methods such as naturalistic observations, ratings, and interviews. The strengths of utilizing this methodology include an opportunity to examine spontaneous behaviors in naturalistic settings (Sattler, 1988) and study behavior that is not analyzable through self-report (Anastasi, 1988).

Attachment theorists tend to utilize observational methods in the study of physically abused children. Attachment refers to the quality of the relationship between an infant and his or her caregiver (Iverson & Segal, 1990).