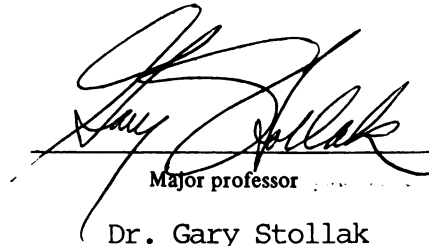THESIS

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Lisa M. Gauthier

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SELF-REPORTS OF CHILDHOOD NEGLECT AND PHYSICAL ABUSE AS DIFFERENTIAL
PREDICTORS OF PSYCHOLOGICAL FUNCTIONING

By

Lisa M. Gauthier

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ABSTRACT

SELF-REPORTS OF CHILDHOOD NEGLECT AND PHYSICAL ABUSE AS DIFFERENTIAL
PREDICTORS OF PSYCHOLOGICAL FUNCTIONING

By

Lisa M. Gauthier

This study sought to examine the differential outcomes of reported physical abuse and neglect in a sample of 512 college undergraduates. In contrast to physical abuse, which by its nature must involve some parental intrusion into a child's life, neglect is characterized by a lack of parental involvement. As such, it was hypothesized that childhood neglect would be more predictive of dysfunctional attachment styles and increased symptomatology in young adults than would physical abuse.

Questionnaires about childhood neglect and physical abuse, symptomatology, and attachment styles were administered to subjects. Results indicated support for the hypothesis. The expected relationship between neglect and more severe psychological problems and anxious attachment styles was demonstrated. Neglect was found to be significantly related to all the indices of psychological dysfunction while physical abuse was related to only one. The implications of these results were discussed in terms of the need to focus both empirically and theoretically upon the impact of neglect, as well as physical abuse.

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INTRODUCTION

Much research in the area of child maltreatment has focused upon the negative effects of abusive acts, rather than on the impact of neglect. This points to a theoretical bias in the literature that identifies abuse as actions which are easily measurable and have clear physical (and probable psychological) effects. However, neglect including the absence of caring and nurturance, while not easily quantifiable, may have more devastating effects on children than actual abusive acts (Egeland & Erickson, 1987).

While it is clear from past research that neglect and physical abuse have detrimental effects on children's functioning (Cicchetti, 1989; Egeland & Erickson, 1987; Erickson et al, 1989; Kinard, 1982), important questions concerning the unique impact of different types of maltreatment, and particularly, the negative impact of neglect, remain unanswered. Within the framework of attachment theory, studies that have found that different forms of maltreatment are uniquely related to certain types of psychosocial difficulties (Briere & Runtz, 1990; Egeland et al, 1983) suggest that neglect may be more harmful to certain aspects of development than physical abuse. Just as attachment to significant others can be conceptualized as occurring along a continuum of engagement through disengagement, we may also view types of maltreatment along this same continuum. Because physical abuse by definition requires more engagement between two people than chronic neglect, which is defined by physical and emotional withdrawal, neglect may have more serious long-term consequences for individual functioning.

The present study replicated past findings that physical abuse and neglect are both harmful to psychological functioning, but more importantly, examined areas which have not been closely studied in child abuse and neglect research: the differential impact of recollections of childhood neglect and physical abuse on psychological functioning and attachment styles. This focus on both the intrapsychic and interpersonal effects of maltreatment is critical because the quality of relationships with others affects psychological health, and in turn one's interpersonal interactions are influenced by the quality of psychological functioning.

The present study attempted to answer questions that have generated mixed findings in the literature by examining the specific types of psychological outcomes (i.e., internalizing or externalizing symptomatology), as well as the types of attachment styles (i.e., secure, avoidant, or resistant), that result from experiences of neglect or physical abuse. This study is an important contribution to the literature because understanding the quality of attachment in individuals who have experienced neglect or physical abuse can illuminate the process of how children develop certain styles of approaching the world; as actively (and positively) engaging with others in the environment, or withdrawing from or actively, but negatively, engaging the environment.

The current research explored the possible differential effects between neglect and physical abuse by relating undergraduates' reported experiences of childhood neglect and physical abuse to their reported symptomatology and attachment styles. The quality of psychological functioning and the ability to establish close relationships are assumed to be related to particular types of early childhood experiences ranging from positive and supportive to maltreating (i.e., physically abusive, neglectful, rejecting).

REVIEW OF THE LITERATURE

Definitions of abuse

The majority of studies have found that child abuse has detrimental effects on children's cognitive, social and emotional development (Cicchetti, 1989; Egeland & Erickson, 1987; Erickson et al, 1989; Kinard, 1982). However, research on child abuse is handicapped by a lack of consensus on the definitions of abuse. The lack of consensus about the definitions of different types of abuse reflects the fact that there is theoretical and empirical confusion about the point at which discipline becomes abusive (Weiss et al, 1992). This confusion has hindered the establishment of a coherent body of literature on abuse (Kinard, 1979; Rosenbloom, 1985).

Accurately defining any particular type of maltreatment such as physical assault, neglect or psychological abuse is difficult because abusive interactions in families occur in complex ways that are not easy to observe or categorize. Isolating the effects of a particular type of maltreatment is made more problematic by the fact its various forms rarely occur in isolation (Aber et al, 1989). Carlson et al (1989), for example, found that according to reports of case workers, children in their sample experienced overlapping forms of maltreatment including physical neglect (71%), emotional mistreatment (41%), and physical injury (40%). These statistics indicate that research on the impact of abuse should consider signs of one type of maltreatment (e.g., children not properly dressed or physically injured) as possible indicators of other types that also might be occurring in the home.

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Many current studies on child maltreatment focus on the distinct outcomes of abuse and neglect (Kaplan & Pelcovitz, 1982). This expanded focus is a clear improvement over the previous rather narrow emphasis in the literature on physical abuse, or the "Battered Child Syndrome" (Kempe & Helfer, 1972). However, our understanding of psychological maltreatment including emotional neglect is still lacking for a number of theoretical and methodological reasons. It is unclear conceptually, whether emotional abuse should be considered an underlying component of all forms of abuse, or a subcategory of maltreatment (Brassard et al, 1987; Tzeng & Jacobsen, 1988). Drawing a distinction between abuse and neglect has been criticized as creating a misleading dichotomy between "active" abuse and "passive" neglect (Garbarino et al, 1986). However, it is useful to make the distinction between abuse and neglect as it becomes apparent that they may produce differential effects (Egeland et al, 1983), with neglect being possibly more detrimental to certain important aspects of development than physical abuse (Augoustinos, 1987). Our understanding of neglect is also hindered by methodological difficulties in measuring neglect and different forms of psychological maltreatment. For example, neglect tends to be chronic and not defined by a specific act. Neglect is also underreported because it is less noticeable than physical abuse.

Some definitions of abuse in the literature focus on the effects of abuse on the child, while others focus on the abusive acts or omissions of proper caregiving. In a longitudinal study on abuse, Egeland & Erickson (1987) provided clear definitions of various types of abusive behaviors, based upon actual behaviors or omissions of caregiving in groups of mothers. These investigators identified specific behavioral outcomes for children as a function of the type of maltreatment that they had received. Egeland &

Erickson categorized children into different abuse groups according to the mothers' behavior. Their definitions of types of abusive mothers encompass most types of abuse in the literature (excluding sexual abuse):

1) The physically abusive group presented behaviors ranging from frequent intense spanking for disciplinary purposes to uncontrolled angry outbursts resulting in serious injuries, including extensive bruises, cuts, and cigarette burns.
2) The hostile/verbally abusive group chronically found fault with the children, criticizing them in a harsh manner.
3) The neglectful group were irresponsible or incompetent in managing day-to-day child-care activities. They failed to provide for the necessary health or physical care of their children and did little to protect them from possible dangers in the home. They lacked the skills, knowledge and understanding to provide consistent and adequate care.
4) The psychologically unavailable group were unresponsive to their children and (oftentimes) passively rejecting of them. They appeared detached and uninvolved with their child and did not respond positively to their children's attempts to elicit interaction. They usually provided for the physical needs of their children and were not physically abusive or overtly rejecting of them (Egeland & Erickson, 1987, p. 113).

While research indicates that child maltreatment has negative effects on children, few studies have attempted to trace the developmental outcomes of such negative experiences on children using longitudinal designs, or to recognize that it is the context within which abuse occurs rather than isolated acts of abuse that lead to deficits in children's functioning (Aber et al, 1989; Azar & Wolfe, 1989; Egeland & Erickson, 1987; Houck & King, 1989). It has been difficult to separate the impact of abuse from the influence of the environmental context because of a lack of control groups (Ammerman et al, 1986), and an inability to pinpoint specific incidents of abuse (Grey et al, 1979; Erickson et al, 1989; Sweet & Resick, 1979). Our understanding of abuse might be improved by a focus on the impact of the pattern of interactions and environmental influences that create an abusive atmosphere. For example, the absence of positive interaction has been found to be more predictive of child behavior problems than abusive or coercive interactions (Pettit & Bates, 1989). The current study examined how reports of the absence or presence of

neglectful or abusive interactions within families are related to the psychological functioning and relationship styles of individuals.

II. Developmental Issues and Attachment Theory

Understanding the effects of child neglect and physical abuse in light of developmental and attachment theory can lead to a richer understanding of the cumulative effects of abuse and neglect as a child develops, as well as the possible differential effects of these two forms of maltreatment. Maltreatment may adversely affect the child not only because it is an isolated traumatic incident, but because it is part of a pattern of unhealthy parent-child interactions that undermine a child's ability to negotiate developmental tasks. Because neglect tends to be more chronic and pervasive than physical abuse (Lutzker, 1990), neglect may have a more deleterious effect than physical abuse on development. This pervasive quality of neglect may lead to neglect having a powerful "organizational" impact on development, that is, it may affect various developmental domains (i.e., cognitive, social, emotional) (Aber et al, 1989, p. 587; Houck & King, 1989).

Attachment theory can increase our understanding of abuse and neglect by allowing us to view such maltreatment not as isolated acts, but as characteristics of the attachment relationship between a parent and child. If we conceptualize attachment to significant others as occurring along a continuum of engagement through disengagement, we may also view types of maltreatment along this same continuum. Physical abuse requires more engagement between two people than chronic psychological neglect, which is defined by physical and emotional withdrawal. Within the frame of this continuum, it is possible to discuss the potential differential impact of neglect and physical abuse on a child's ability to form attachments to others.

Research on infant-mother attachment supports the notion that a lack of consistent nurturance distorts a child's interpersonal interactions (e.g., leading to avoidance or resistance), and thwarts his/her ability to integrate information from the environment and to achieve a sense of self-efficacy (Cicchetti, 1989; Crittenden et al, 1989: Gray et al, 1979; Houck & King, 1989; Rutter, 1972). Crittenden et al (1989) indicate that such an avoidant pattern may be detrimental to development. They found that abused children who were compliant with their parents (i.e., they anticipated and acted in accordance with their parent's wishes) achieved higher developmental quotients than abused children who were passive and withdrawn. It seems that engaging with others, whether in a negative or positive manner, led to better development than completely withdrawing from the environment.

Evidence of the negative effects of institutional and hospital care on infants led Bowlby (1969) to formulate an attachment theory based upon a behavioral control system. He describes a system based on survival mechanisms that allow the infant to explore his/her environment only under safe conditions (i.e., when the caretaker is within proximity). If danger becomes imminent, the child can then seek out the caretaker. Attachment is a "goal-corrected system" (p. 251) with the goal being a sense of security.

Bowlby extends his theory beyond the physical survival value of the system and refers to the continual transactions between the infant and the caretaker which allow the infant to develop internal working models of the world. These models ideally offer security and predictions about what caretakers (and eventually other people) will do in certain situations, and about the child's ability to elicit such care. The attachment relationship, then, has social survival value, by allowing the infant to explore, to learn to interact within its environment and to develop autonomy.

Ainsworth et al (1978) studied the behavioral manifestations of the quality of attachment in infants and found that patterns of parent-child interactions affect the ability of infants to deal with stress and unfamiliar situations. Her study of infants' reactions in the Strange Situation task revealed that infants showed different reactions to novel stimuli (a stranger entering the room) and to separation from and reunion with their mothers. All the children studied could be placed in one of the three attachment categories (secure, avoidant, or resistant). Briefly, the secure infants easily separated from their caregivers and explored, but quickly sought out and were comforted by their caregivers when distressed (i.e., when an unfamiliar person entered the room). The avoidant children avoided and looked away from the caregiver even when levels of stress rose. These infants were unimaginative and apathetic in their exploration. The resistant infants displayed little exploration and an inability to be comforted by their caregivers upon reunion. Ainsworth's research suggests that attachment to the caregiver and its manifestations during interactions with others are critical developmental issues that effect children's ability to interact with others and to develop a sense of self-efficacy in new situations in the environment.

According to developmental theory, if a child does not master early stage-salient issues such as trusting and attaching to the caregiver, he/she cannot (more) successfully negotiate later, more complex developmental tasks (Erikson, 1980). Development is viewed as a series of reorganizations where the individual transacts with the world in qualitatively different ways at each stage (Sroufe, 1979). Many theorists and researchers discuss how abuse can prevent certain stage-salient issues from being mastered. Cicchetti (1989) states that "certain developmental systems are at risk for delays at certain

ages" (p. 390), illustrating how critical it is to determine the age at which physical abuse or neglect first occurs, as well as whether or not either recurs (Friedrich & Einbender, 1983; Jacobsen & Straker, 1982; Kinard, 1979). It is important to examine the point in the developmental trajectory during which maltreatment prevents the child from exploring and integrating new information.

Houck & King (1989) discuss the impact that maltreatment can have on toddlers, stating that it can compromise the development of a secure attachment and then interfere with the "emergence of an autonomous self, the emergence of social relatedness and the exploration of the environment..." (p. 197). This conclusion suggests that maltreated children might be reluctant to explore and learn about their environment because they do not experience the security and safety of a consistent, nurturing caregiver to whom they can return following their explorations. This reluctance has been termed "adaptational failure," where failure to adapt at one stage makes adaptation more difficult at later stages (Cicchetti, 1987 cited in Houck & King, 1989).

Erikson (1980) theorizes that if a child is not able to establish "basic trust" in the caretaker during the first year of life, he or she will have difficulty moving on to later psychosocial stages that involve establishing a sense of autonomy or self-initiative, developing new skills, and maintaining a coherent sense of self. Allen & Oliver (1982, cited in Augoustinos, 1989) suggest that language development is compromised in maltreated children because they lack trust in the environment, are afraid to talk, and therefore do not get the practice they need in expressive and receptive language skills. This lack of trust may lead not only to language and other skills deficits, but may also prevent the individual from experiencing real intimacy with others. The experience of maltreatment, which is essentially a breach of trust, may

prevent children from ever allowing themselves to be vulnerable to others in relationships, thereby preventing them from forming close friendships, or relationships in later life.

Stern (1985) expands upon Erikson's ideas by emphasizing the importance of the quality of parent-child interactions for the psychological and interpersonal development of the child. Stern states that the infant does not merely learn by taking in new information, he/she learns from the interactional process itself. Through interactions with a responsive caregiver, the infant develops "evoked companions" which are representations of people in the infant's life that accompany the infant when it is alone. Having experienced a self-regulating caregiver, the infant is able to feel secure and to explore the world when the caregiver is not present because of these evoked companions. This theory suggests that children with neglectful, nonresponsive parents may be particularly negatively affected by such experiences. If a child is chronically neglected, he/she has had no opportunity to develop these evoked companions because he/she has not experienced a self-regulating caregiver. Children who are physically abused, on the other hand, may experience periods of interaction with their caregiver (some of which may be positive) which allow them to experience some sense of regulation by a caregiver.

III. Caregiving and the Differential Impact of Neglect and Physical Abuse

The effect of a lack of mutual regulation between child and caretaker is critical to understanding why neglect may be so harmful. Bowlby (1969) states that attachment to the caregiver is mediated by the infant's crying, calling or babbling behavior which "has proximity to the mother as a predictable outcome." (p. 244) Individuals who learn that their needs are not consistently

responded to and that their actions (e.g., crying, reaching out for a caregiver) do not bring about comfort, may lose a sense of control and efficacy within their environment. Children's understanding of causality, or notion of themselves as an agent in the environment, is affected by their approach to the environment. Likewise, the success with which they are able to engage their environment will affect how much efficacy they believe they have within it. Possessing a sense of "effectance," or seeing the result of one's own actions allows one to establish a sense of contingency between one's actions and subsequent effects (Harter, 1983; Loevinger, 1976). Perceiving no contingency between one's actions and subsequent outcomes can lead to a learned helplessness (Abramson et al, 1980), where the individual gives up after many unsuccessful attempts at maintaining control (Taylor, 1983). The learned helplessness hypothesis holds that emotional, cognitive, and motivational deficits occur as a result of "learning that outcomes are uncontrollable" (Abramson, Garber & Seligman, 1980, p. 4).

Individuals who are maltreated often do not experience a consistently responsive caregiver. In the instance of neglect this lack of regulation and stimulation may be more striking than in the case of physical abuse. Frodi & Smetana (1984) examined the ability of maltreated and non-maltreated children to discriminate emotions in others. They state that while victims of "violent encounters" in families may become skilled at reading the emotions of others in order to learn to protect themselves, that children whose parents are chronically neglectful may not ever acquire such skills because of the physical and emotional unavailability of the parents and the lack of interaction and stimulation. While the group differences were nonsignificant, they did find that physically abused children had a greater

ability to discriminate emotions on an Interpersonal Awareness Test than neglected children.

Sroufe (1979) describes developmental issues which form a sequence and the role the caregiver must play in order for these events to develop smoothly. From 0-3 months physiological regulation is the infant's main focus which is facilitated by caregiver's providing smooth routines. Between 3-6 months the child is learning how to manage tension, and needs sensitive, cooperative interactions with the caregiver. If these first two phases are not mastered by the infant with the help of a caregiver, a secure attachment relationship, the next phase (6-12 months), cannot be established. This relationship is contingent upon the responsiveness and availability of the caregiver. Responsiveness may be critical because proximity of the parent without interest in the child's needs or interaction may not promote the infant's trust in the parent and may send the child a mixed message (e.g., "I am here physically, but not emotionally").

If a secure attachment relationship is established, between 12-18 months the infant begins to explore and master the environment, working from the caregiver's secure base. This stage seems to form the bridge between dependence on the caregiver and dependence on the self. If provided with firm support by the caregiver, between 18-30 months the toddler develops autonomy. This autonomy allows the child (between 30-54 months) to effectively manage impulses, establish a clear sex-role identification and healthy peer relations, with the help of clear roles and values and flexible self-control on the part of the caregiver.

In examining these phases and the role the caregiver needs to play to allow the child to progress to the next stage, it is possible that chronic neglect would create significant delays during all the stages. Neglected children may

not experience smooth routines, responsive availability of a caregiver, a secure base to whom they can return, firm support, or clear roles and values. Neglected children may not possess a "motivational duality" which is "security in the familiar, yet attraction to the unfamiliar" (Sroufe, 1979, p. 835). Instead, they may have no security in the familiar which creates a repulsion to or withdrawal from the unfamiliar. In the face of environmental challenges, then, their degree of involvement may be low and they may have little ability to be resilient.

IV. Impact of Neglect and Physical Abuse on Attachment Styles

As discussed earlier, a child's experience of responsive or nonresponsive caregiving is theorized to influence how the child develops emotionally and socially, how well the child adapts to new situations, and how successful the child is in confronting challenges and exploring his/her world. According to attachment theory, children crystallize their views about the nature of relationships through repeated interactions with their parents. Bowlby theorizes that infants form "representational models," which are expectations about the quality of future interactions with people based upon experiences with attachment figures (Bowlby, 1969; Crittenden & Ainsworth, 1989). A child's expectation that interactions with the caregiver bring distress and pain may generalize to relationships with other people.

Many studies have found that children who were abused engage in more approach/avoidance behavior and aggression with both peers and caretakers (George & Main, 1979; Rivera & Widom, 1990; Widom, 1989). While these behaviors might appear maladaptive, they may be learned patterns that enable the child to cope with the conflicting emotions in wanting to approach the parent and knowing that such an approach will often be frustrating and

painful. If these patterns persist throughout the child's life, they can elicit negative responses from others and result in what Salzinger et al (1991) called "adaptational failure" (p. 69). These patterns seem to appear quite early on and persist in many abused children. For example, Crittenden & Ainsworth (1989) found that infants usually learn to accommodate their mother's styles of interaction by the time they are one year of age.

Studies of maltreated children utilizing observational methods, teacher and parent ratings, and peer nomination have consistently identified peer relations as difficult for abused children (Cicchetti, 1989). This difficulty with relationships with peers may be related to the type of attachment style these children have developed during the course of interactions with their parents (and others in their lives). The first controlled observational study on the interactions of physically abused versus non-abused toddlers was conducted by George & Main (1979). Observations of toddlers (N = 20, 1-3 years) in interactions with peers and caregivers in a day-care setting, revealed that among abused toddlers there was a pattern of behavior characterized by aggression, verbal threats, and approach-avoidance behavior with peers. A study by Main & George (1985) found that abused toddlers responded abnormally to their age-mates' distress. None of the abused toddlers showed signs of concern when faced with an age-mate's distress. In fact, they even responded with fear, anger or physical attacks. However, this study did not examine the reactions of neglected children to such situations.

There may be a relationship between the experience of neglectful or physically abusive parenting and the subsequent development of attachment styles in adulthood. Children with nonresponsive parents may have difficulty relating to others because they have no history of mutually positive and supportive interactions with their parent(s). Collins & Read (1990) found, for

example, that young adult individuals with secure attachment styles perceived their parents as warm, whereas individuals with anxious attachment styles described their parents as inconsistent and cold.

Erikson stresses the important link between an individual's ability to develop trust in others and establish autonomy, and psychological health. Because certain individuals do not experience the mutual regulation that Erikson discusses (particularly in cases of neglect), their behavior becomes an attempt to compensate for a lack of mutually satisfying social interactions. He says, that in the extreme, individuals who fail to develop a sense of trust while growing up may "withdraw into schizoid and depressive states..." (Erikson, 1950, p. 249), and may "test (the) borderlines between senses and physical reality" (Erikson, 1950, p. 248). If insecurely attached individuals have not (established) estabilished their own clear but flexible boundaries (between self and others, closeness and autonomy), they may either establish rigid boundaries (e.g., become avoidant, obsessive, compulsive) or diffuse boundaries (e.g., become preoccupied with relationships, enmeshed with others).

V. Effects of Neglect and Physical Abuse on Psychological Functioning and Development

Studies of the effects of maltreatment on children have consistently found that abused and neglected children show deficits in functioning relative to their non-maltreated peers (Cicchetti, 1989; Egeland and Erickson, 1987; Erickson et al, 1989; Kinard, 1982). Because development is understood as a process of integrating skills across cognitive, emotional, and social areas of functioning, the findings indicating that maltreated children show deficits across a range of domains are not surprising.

One of the clearest findings in the literature on child abuse is the deleterious effect of abuse on the child's emotional maturity and ability to interact with others (Cicchetti, 1989; George & Main, 1979; Kinard, 1982; Main & George, 1985). The behavior problems of abused children can lead to problems interacting with peers. Because peer relations have been cited as an important developmental issue during the preschool and early school-age time period (Cicchetti, 1989), problems in peer relations may exacerbate the child's behavioral and emotional problems. Frustrating interactions with others may contribute to the child's negative sense of self, reinforcing a poor self-concept and low self-esteem (Green, 1978; Kinard, 1982). Kinard (1982), for example, using the Piers-Harris Children's Self-Concept Scale found a negative relationship between the severity and frequency of abuse and self concept. If the child is not able to experience healthy reciprocal interactions with a caregiver early on, it is likely his/her secure sense of self and ability to negotiate relationships with others will become distorted. If emotional functioning organizes behavior (Sroufe, 1979), it might follow that maltreated children who are insecurely attached and psychologically distressed may also show deficits in cognitive and social functioning as well as emotional functioning. Many studies have found that abused/neglected children show poorer cognitive functioning than their non-abused age-mates, and low IQ scores which border on the mentally retarded range (Friedrich & Einbender, 1983; Kempe & Helfer, 1972; Salzinger et al, 1991).

The Minnesota Mother-Child Interaction Project, a longitudinal study of 267 high-risk families (Egeland et al, 1983; Erickson et al, 1989), examined the impact of abuse on development. This study compared the functioning of maltreated and control group children age 3 months through the preschool years on several outcome variables. This study examined the cumulative

impact of abuse over time, as well as the differential effects of various types of abusive parenting; physically abusive, hostile/verbally abusive, neglectful and psychologically unavailable (i.e., unresponsive, rejecting). Egeland et al (1983) examined the success of children in different maltreatment groups at completing tasks, as well as how they approached the barrier box task and teaching tasks. They examined variables such as self-esteem, ego control, apathy-withdrawal, flexibility, creativity, agency, hyperactivity, distractibility, dependency, directness of help-seeking, intensity of help-seeking, positive affect, negative affect, persistence (proportion of time on task), enthusiasm, negativity, compliance, reliance, affection for mother, and avoidance of mother. During a tool-using task at 24 months all four maltreatment groups were found to be more noncompliant, frustrated and angry than the control group. In a 42 month barrier-box task the abused groups showed less creativity, less agency, and more hyperactivity and negative affect than the control group. The maltreated group also obtained lower WPPSI scores at five.

When Egeland et al (1983) examined differences between the maltreatment groups they found that children who had been neglected had the highest mean scores on apathy and withdrawal, the highest scores on negative affect, and the lowest scores on flexibility, creativity, agency, positive affect, and affection for mother of all groups during a 42-month barrier-box task. The physically abused group had the highest scores in hyperactivity and distractibility of all groups during this same task. This group also had the highest score of all abuse groups on ego control and had a slightly higher score than the control group in directness of help seeking. Interestingly the group who had experienced neglect without physical abuse had the lowest scores on self-esteem, agency, and negative affect of all groups

at 42 months. It appears that neglect without abuse was more problematic for children than experiencing neglect with physical abuse. The lack of interaction seemed to be the more critical factor in determining negative outcomes than was the experience of physical abuse.

The results of the Minnesota Mother-Child Interaction Project clearly indicate that children who were abused performed more poorly than the control groups on all tasks and had a poorer, less persistent approach to the tasks. Notably, there were striking differences between children who had experienced different types of maltreatment. The group who showed the greatest degree of withdrawal from tasks and the greatest negative affect was the group who had experienced neglect without physical abuse. It appears that any stimulation, even if negative, was "better" for the child than no stimulation at all.

Maltreated children's poor problem solving skills may lead them to feel extremely frustrated with challenging tasks and to withdraw from the task or be non-compliant. The distractibility and negative affect which these children display likewise inhibit their ability to successfully complete cognitive tasks. Aber et al (1989) found that on Puzzle Preference and Marble-In-the-Hole Tasks children who were maltreated showed lower cognitive maturity, lower effectance motivation, and higher dependency than low income controls and middle class comparisons. It is possible that this vicious cycle affects performance on IQ tests and in schoolwork. It has been found that maltreated children perform more poorly in school than their non-abused peers (Houck & King, 1989). This lower performance may be because they lack a "secure readiness to learn" which Aber et al (1989) state is critical for integrating new information. In a sample of abused, neglected and control low income children, Kent (1976) found that 53% and 82% of the abused and

neglected groups, respectively, were doing below average in school, as compared to only 28% of the control group. Neglected children were performing worse than the abuse or control groups, indicating that in part they may have even less secure readiness to learn than the other groups.

VI. Differential Impact of Neglect and Physical Abuse on Symptomatology

Many studies of maltreatment find a range of emotional and behavioral difficulties in physically abused and neglected children. Studies which utilize behavioral questionnaires have found internalizing and externalizing behavior problems in abused children (Aber et al, 1987; Downey & Walker, 1989; Perry et al, 1983; Vissing et al, 1991). Utilizing the Child Behavior Checklist and the Conner's Teacher Questionnaire, Salzinger et al (1984, cited in Ammerman et al, 1986) found that abused children (age 11) had more reported behavior problems and were less socially competent than non-abused children. Reidy (1977) compared teacher ratings of physically abused, neglected, and control children on the Behavior Problem Checklist, and found that the abused and neglected groups obtained higher ratings of aggression than the control group.

While children who experience any form of maltreatment exhibit more problem behaviors than their non-abused peers, there is evidence which indicates that children who were neglected show more internalizing behaviors (depression and withdrawal) and children who were physically abused engage in more externalizing behaviors (Conaway & Hansen, 1989; Kinard, 1979). If we view the effects of abuse from a social-learning perspective, this would indicate that children with more aggressive role models would learn to act aggressively and likewise, that children with neglectful, withdrawn role models would develop internalizing symptoms

(Augoustinos, 1987). Weiss et al (1992), for example, found that the effects of receiving harsh physical discipline appear to be related more to aggression and externalizing behaviors in children than to internalizing behaviors. The Egeland et al (1983) longitudinal study discussed earlier found that the neglected group who had not experienced physical abuse had the highest mean scores on apathy and withdrawal during a 42-month barrier-box task. The physically abused group, on the other hand, had the highest scores in hyperactivity and distractibility of all groups during this same task. Kent (1976) found that neglected children show more social and emotional withdrawal than abused children and that abused children display more aggression towards peers and adults.

Chronically neglected children might tend to withdraw from their environment more than physically abused children and thus may display more internalizing behaviors. Internalizing painful emotions may be the most adaptive way for them to cope with their home environment. The physically abused child on the other hand, may perceive some contingency between his/her behavior and his/her parent's behavior. The abused child may act out and anger his/her parents who then become physically abusive. The child may relate the physical abuse to the preceding behavior which provoked it. Even if the child does nothing to provoke a violent outburst, there may be subsequent interaction where the parents feel sorry for their actions, and possibly apologize to the child. The neglected child may simply learn that his/her behavior does not elicit any positive or negative response from his/her caregivers.

Internalizing and externalizing behaviors appear to have long-term negative effects. Problems with interpersonal relationships due to a child's aggressive behaviors, lack of social competence, or withdrawal have been

shown to contribute to enduring psychiatric problems in adults, such as Antisocial Personality Disorder or Anxiety Disorder (Cicchetti, 1989; Green, 1983). Furthermore, delinquency and aggression are deviant behaviors which often appear early on in abused children and have been shown to persist into adulthood (Lewis et al, 1989; Widom, 1991). For example, female delinquency (including prostitution and theft) following physical and sexual abuse has been called a "post-traumatic adaptive response" (Bowers, 1990, p. 390).

In comparing the outcomes of different types of problem behaviors, it may be that externalizing behavior is the lesser of two "evils." A child who acts out, for example, may receive more attention from others, even if it is negative. A child who withdraws may remain unnoticed by parents and teachers, who might be more apt to give attention to children who are disruptive both at home and in the classroom (Kendall et al, 1991). Individuals who are physically abused may receive occasional reinforcement when acting out and eliciting attention from others. This type of experience may prevent the behavior of approaching and seeking out relationships from being extinguished (Saunders et al, 1991), as may occur in individuals who are chronically neglected. Individuals who experience chronic nonresponsiveness may learn that there is no relationship between attempts to seek closeness and interaction and the occurrence of interaction, and therefore they may withdraw. This reasoning suggests that if the experience of parental nonresponsiveness causes a child to withdraw from interactions, then the child is negatively affected not only because of the lack of positive interaction with others, but because a child in such a family is less likely to become connected to support systems outside of the family.

The internalizing or externalizing patterns of behavior discussed above may be linked to the type of attachment relationship that abused and neglected children form with their caregivers. An internalizing style might be linked to an avoidant style of attachment, while an externalizing style of behavior might be more closely linked with a resistant style. The avoidant child may not attempt to seek proximity to attain comfort, whereas the resistant child may attempt to engage others with aversive, acting-out behavior. While studies have shown mixed results in this area, there is some evidence to indicate this may be true. Crittenden (1988, cited in Houck & King, 1989) state that neglected children appear to manifest an avoidant pattern, while abused children seem to show avoidance-ambivalence.

However, the results of studies in this area are mixed, as Renken et al (in press) found that avoidant attachment in boys predicted later aggressive/ antisocial behavior, whereas resistant attachment predicted passive-withdrawal. They found that the outcome variables of aggression and withdrawal in girls were not strongly related to infant attachment. While it may be difficult to prove conclusively that one type of abuse will lead to a particular anxious attachment style, it is possible that reports of both neglect and physical abuse will be related to reports of anxious attachment styles.

VII. Family Environment and the Impact of Chronic (Psychological) Neglect

It is clear that the development of social, emotional, and cognitive competence depends upon one's experience of positive interactions with others. In conjunction with examining types of abuse an individual has experienced, it is also important to examine the overall quality of family interactions. In many families with physically abused children, there is a pervasive atmosphere of violence, and spousal abuse may also be present

(Kaplan & Pelcovitz, 1982). The effects of witnessing parental violence may be as harmful to a child as experiencing violence him/herself (Lewis et al, 1989; Rosenbaum & O'Leary, 1981). Rosenbaum & O'Leary (1981) studied the effects of wife-battering on children by comparing a sample of abused women (N = 52), with 2 comparison groups: a matched comparison group with good marriages (N = 20), and a group of non-abused women in discordant marriages. Responses by mothers to the Behavior Problems Questionnaire and the Personal Data Questionnaire, indicated that children who witnessed the parental abuse clearly (but non-significantly) showed more deviant behaviors than controls. These type of studies point to the importance of examining the general family atmosphere as well as the occurrence of abuse within families.

It is likely that an individual who is chronically neglected experiences a negative family atmosphere with little interaction. However, an individual who is physically abused may have a greater likelihood of experiencing some periods of positive interaction and stimulation. For example in a study of the effects of abuse on language development, Allen and Oliver (1982, in Augoustinos, 1987) found that neglect was the only variable that significantly affected language scores. They argue that the lack of environmental stimulation may be more critical in language development than other factors such as abuse. It is likely that deficits in language development and difficulties in communicating with others would pervade the neglected child's functioning in multiple areas such as emotional and cognitive development.

Lynch & Roberts (1982) conducted a study in which they examined characteristics of physically abused children using their non-abused siblings as a control group. While they found that overall, the abused children had lower self-confidence, spontaneity, and intelligence than their siblings, these differences were usually nonsignificant. They concluded that aspects of the

abusive environment itself, not the abuse alone, may lead to difficulties. In a study of 369 sexually abused children (using information provided by a parent behavior rating scale as well as by a social worker), Conte & Schuerman (1987) found that abused children rated by social workers to come from families with greater overall problems and family pathology were more negatively affected by abuse than abused children who had positive, supportive relationships with siblings or other adults. Conte & Schuerman conclude that:

variables indicating supportive relationships with others and the general functioning of the victim's family together explain the largest amount of variance in both measures (parent reports and social worker reports) of child functioning (Conte & Schuerman, 1987, p.209)

Separating out the impact of types of abuse from the influence of a child's environment is far from an easy task. Studies which find that abusive families have multiple problems including high levels of stress, psychiatric illness in family members, and social isolation all point to the difficulty in identifying the specific effects of abuse (Erickson et al, 1989; Gray et al, 1979; Resick & Sweet, 1979; Sweet & Resick, 1979). Using Berger & Knutsen's (1984) questionnaire about punitive childhood environments, Whitmore et al (in press) found no relationship between the severity of symptoms of Attention Deficit Disorder and reports of physical punishment. They concluded that families who present for psychiatric services (e.g., for ADHD) may have "poor parenting abilities in general" (p.11). This indicates that it may be necessary to examine other aspects of the overall family environment (e.g., neglect) in assessing the effects of abuse. It is clear that researchers on child abuse need to avoid the tendency to assume that abuse is the causative factor when both substantiated child abuse and child behavior problems are present. In fact, it is possible that the reason abuse has such pervasive and long term effects on children's development is that it takes place within a neglectful family

environment; a family in which there is not only ongoing abuse, but the absence of consistent positive interaction.

In light of the importance of the overall family atmosphere and the lack of positive interactions, the current study examined the impact which reports of pervasive neglect have on individuals' reported functioning.

VIII. Methodological Issues

Much research in the area of child abuse has been characterized by methodological problems including a lack of clear definitions of different types of abuse, biased sample selection, small sample sizes, use of heterogeneous subject samples (where overlapping types of abuse are grouped together), lack of multiple or reliable outcome measures, and hazy definitions of "matched" control groups. These difficulties have led to problems with determining whether there are distinct outcomes of different types of abuse. Many researchers have conducted studies of abuse without operationally defining physical abuse, neglect, or emotional abuse (Elmer, 1979; Kinard, 1979; Rosenbloom, 1985), or without adequately characterizing the home atmosphere in which the child lives. This lack of definition is consistent with the nature of this controversial issue; not everyone agrees where "normal" punishment ends and abuse begins. It is difficult to interpret the findings of studies which state that the experimental group was abused without defining what constitutes abuse (Pfeffer & Trad, 1988). The Minnesota Mother-Child Interaction Project (Erickson et al, 1989) was one of the few studies that provided clear, thorough definitions of the types of abuse that were being investigated. Assigning each of the maltreatment groups of mothers (physically abusive, verbally abusive, neglectful, and psychologically unavailable) into physically and non-physically abusive categories, allowed

the investigators to achieve greater precision in their interpretations about the effects of different types of abuse on children.

Another difficulty with child abuse research is biased sample selection (Achenbach, 1978; Jacobsen & Straker, 1982). Because it is difficult to find abused children to study, these subjects are often found through the juvenile court system, day-care facilities for battered children, and Protective Service agencies (Cicchetti et al, 1987; Elmer, 1977; Main & George, 1985). By the time a family is referred to Protective Services, the abuse and/or neglect have often been ongoing. Therefore, the children who are being studied may have experienced frequent and severe abuse or neglect. This may cloud our understanding of the early effects of maltreatment which is less severe. This points to the necessity of understanding the effects of a range of interactions in wider samples (Berger et al, 1988). Research with clinical samples also tends to focus on the impact of harmful interactions to the exclusion of the impact of a lack of positive interactions.

Combining subjects who have experienced different types of maltreatment into a single "abuse" group can also confound the results of child abuse research (Aber et al, 1989; Ammerman et al, 1986). Studying the effects of abuse within families when overlapping types of maltreatment occur creates a conceptual and empirical dilemma, particularly when such overlap is not acknowledged by researchers.

Because these questions about isolating the effects of certain types of abuse remain unanswered, researchers tend to either combine all types of abuse into an "abuse" group (physical abuse, neglect, emotional abuse) (Aber et al, 1987; Downey & Walker, 1989; Rivera & Widom, 1990), or to separate the groups by the predominant verified form of abuse (e.g., abuse versus neglect versus emotional maltreatment) (Crittenden, 1985; Green, 1975; Erickson et al,

1989; Kent, 1976; Reidy, 1977). Each of these methods has its strengths and weaknesses. On the one hand, separating the groups may allow for greater clarity in understanding how specific types of maltreatment affect children's development. For example, Vissing et al (1991) studied verbal aggression versus physical aggression in families and found that the combination of verbal violence and abusive violence was more strongly related to behavior problems than the presence of either in isolation. However, separating children who experience different types of abuse into different groups may lead to inaccurate conclusions regarding how different types of psychological and maltreatment occur together in the real world. A possible solution to this issue is to more closely examine differences within various groups (Aber et al, 1989).

IX. Self-Report Measures of Abuse

Many studies of child-abuse have focused on clinical samples comprised of individuals who experienced substantiated physical abuse or neglect (Berger et al, 1988). Relying solely on this type of population can lead to a severity bias as well as a tendency to focus only on the impact of overtly abusive interactions.

While it is clear that self-report measures are subject to distortion (e.g., denial of difficult experiences) and bias (Paulhus, 1991), studies still find a high number of individuals who report extremely punitive and abusive childhood experiences (Briere & Runtz, 1988). Berger et al (1988) found that in a questionnaire survey of 4,695 university students, approximately 9% of the sample reported a large number of severely punitive childhood experiences that could be categorized as abusive. Notably, only 27% of those subjects who reported experiences that could be categorized as abusive actually defined their experiences as abusive (Rausch & Knutsen, 1991). This finding indicates

that there may be a discrepancy between what researchers label "abusive" and what individuals in families perceive as abusive.

Shek (1989) found that Chinese students' reports of the quality of maternal and paternal treatment styles was significantly correlated with psychological well-being as assessed on measures of anxiety, depression, somatic symptoms, purpose in life, and ego strength. Parental treatment styles were assessed by items such as "warm vs. cold," "stern vs. mild," "relaxed vs. tense," etc. on a 7-point Likert scale. The present study expanded upon this approach by utilizing a questionnaire that examines reports of specific behaviors related to these different parental styles. Reports of specific behavior may be as important in assessing the quality of parent-child interactions as global perceptions of the manner in which one was treated.

In a study of university women, Briere & Runtz (1988) found that physical maltreatment by fathers was associated with somatization and anxiety on the Hopkins Symptom Checklist, and that psychological maltreatment by fathers was associated with anxiety, depression, and dissociation. They utilized multivariate analyses to distinguish between the effects of particular types of abuse and the general effects of abuse. In another study, Briere & Runtz (1990) found that retrospective reports of different types of abusive experiences were related to different types of psychosocial difficulties: physical abuse was related to later aggression, psychological abuse was associated with low self esteem, and sexual abuse was related to maladaptive sexual behavior. However, these studies utilized very brief measures of abuse (e.g., a 7-item scale of psychological abuse and a 5-item scale of physical abuse with items such as "slap you," "hit you").

The current study utilized a revised self-report questionnaire that examines the occurrence of physical abuse and neglect in a sample of college

undergraduates. While studies utilizing clinical samples have found correlations between different types of negative parent-child interactions and unique psychological and interpersonal outcomes, few studies have used self-reports to examine whether such relationships exist (Briere & Runtz, 1988; Briere & Runtz, 1990; Egeland et al, 1983; Egeland & Erickson, 1987). Some studies which have used self reports (Briere & Runtz, 1988; 1990) provided vague definitions of psychological abuse, and used abbreviated scales of abuse. The present study examined whether such systematic relationships exist utilizing a more detailed measure to assess self-reports of different types of abusive experiences.

STATEMENT OF THE PROBLEM

Based upon the findings in the literature and the previous theoretical examination of the quality of the parent-child interactions which may characterize neglect and physical abuse, it is possible that neglect and physical abuse have very different effects on development, with chronic neglect possibly being more harmful than physical abuse. However, the exploration of this distinction has been hindered by methodological limitations, and an overemphasis in the literature on the impact of physical abuse.

The present research focuses specifically on the differential impact of reported physical abuse and neglect. This study examines the effects of reported neglect versus physical abuse on the severity and type of symptomatology, as well as on the quality of attachment styles, utilizing cross-sectional data. This study's findings are potentially important in that they could point to the need to explore more closely the harmful impact of more "silent" types of maltreatment in children.

The following general hypothesis is suggested: There is a positive relationship between the experience of physical abuse or neglect (predictor variables) and the degree of reported symptomatology and the insecurity of attachment styles (criterion variables). It is further hypothesized that the predictor variables (different types of maltreatment) will differentially predict the criterion variables (symptomatology and attachment styles), such that reports of neglect will be more predictive of anxious attachment styles and global symptomatology than reports of physical abuse.

HYPOTHESES

1. Based upon findings in the literature that physically abused and neglected children show more symptomatology than children who are not physically abused, it was hypothesized that reported high physical abuse and/or neglect will be more predictive of psychological distress (symptomatology) than reports of low physical abuse or neglect.

2. Based upon findings in the literature that physically abused and neglected children have difficulty with peer relationships and interacting with others, it is hypothesized that reports of high physical abuse and/or neglect will be more predictive of anxious-attachment styles than reports of low physical abuse and/or neglect.

3. Likewise, reports of low physical abuse and/or neglect will be more predictive of secure attachment styles than reports of high physical abuse and/or neglect.

4. Based upon speculation that the psychological disengagement which characterizes neglect may have a more negative impact on psychological outcomes than the experience of physical abuse, which implies some parental involvement, it is hypothesized that reports of high neglect, rejection, or nonresponsiveness will be more predictive of psychological distress than reports of high physical abuse and low neglect.

5. Based upon findings that childhood neglect tends to be associated with withdrawal, while physical abuse tends to be associated with aggression and hyperactivity, as well as speculation that the disengagement between parents and children which characterizes neglect may lead to withdrawal from others,

it is hypothesized that reports of high neglect, rejection, or

nonresponsiveness will be more predictive of internalizing symptomatology,

while reports of high physical abuse will be predictive of externalizing

symptomatology.

6. Based upon speculation that the lack of emotional engagement between

parents and children which characterizes neglectful experiences may lead to

an avoidance of relationships, while the experience of physical abuse may

lead to a style of attempting to engage others aversively, it was hypothesized

that reported high neglect, rejection, and nonresponsiveness will predict

anxious-avoidant attachment styles, whereas reported high physical abuse

will predict anxious-resistant attachment styles.

METHOD

SUBJECTS

The subjects in this study were 512 undergraduates who were enrolled in Introductory Psychology courses at Michigan State University. Participation in this study fulfilled research experience requirements for these students. Subjects were informed that their participation was voluntary and that their responses would remain confidential.

PROCEDURE

During Spring, 1993, subjects were recruited through the MSU Department of Psychology Subject Pool. Sign-up sheets were distributed to Introductory Psychology classes. Data collection involved ten 2-hour experiment sessions conducted by upper-division undergraduate psychology research assistants supervised by a graduate student. There were approximately 50 subjects present at each session. Appendix A describes the standard procedures that were used in these sessions. Order of distribution of the questionnaires was varied across sessions.

MEASURES

Demographic Information. The demographics questionnaire provided information regarding subject's sex, age, ethnic background, marital status of subject, marital status of parents, number of siblings, and socio-economic status (See Appendix B for Page 1 of AE-III-A questionnaire).

I. PREDICTOR VARIABLES

Self-Reports of Neglect and Physical Abuse: Assessing Environments III

(Adaptation) (Forms for mother and father).

The AE-III (Adaptation) is a modified version of the AE-III (Berger &

Knutsen, 1984). The original AE-III questionnaire was developed due to a lack

of instruments for objectively examining the occurrence of childhood abuse

in clinic and non-clinic populations (Berger & Knutsen, 1984).

The AE-III (Adaptation) is a self-report questionnaire in which the

respondent rates descriptions of parent-child interactions and childhood

environments on a 4-point Likert scale ranging from "Never" to "Frequently."

Subjects were asked to complete the 75 item questionnaire in reference to both

their mother/ stepmother and their father/ stepfather.

The original AE-III was revised in the following ways to create the AE-

III (Adaptation): All items related to sexual abuse were excluded because they

were not related to the focus of the current study on physical abuse and

neglect. Parental Neglect and Nonreponsiveness scales were added as the

unrevised questionnaire did not have scales related to neglect. The wording of

some items was modified in order to make the items easier to understand. The

format was changed from true-false to a 4-point Likert scale format, because

respondents might be more likely to endorse a difficult experience as

occurring "rarely" rather than endorsing the statement as "true" for them.

The following scales of the original AE-III were used in the current study:

Physical Punishment and Parental Rejection. (Perception of Discipline, Age-

Inappropriate Demands, Negative Family Atmosphere, and Positive Parental

Contact scales were left on the AE-III but were not used in subsequent

analyses). These scales were originally designed to provide descriptions of

childhood environments, rather than to be independent scales empirically derived via factor analysis (Berger & Knutsen, 1984).

The following scales have been added based upon a content analysis: Nonresponsiveness, Neglect, and Verbal Abuse (some items derived from Briere and Runtz's scale, 1988). Test-retest reliabilities for the original scales of the AE-III have been shown to range from .61-.85. Appendix B contains the AE-III (Adaptation) questionnaire. Appendix C contains the items in each scale.

Subject categorization into physical abuse and neglect groups

Subjects scoring in the top third of the sample on the Neglect and Physical Abuse scales of the AE-III-A were categorized as the high Physical Abuse (N = 105) or high Neglect Groups (N = 144), and subjects scoring at the bottom third of the sample were categorized as the low Physical Abuse (N = 158) or low Neglect groups (N = 184). The decision to use the criteria of top and bottom third of the sample to place subjects in the maltreatment groups was based upon the assumption that a median split would not discriminate well enough between subjects who had experienced low versus high levels of neglect or physical abuse. Also, using the top 1/4 of subjects as a criteria for membership in the maltreatment groups appeared to be too stringent a criteria to conduct meaningful analyses, as some of the groups had extremely small sample sizes.

II. CRITERION VARIABLES

A. SYMPTOMATOLOGY: SCL-90-R (Symptoms Checklist-90-Revised).

The SCL-90-R (Derogatis, 1977) was designed to examine the "psychological symptom patterns of psychiatric and medical patients (p.3)."

This is a 90-item self-report scale in which the respondents are asked to endorse the degree to which they were distressed by a particular symptom or problem (during the last seven days) on a 5-point Likert scale of distress ranging from "not at all = 0" to "extremely = 4." In an analysis of the factor structure of the SCL-90 it was found that the total score on the instrument was correlated with each of the factors (Depression, Somatization, Phobic Anxiety, Functional Impairment, and Hostile Suspiciousness), suggesting that a single global score (i.e., Global Severity Index) could be utilized as an "index of psychopathology or psychological discomfort." (Hoffman & Overall, 1978, p. 1189).

Appendix E lists the nine symptom dimensions in terms of which the SCL-90-R is scored (Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, Psychoticism) and three global indices of distress (Global Severity Index, Positive Symptom Distress Index, and Positive Symptom Total). Coefficient alphas for the symptom dimensions range from .77 to .90 and test-retest reliabilities range from .78-.90 (Derogatis, 1977). (See Appendix D for the SCL-90-R questionnaire).

Measuring Global Symptomatology

The Global Severity Index is computed by dividing the total scores on all items endorsed by 90. This index was utilized by the current study as a measure of general psychological functioning. The Global Severity Index is the best single summary of the depth of an individual's distress.

Measuring Internalizing and Externalizing Symptomatology

For the purposes of analyses, the Somatization, Depression and Anxiety scales of the SCL-90-R were combined by the investigator to form an Internalizing scale, and the Hostility and Paranoid Ideation scales were combined to form an Externalizing scale. The theoretical basis for utilizing the internalizing and externalizing dichotomy was to explore the relationship between the quality of interaction between parents and their children in instances of neglect and physical abuse, and the child's style of engaging or withdrawing from his/her environment. The rationale for combining these scales on the SCL-90-R was based upon a content analysis of the SCL-90-R scales, as well as an analysis of Achenbach's (1991) categorization of items on the Child Behavior Checklist related to withdrawal, somatic complaints, and anxiety/depression into an internalizing scale, and categorization of items related to aggressive and delinquent behavior into an externalizing scale.

B. ATTACHMENT STYLES

Adult Attachment Scale (AAS) (Modified version)

The Adult Attachment Scale (Collins & Read, 1990) was developed to improve upon earlier discrete measures of attachment in which single descriptions might not capture the individual's feelings on all the dimensions (i.e., Hazan & Shaver's 1987 3-item scale). Three dimensions which seem to underly attachment styles were derived from factor analysis of the AAS:

1) Close: how comfortable an individual is with closeness,

2) Depend: to what degree an individual feels he/she can depend on others and

3) Anxiety: the extent to which an individual is afraid or anxious about being unloved or abandoned. Cronbach's alpha for the three factors (Close, Depend, Anxiety) were .69, .75, .72, respectively.

The AAS is an 18 item questionnaire that asks the respondents to rate how characteristic the 18 statements (e.g., "I find it relatively easy to get close to people") are of their feelings on a 5-point Likert scale ranging from "Not at all characteristic" to "Very characteristic." Appendix F contains the AAS questionnaire (Part 2 of the Relationships quesionnaire) and Appendix G contains the modified AAS scale items used in the present study. Subjects received scale scores for each of the three attachment styles measured by this questionnaire; Secure, Anxious-Avoidant, and Anxious-Resistant. Collins and Read describe the three attachment styles measured as follows:

"...a person with secure attachment style was comfortable with closeness, able to depend on others and not worried about being abandoned or unloved. An avoidant individual was uncomfortable with closeness and intimacy, not confident in others' availability and not particularly worried about being abandoned. An anxious (or resistant) person was comfortable with closeness, fairly confident in the availability of others, but very worried about being abandoned and unloved." (p. 648)

Relationships Questionnaire

The Relationships Questionnaire (Bartholomew & Horowitz, 1991) was developed as a continuous and categorical measure of attachment styles. Bartholomew and Horowitz developed four categories of attachment styles derived by combining two levels of self-image (positive and negative) with two levels of image of others (positive and negative). The four categories are as follows: secure (a sense of worthiness and belief that others are accepting and responsive), preoccupied (sense of unworthiness combined with a positive evaluation of others), fearful (unworthiness combined with belief that others are untrustworthy) and dismissing (sense of worthiness of love and a negative evaluation of others).

Appendix F contains the four short paragraphs of the Relationships Questionnaire (see Part 1) which describe different attachment styles.

Subjects are first asked to choose which style is most characteristic of how they feel in relationships. Subjects are then asked to indicate on a seven-point scale the extent to which each style corresponds to their general relationship syle. The two avoidant types of attachment were combined into a single avoidant category for the purposes of analysis. The three attachment styles yielded in this categorical measure (i.e., the subject's choice of which description is most characteristic of their style) were used as a validity check for the attachment styles yielded from the Adult Attachment Scale. Appendix H contains the Self-Report Attachment Style Prototypes used in the RQ.

RESULTS

Missing Data

Before beginning statistical analyses, files were screened for missing data. Means, based upon sex of subject, were utilized to estimate individual data points when only a few questions were missing from questionniares. When entire protocols were missing (i.e., subjects failed to complete entire questionnaires), these subjects were not used in comparative analyses.

Demographic Characteristics

Tables 1 and 1a present the demographic characteristics of the subjects used in this study. 46.1% of the sample was male (N = 236) and 53.9% of the sample was female (N = 276). The average age of subjetcs was 19, and ranged from 17 to older than 24 years of age. The average age of the subjects was 19. The sample was 85.9% Caucasian (N=440), 8% African American (N=41), and 6% Asian American (N=31). Table 1 also presents family income, and parents' educational and marital status.

Psychometric Examination of Scales

Reliability of Subscales

Tables 2, 3, and 4 contain reliability coefficients and mean subject scores for the AE-III (Adaptation), the SCL-90-R, and the AAS, respectively. All the subscales were found to have adequate internal consistency. The Cronbach's alpha for the subscales of the AE-III (Adaptation) ranged from ,79 to .85. Cronbach's alpha for the scales on the SCL-90-R ranged from .78 to .89. Cronbach's alpha for the scales on the AAS ranged from .73 to .84.

Table 1

Demographic Characteristics of the Sample (N = 512)

	Total	% of Sample
Sex		
Males	236	46.1
Females	276	53.9
Age		
17-18	176	34.4
19-20	249	48.7
21-22	61	11.9
23-24	10	2.0
> 24	15	2.9
Ethnicity		
Caucasian	440	85.9
African American	41	8.0
Asian American	31	6.1
Number of Siblings		
None	54	10.6
1	189	37.0
2	145	28.4
3	67	13.1
>3	56	11.0
Family Income		
< $15,000	15	2.9
$15-25,000	35	6.9
$25-50,000	142	27.9
$50-75,000	160	31.4
>$75,0000	157	30.8

Table 1a

Demographic Characteristics of the Sample (N=512)

	Total	% of Sample
Father Education		
Some high school	27	5.3
High school graduate	85	16.6
Some college/tech school	94	18.4
College/tech. graduate	164	32.1
Graduate degree	141	27.6
Mother Education		
Some high school	28	5.5
High school graduate	106	20.7
Some college/tech school	135	26.4
College/tech. graduate	154	30.1
Graduate degree	88	17.2
Parent's Marital Status		
Married	362	71.1
Remarried	40	7.9
Separated	15	2.9
Divorced	77	15.1
Widowed	15	2.9

Table 2

Reliability Coefficients, Mean Subject Scores, and Standard Deviations for the AE-III (Adaptation) Scales

	Physical Abuse by Mother	Physical Abuse by Father	Neglect by Mother	Neglect by Father
Alpha	.79	.85	.80	.84
Mean	15.67	15.94	12.48	15.06
(SD)	(3.76)	(4.66)	(3.77)	(5.27)

	Rejection by Mother	Rejection by Father	Nonresponse by Mother	Nonresponse by Father
Alpha	.81	.83	.85	.85
Mean	10.19	12.41	19.22	21.69
(SD)	(3.76)	(4.82)	(5.67)	(6.68)

Table 3

Reliability Coefficients, Mean Subject Scores, and Standard Deviations for the SCL-90-R Scales

	Somatization	Depression	Anxiety	Hostility	Paranoid Ideation
Alpha	.83	.89	.84	.78	.80
Mean	18.81	25.82	16.86	9.08	11.12
(SD)	(6.69)	(9.02)	(5.90)	(3.86)	(4.52)

Table 4

Reliability Coefficients, Mean Subject Scores, and Standard Deviations for the AAS Scales

	Secure Attachment	Avoidant Attachment	Resistant Attachment
Alpha	.74	.73	.84
Mean	15.97	13.54	14.87
(SD)	(4.16)	(4.33)	(5.55)

Correlations between Mother and Father scales on the AE-III (Adaptation)

Table 5 lists correlations between the Mother and Father scales on the AE-III (Adapation). Analyses indicated that the Mother scales were significantly positively correlated with the Father scales on the AE-III (Adaptation). To simplify analyses, Mother and Father scales were combined into overall Physical Abuse or Neglect scales. Correlations between Mother and Father scales ranged from .42 to .47.

Correlations Between Subscales of the AE-III (Adaptation)

Table 6 contains correlations between the Neglect, Rejection, and Nonresponsiveness subscales of the AE-III (Adaptation). Because these scales all correlated significantly with one another, the scales were combined for some of the analyses into an Overall Neglect scale. Correlations among the three scales ranged from .76 to .83. Appendix H contains the results for the Overall Neglect scale.

Validation of the Adult Attachment Scale

Table 7 contains the results of analyses comparing the categorical attachment measure (RQ) with the continuous measure of attachment (AAS). Planned contrasts indicated that as expected, the highest mean score for each categorization on the AAS was in the congruent category on the RQ (e.g., Secure attachment on the RQ and Secure attachment on the AAS). The means for the congruent categories were significantly higher than the means on the other two noncongruent categories. Unexpectedly, the two nonrelevant categories also differed significantly at the .001 level of significance. That is, for each AAS measure, the scores across the RQ

categorizations all differed significantly. Table 7 contains the means for these categories.

Table 5

Correlations Between Mother and Father Subscales on the AE-III (Adaptation)

	Neglect	Physical Abuse	Rejection	Nonresponsiveness
r^a	.47*	.45*	.42*	.43*

[a] Pearson r's for correlation between Mother and Father subscales on the AE-III (Adaptation)

*p < .001

Table 6

Inter-Correlations Between Neglect, Rejection, and Nonresponsiveness Subscales of the AE-III
(Adaptation)

	Rejection	Nonresponsiveness
Neglect	.76*	.82*
Rejection	-----------------	.83*

*p < .001

Table 7

Validation of Continuous Attachment Measure (AAS) by Categorical Attachment Measure (RQ) [F(2,509)]

	RQ Attachment Style[a]		
	Secure	Avoidant	Resistant
AAS Attachment Style[bc]			
Secure			
Mean	18.33	13.56	16.26
S.D.	(3.48)	(3.40)	(4.06)
Avoidant			
Mean	10.99	16.07	13.37
S.D.	(3.48)	(4.07)	(3.31)
Resistant			
Mean	11.69	16.12	18.41
S.D.	(4.21)	(5.33)	(5.11)

[a]Subjects chose the attachment style most characteristic of them on the Relationship Questionnaire in order to categorize themselves as Secure, Avoidant or Resistant (Bartholomew & Horowitz, 1991).
[b]Subjects received scale scores for Secure, Avoidant, and Resistant Attachment on the Adult Attachment Scale (Collins & Read, 1990).
[c]For each AAS measure, scores across the RQ categorizations all differed significantly ($p < .001$).

<u>Subject Characteristics</u>

<u>Relationship Between Demographic Variables and Indices of Neglect and Physical Abuse</u>

Tables 8 and 8a contain the results of analyses which were used to analyze subject characteristics. ANOVAs were performed using Neglect and Physical Abuse as continuous variables. There were nonsignificant differences between males and females on reported Neglect, $F(1, 510) = 1.98$, $p < .2$. There were, however, significant differences between males and females on reported Physical Abuse, $F(1, 510) = 11.98$, $p < .001$. Males reported more Physical Abuse than females.

There were significant differences between Caucasians, African Americans, and Asian Americans in reports of Neglect, $F(1, 510) = 5.89$, $p < .001$ and Physical Abuse, $F(1, 510) = 2.93$, $p < .05$. It should be noted that there were significantly more Caucasians (N = 440) in the sample than African Americans (N = 41) or Asian Americans (N = 31). African Americans reported more Neglect than Asian Americans and Caucasians. Caucasians reported the least Neglect of all three groups. Asian Americans reported more Physical Abuse than African Americans and Caucasians. Caucasians reported the least Physical Abuse of all three groups.

Correlational analyses using demographic variables and Neglect and Physical Abuse as continuous variables indicated that there were significant differences between different age groups on reports of Neglect, $r(N = 511) = .14$, $p < .001$, and on reports of Physical Abuse, $r = .15$, $p < .001$. Older subjects reported more Neglect and Physical Abuse than younger subjects. Appendix I contains the results of analyses for the other demographic variables of family income, educational level of mothers and fathers, marital status of parents, and number of siblings.

Effects of Demographic Variables on the Dependent Variables

Because significant differences were found between subjects on the demographic variables of sex, ethnicity, age of subject, family income, parent's education, and parent's marital status, analyses of variance were performed using these variables as factors. However, analysis of variance revealed nonsignificant effects for sex of subject on the dependent variables: Global Severity Index, $F(1, 510) = 2.73$, $p < .1$, Secure Attachment, $F(1, 510) = .00$, $p < .95$, Avoidant Attachment, $F(1, 510) = .19$, $p < .66$, and Resistant Attachment, $F(1, 510), = 3.24$, $p < .072$).

Analysis of variance also revealed a nonsignificant effect for ethnicity of subject on the Global Severity Index, $F(1, 510) = .97$, $p < .38$, and on Resistant Attachment, $F(1, 510) = 1.98$, $p < .14$. However, there was a significant effect of ethnicity of subject on Avoidant Attachment, $F(1, 510), = 3.14$, $p < .04$, and Secure Attachment $F(1, 510) = 4.50$, $p < .01$.

Analysis of variance also revealed a nonsignificant effect for age of subject on the Global Severity Index, $F(1, 510) = .86$, $p < .49$, on Secure Attachment, $F(1, 510) = 1.47$, $p < .21$, and on Resistant Attachment, $F(1,510) = .45$, $p < .77$. However, there was a significant effect of age of subject on Avoidant Attachment, $F(1,510) = 2.51$, $p < .04$. Appendix I contains results of analyses variance on educational level of mothers and fathers, family income, marital status of parents.

Table 8

Relationship Between Sex , Ethnicity, and Parents' Marital Status and Indices of Neglect and Physical Abuse on the AE-III (Adaptation)

	Neglect	Physical Abuse
Sex		
(Mean scores)		
Males	28.07	32.78
Females	27.10	30.61
$F(1,510)$	1.98	11.98**
Ethnicity		
(Mean scores)		
Caucasians	27.11	31.31
African Americans	31.22	32.85
Asian Americans	28.94	34.13
$F(2,509)$	5.89**	2.93*
Parent's Marital Status		
(Mean Scores)		
Married	25.91	31.54
Remarried	30.00	30.68
Separated	30.80	31.33
Divorced	34.01	32.69
Widowed	24.73	30.47
$F(4, 504)$	22.87**	.71

*$p < .05$ **$p < .001$

Table 8a

Relationship Between Age, Income, Parents' Education, Number of Siblings and Indices of Neglect and
Physical Abuse on the AE-III (Adaptation) (Pearson's r (N = 511)

	Neglect	Physical Abuse
Age	.14*	.15*
Income[a]	-.28*	-.16*
Father Education	-.14*	-.13*
Mother Education	-.18*	-.15*
Number of Siblings	-.03	-.02

[a]Income refers to the income of the respondent's family of origin

*$\underline{p}$ < .001

Tests of Hypotheses

To test hypotheses, planned comparisons were performed within the framework of omnibus ANOVAs. Tables 9 and 9a contain the results of preliminary analyses of variance (i.e., high Physical Abuse and/or Neglect vs. low Physical Abuse and/or Neglect). These analyses revealed a significant effect for experiencing any type of abuse on Global Symptomatology (i.e., Global Severity Index), $F(1,410) = 34.62$, $p < .001$. Analysis of variance revealed a significant effect for any type of abuse on Secure Attachment, $F(1,410) = 22.12$, $p < .001$, on Avoidant Attachment, $F(1,410) = 40.07$, $p < .001$, and Resistant Attachment Styles, $F(1, 410) = 23.42$, $p < .001$.

Planned Comparisons: Neglect versus Physical Abuse

Table 10 contains the cell means for the Neglect and Physical abuse groups on the Global Severity Index and on Internalizing and Externalizing Symptomatology. 2X2 analyses of variance (high vs. low Physical Abuse X high vs. low Neglect) revealed a significant effect for Neglect on the Global Severity Index, $F(1,159) = 12.37$, $p < .001$. No effect was found for Physical Abuse, $F(1,159) = 1.54$, $p < .22$, and no interaction was found between Physical Abuse and Neglect. Likewise, when the Neglect, Rejection, and Nonresponsiveness scales were combined, the results were similar. Appendix J contains the results for the combined scale titled Overall Neglect.

Analyses revealed a significant effect for Neglect on reported Internalizing Symptomatology, $F(1,159) = 8.95$, $p < .003$, and no effect for Physical Abuse, $F(1,159) = .66$, $p < .42$. No interaction effects were found between Neglect and Physical Abuse. Analysis of variance revealed a significant effect for Neglect on reported Externalizing Symptomatology,

$F(1,159) = 7.54$, $p < .007$, and for Physical Abuse on reported Externalizing Symptomatology, $F(1,159) = 4.98$, $p < .03$, with a stronger effect for Neglect.

Table 11 contains the cell means for the Neglect and Physical Abuse groups on Attachment Styles. Analysis of variance revealed a significant effect for Neglect on Avoidant Attachment, $F(1, 159) = 10.47$, $p < .001$, and for Physical Abuse on Avoidant Attachment, $F(1,159) = 6.29$, $p < .01$, with a stronger effect for Neglect. No interaction effects were found between Neglect and Physical Abuse. Analysis of variance also revealed a significant effect for Neglect on Resistant Attachment, $F(1,159) = 12.33$, $p < .001$, and Secure Attachment, $F(1,159) = 7.62$, $p < .006$. No significant effect was found for Physical Abuse on Resistant Attachment, $F(1,159) = 3.43$, $p < .07$, or Secure Attachment, $F(1,159) = 1.43$, $p < .23$.

Table 12 contains a summary of the main effects of Neglect and Physical Abuse on Symptomatology and Attachment Styles. In summary, main effects indicate that Neglect was significantly related to all the dependent measures (in the predicted direction), while Physical Abuse was found to be significantly related to only Avoidant Attachment and Externalizing symptomatology. It is important to note that additional analyses did not support potential methodological explanations for the differential results found between Neglect and Physical Abuse. For example, we found that the Neglect and Physical Abuse subscales had comparable reliabilities (coefficient alpha = .82, .82, respectively). And, the variability of respondents' scores on the two scales also was equivalent, $F = 1.18$, suggesting that results were not due to restriction of range in one of the measures of maltreatment.

Planned Contrasts between Neglect and Physical Abuse Groups

Planned contrasts revealed a marginally significant effect for the hypothesis that the High Neglect - Low Physical Abuse category would be a stronger predictor of the dependent variables than the Low Neglect - High Physical Abuse category for Global Symptomatology, $\underline{t}$ (1,159) 1.30, $\underline{p} < .1$ (one-tailed). However, there was no support for this hypothesis for the other three dependent variables: Secure Attachment, $\underline{t} = -.90$, $\underline{p} < .37$, Avoidant Attachment, $\underline{t} = .42$, $\underline{p} < .68$; Resistant Attachment, $\underline{t} = .95$, $\underline{p} < .34$.

Table 9

Relationships Between Reports of Any Abuse and Global Symptomatology (GSI), and Internalizing and Externalizing Symptomatology

	Any Abuse[a]	Any Abuse
	Low	High
GSI[b]		
Mean	1.68	2.00
(SD)	(.45)	(.63)
[F (1,410)]		34.62*
Internalizing Symptoms[c]		
Mean	59.35	69.37
(SD)	(16.84)	(22.59)
F		26.10*
Externalizing Symptoms[d]		
Mean	18.66	23.53
(SD)	(5.96)	(9.28)
F		41.87*

[a]Subjects were categorized in the Any Abuse group based upon scores in the top third
 of the Physical Abuse and/or Neglect subscales of the AE-III (adaptation)
[b]The Global Severity index is a measure of overall symptomatology computed by summing the total score of the 90 items on the SCL-90-R and dividing by 90.
[c]Internalizing symptomatology was derived by summing the Depression, Somatization, and Anxiety subscales of the SCL-90-R.
[d]Externalizing symptomatology was derived by summing the Hostility and Paranoid Ideation Subscales of the SCL-90-R.

*$p < .001$

Table 9a

Relationships Between Reports of Any Abuse and Attachment Styles (AAS)

	Any Abuse[a] Low	Any Abuse High
Secure Attachment[b]		
Mean	16.68	14.69
(SD)	(4.10)	(4.18)
F		22.12*
Avoidant Attachment		
Mean	12.49	15.24
(SD)	(3.87)	(4.78)
F		40.07*
Resistant Attachment		
Mean	13.80	16.48
(SD)	(5.12)	(5.81)
F		23.42*

[a]Subjects were categorized in the Any Abuse group based upon scores in the top third of the Physical Abuse and/or Neglect subscales of the AE-III (Adaptation)
[b]Secure, Avoidant and Resistant Attachment Styles on the Adult Attachment Scale (modified)

*$p < .001$

Table 10

Cell Means for Global Symptomatology (GSI), and Internalizing and Externalizing Symptomatology for the Neglect and Physical Abuse Groups [F (1,159)]

Physical Abuse	Neglect	
	Low	High
GSI[a]		
Low		
Mean	1.59	1.87
(SD)	(.36)	(.49)
High		
Mean	1.65	2.04
(SD)	(.46)	(.67)
Internalizing Symptoms[b]		
Mean	57.02	65.32
(SD)	(.68)	(18.99)
Mean	57.64	70.43
(SD)	(17.09)	(23.20)
Externalizing Symptoms[c]		
Mean	17.54	20.46
(SD)	(5.44)	(5.59)
Mean	19.71	24.81
(SD)	(7.96)	(10.73)

[a]Subjects were categorized into High and Low Physical Abuse and Neglect groups based upon scores in the top or bottom third of the distribution of scores.

[b]The Global Severity index is a measure of overall symptomatology computed by summing the total score of the 90 items on the SCL-90-R and dividing by 90.

[c]Internalizing symptomatology was derived by summing the Depression, Somatization, and Anxiety subscales of the SCL-90-R.

[d]Externalizing symptomatology was derived by summing the Hostility and Paranoid Ideation Subscales of the SCL-90-R.

Table 11

<u>Cell Means for Attachment Styles of Neglect and Physical Abuse Groups [F (1,159)]</u>

Physical Abuse	Neglect	
	Low[a]	High
	Secure Attachment[b]	
Low		
Mean	17.24	14.64
(SD)	(4.47)	(4.47)
High		
Mean	15.93	13.98
(SD)	(3.77)	(4.47)
	Low	High
	Avoidant Attachment	
Low		
Mean	11.82	14.42
(SD)	(3.51)	(4.17)
High		
Mean	13.86	16.34
(SD)	(4.64)	(4.84)
	Low	High
	Resistant Attachment	
Low		
Mean	12.47	15.54
(SD)	(3.97)	(5.65)
High		
Mean	13.92	17.66
(SD)	(6.67)	(5.77)

[a]Subjects were categorized into Low and High Physical Abuse and Neglect groups based upon scores in the top or bottom third of the distribution of scores.
[b]Secure, Avoidant, and Resistant Attachment Styles on the Adult Attachment Scale (AAS)

Table 12

Main Effects of Neglect and Physical Abuse on Symptomatology and Attachment Styles

	Neglect	Physical Abuse
GSI[a]		
F	12.37***	1.54
[F (1,410)]		
Internalizing Symptoms[b]		
F	8.95**	.66
Externalizing Symptoms[c]		
F	7.54**	4.98*
Secure Attachment[d]		
F	7.62**	1.43
Avoidant Attachment		
F	10.47***	6.29**
Resistant Attachment		
F	12.33***	3.43

[a]The Global Severity index is a measure of overall symptomatology computed by summing the total score of the 90 items on the SCL-90-R and dividing by 90.

[b]Internalizing symptomatology was derived by summing the Depression, Somatization, and Anxiety subscales of the SCL-90-R.

[c]Externalizing symptomatology was derived by summing the Hostility and Paranoid Ideation Subscales of the SCL-90-R.

[d]Secure, Avoidant and Resistant Attachment Styles on the Adult Attachment Scale (modified)

*p < .05 **p < .01 ***p < .001

DISCUSSION

Implications of Findings for Understanding Neglect and Physical Abuse

The finding that reports of neglectful childhood experiences more strongly predicted psychological dysfunction in young adults than did recollections of physical abuse suggests that it is important to focus both empirically and theoretically on the impact of parental omissions in childrearing, as well as on actively physically abusive acts (Egeland & Erickson, 1987; Petitt & Bates, 1989). It is important, then, to examine the impact of childhood neglect experiences in young adults more than has been done in the past. The finding that neglect is uniquely related to certain negative outcomes is consistent with the work of Egeland et al (1983) who found that children who had been neglected and not physically abused, had the highest mean scores on apathy, withdrawal, and negative affect, and the lowest scores on flexibility, creativity, agency, and positive affect of all groups during a 42-month barrier-box task. It is notable that the current study obtained results similar to these using a non-clinical sample of college undergraduates.

When more specific contrasts were done to examine the effects of neglect under conditions of low physical abuse the results were mixed. This reiterates the difficulties that past studies have had with isolating the effects of different types of maltreatment because they often cooccur (Aber et al, 1989). However, some studies have been able to separate out the effects of different types of abuse. Briere and Runtz (1990), for example, found that

retrospective reports of different types of abusive experiences were related to unique types of psychosocial difficulties in university undergraduates.

It appears that while neglect may be more correlated with certain indices of psychological dysfunction, there may be additive effects of physical abuse and neglect. An examination of the cell means for global symptomatology reveals an interesting pattern. The group with the lowest scores on the Global Severity Index (symptomatology) was the low Neglect/low Physical Abuse group, followed by the low Neglect/ high Physical Abuse group. Notably, the two highest cells means were the high Neglect/ low Physical Abuse group and the high Neglect/ high Physical Abuse group. This indicates that while there are additive effects of neglect and abuse, that reports of neglect without physical abuse are associated with greater psychological dysfunction than reports of physical abuse without neglect.

While the overall hypothesis that neglect would be more strongly related to indices of psychological dysfunction than physical abuse was confirmed, the more focused hypotheses that neglect would be associated with more avoidant attachment while physical abuse would be associated with greater resistant attachment was not wholly supported. Neglect significantly predicted all attachment styles in the expected direction, while physical abuse only predicted avoidant attachment. It is possible that the relationship between abuse and anxious attachment in general is more robust than the relationship between different types of abuse and specific types of anxious attachment styles. It may be that the two anxious attachment styles (avoidant and resistant) are more similar conceptually than was originally thought. There may also be methodological difficulty in neatly separating these two attachment styles via self-report measures. It is clear, however, that these

types of maltreatment, especially neglect, are correlated with reports of difficulties in relationships.

The finding that neglect was related to reported internalizing symptomatology, while physical abuse was not, coincides with evidence which indicates that children who are neglected show more internalizing behaviors (such as depression and withdrawal) than do physically abused children (Egeland et al, 1983; Conaway & Hansen, 1989; Kent, 1976; Kinard, 1979). While it was predicted that there would be a stronger effect for physical abuse on reported externalizing symptomatology, there was an effect for both neglect and physical abuse on externalizing symptomatology, with a stronger effect for neglect (p < .007 for Neglect and p <. 03 for Physical Abuse). While neglect may have a more robust link to all types of symptomatology, physical abuse may be uniquely related to externalizing types of behavior.

This pattern points to several possibilities. First, it indicates that children who are experiencing neglect may also be exposed to overt conflict in the home and other types of abuse. It is also possible that there is not a clear one-to-one relationship between omissions of behavior and internalizing styles in children, and commissions of violent acts and externalizing styles of behavior. Such a relationship may be too simplistic. Temperamental and personality characteristics of children may make them prone to displaying internalizing or externalizing behaviors, regardless of degree of parental involvement in their lives.

However, it is notable that reported Physical Abuse was significantly related to reports of externalizing but not internalizing symptomatology, suggesting that children who are physically abused may learn from violent role models to act out and be aggressive in order to get what they need from others. Physically abused children may learn that the only option of

interaction with others is through aversive, attention-seeking behavior, while children who are neglected may be more prone to withdraw from their environment.

Theoretical Implications

Physical abuse and neglect may have differential effects because of the nature of interactions which occur in these two types of maltreatment. Because physical abuse by its nature must involve some parental intrusion into a child's life, while neglect is characterized by a lack of parental involvement, neglect (especially chronic, persistent neglect) may have a more deleterious long-term impact on individual psychological development even in individuals skilled enough to attend college.

Neglect may have a very different psychological meaning for a child than the experience of physical abuse. Neglect is the equivalent of complete psychological abandonment, whereas physical abuse may not be. If parents who physically abuse their children do so in response to a child's misbehavior, this may allow children to see a contingency between their own behavior and their parent's response (e.g., "Dad hit me because I broke the lamp"). Neglected children may feel that their parents fail to interact with them regardless of how they behave. This might make it very difficult for chronically neglected children to separate their parents' rejection of them from their self-image. Such psychological abandonment may have a powerful impact on an individual's sense of themselves and their ability to form attachments with others. Pervasive neglect may communicate a message to a children that they are unworthy of attention and energy, whereas physical abuse may communicate to children that they are at least worthy of some attention, even if negative. Feeling unworthy and abandoned is likely to have

pervasive effects on an individual's ability to become close to others as well as on their psychological functioning.

If developing a sense of self and establishing secure relationships with others is dependent upon interactions with significant others, than being denied such interactions might greatly impede normal psychological development. According to Bowlby (1969) a primary goal of the attachment relationship is to allow a child to develop a sense of security. This idea implies that if there is little or no interaction with significant others (e.g., in cases of chronic neglect), that there would be no foundation for a secure attachment relationship.

Individuals who are physically abused may interact enough with others to be able to construct working models (Bowlby, 1969) of others and of themselves in relationships. If working models or "evoked companions" (Stern, 1985), provide the child with predictions about what others will do, then a child who does not have the basis for developing such models lives in an unpredictable (and probably anxiety-producing) environment, and hence may experience a sense of learned helplessness, a feeling of total loss of control (Abramson et al, 1980). These working models or evoked companions allow exploration of the environment when the caregiver is not present. A neglected child with a caregiver who is physically but not psychologically present may have little opportunity to develop evoked companions because they do not have "real" companions upon which to form them.

Secure attachment with others and psychological development may be compromised in maltreated children; they may be reluctant to explore and to learn from the environment because they do not experience the safety of a nurturing caregiver to whom they can return (Houck & King, 1989). Children who are chronically neglected may experience even less of a self-regulating

caregiver (Stern, 1985) than children who are physically abused. This is a critical distinction between neglect and physical abuse because neglected children may not learn self-regulation or how to interact skillfully in the environment, because they have not been engaged in interactions with their caregiver. The greater degree of parental engagement in cases of physical abuse might account for findings that physically abused children are more adept at discriminating emotions in others than neglected children (Frodi & Smetana, 1984), and that neglect was found to be the only factor significantly related to difficulties with language development (Allen & Oliver, 1982). This indicates that physically abused children who interact more with their environment may also be able to develop some skills through those interactions, whereas neglected children may not have the opportunity to develop such skills.

Also, it is possible that neglect is so harmful to children because it may be a more chronic pattern within families while certain kinds of physical abuse may occur more sporadically (Lutzker, 1990). Physical abuse may also have more obvious physical manifestations which are noticeable by others outside the family, than neglect. Because of this, the child who is physically abused may be more likely to be connected with support systems outside the family (e.g., teacher, social worker), and receive benefits from that.

Definitional Issues

While the current study combined neglect, rejection, and nonresponsiveness into one construct because of the high correlations between these scales, it nevertheless needs to be acknowledged that these constructs may not be as similar as they appear on the surface. Rejection may be a more active form of disengagement than neglect or nonresponsiveness.

It would be important to explore these distinctions in the future. An exploration of the psychological meaning (not just the quality) of different types of maltreatment is critical to understanding individual outcomes following the experience of different types of abuse.

Limitations of Study

It is possible that the results of this study were affected by certain methodological limitations. First, there is difficulty with relying on retrospective accounts as valid reports of childhood experiences, particularly when the experiences are of a highly personal nature. It is probable that there is some denial of negative experiences and distortion (e.g., due to a social desirability bias) by subjects responding to questionnaires (Paulhus, 1991). However, as Berger et al (1988) found in their study using the AE-III with university undergraduates, many individuals report highly punitive and abusive childhood experiences.

Given that the subjects in the present study have sufficient resources to attend college, among these resources might be an absense of extreme repression. In the current study, a fairly large number of subjects were willing to report experiences of physical abuse and neglect. For example, 28% (N = 144) of subjects were categorized in the high Neglect group, and 20.5% (N = 105) were categorized in the high Physical Abuse group. 10.4% (N = 53) of the subjects were categorized in the high Neglect/ high Physical Abuse Group. This finding is similar to that of Berger et al (1988) who found that in a questionnaire survey of 4,695 university students, approximately 9% reported a large number of severely punitive childhood experiences that could be categorized as abusive. It is assumed that if there was a problem with underreporting, this would affect both the physical abuse and neglect scales

equally. The variability of respondents' scores on the two scales also was equivalent, suggesting that the results were not due to restriction of range in one of the measures of abuse type.

Another methodological difficulty lies in the measurement of the occurrence of physical abuse and neglect. Because we utilized retrospective accounts, there is no way to substantiate that physical abuse or neglect actually occurred. Because of this, we had to rely on individuals' perceptions that they had experienced certain events in childhood. We utilized the top third of the distribution of subjects as the high Physical Abuse or Neglect groups. Yet it is possible that many subjects in these groups did not view their parents as having been abusive or neglectful. Such perceptions might greatly affect an individual's sense of self and perception of psychological functioning. However, perceptions of having been abused or neglected were not central to the hypotheses of this study. The finding that absolute levels of reported neglect led to greater psychological problems than levels of reported physical abuse is the critical point.

The validity of the measures used to assess physical abuse and neglect was addressed indirectly by analyses of the relationship between these measures and demographic variables. These analyses revealed findings similar to those in the literature on child abuse: high neglect and physical abuse scores correlated with factors such as lower socioeconomic status and parent's education (Kinard, 1979). However, subsequent analyses indicated that these demographic variables were not accounting for the differential results found between neglect and abuse. While these demographic variables were clearly contributing to recollections of abuse and neglect, in general they were not uniquely related (at least as measured by the current study) with symptomatology and attachment styles. Also, the Neglect scale used in the

current study was found to be highly correlated with the Rejection scale of the AE-III, which speaks to the validity of this scale.

Another methodological limitation of the current study was the type of sample used; university undergraduates. It is assumed that this is a fairly high functioning population and that this sample attribute may have limited the range of negative experiences and outcomes that subjects reported. It is possible that the relationship found between neglect, physical abuse and symptomatology would have been different in a different (e.g., clinical) population. The types of physically abusive and neglectful experiences which this population may have experienced in childhood may have been much less severe (and hence, less predictive of psychological dysfunction) than would be reported in a more dysfunctional sample. However, examination of the norms for the SCL-90-R indicate that the subjects in the current study reported a fairly high degree of global symptomatology. This sample had higher GSI scores than a sample of psychiatric outpatients reported by Derogatis (1977) [mean = 1.77 (S.D. = .52), 1.26 (S.D. = .68) respectively].

The sample was also largely Caucasian. Analyses indicated that there were differences among Caucasians, African Americans, and Asian Americans in reports of Neglect and Physical Abuse, with more African Americans reporting high Neglect and more Caucasians reporting low Neglect, as well as more Caucasians reporting low Physical Abuse and more Asian Americans reporting high Physical Abuse. These differences might have had a stronger effect on the study outcomes if the minority sample was larger. It is also possible that different ethnic minorities may have differing attitudes about what "normal" discipline is and when discipline becomes abusive. Because of this, it is difficult to generalize these results beyond white, middle class college undergraduates.

Finally, the use of physical abuse and neglect as independent variables could be criticized as simplistic. The current study acknowledges that certain temperamental and personality characteristics of children may impact the likelihood that they will be physically abused or neglected. In fact, children with certain personalities may evoke not only abuse, but particular types of abuse. Factors such as low birth weight, premature birth, and difficult infant temperaments may all predispose children to elicit abuse (Gaines et al, 1979; Green et al, 1974). However, determining the child's role is problematic because it is difficult to assess a child's functioning prior to the abuse or neglect. The theoretical focus of the current study was on the relationship between abuse, neglect and functioning, and examining the impact of personality and temperament would be possible only in a longitudinal study and is beyond the scope of the current study. Such a study would also need to examine closely when abuse or neglect began and whether or not they were recurring.

Future Directions

The limitations of the current study suggest future studies that might be conducted to examine the impact of neglect and abuse. First, it would be useful to conduct interviews with subjects following their completion of certain questionnaires to understand their perceptions and definitions of abuse. Two individuals may report the same absolute amounts of abuse, but if one perceives him/herself as having been abused while the other does not, psychogical outcomes might be different. It would also be useful to examine the defensive styles of individuals that affect the manner in which subjects respond to questionnaires as a control for reporting bias. The use of other measures of symptomatology would also be useful as well as obtaining

confirmation from roommates, friends (with subjects' permission) about relationship styles and psychological functioning.

It would also be critical to conduct a longitudinal study to examine how temperamental characteristics, styles of attachment and physically abusive or neglectful experiences in childhood interact to influence psychological development.

Summary and Conclusions

Research has documented the detrimental effects of abusive experiences in childhood on subsequent psychological functioning (Cicchetti, 1989; Egeland et al, 1983; Egeland & Erickson, 1987). However, for a variety of reasons, much of this work has not recognized a potentially important distinction among types of abuse--active physical maltreatment (i.e., physical abuse) versus more passive lack of appropriate care (neglect). While it is very likely that both types of abusive experiences are destructive, we reasoned that neglect and physical abuse would adversely affect psychological development somewhat differently. In contrast to physical abuse, which by its nature must involve some parental intrusion into a child's life, neglect is characterized by a lack of any parental involvement. As such, we hypothesized that childhood neglect would be more related to certain psychological problems (e.g., dysfunctional attachment styles) in young adults than would physical abuse. Results indicated support for the hypothesis. Neglect was found to be significantly related to all the indices of psychological dysfunction while physical abuse was related to only one.

The results of the current study indicate that it is useful to examine the impact of neglect and physical abuse in non-clinical populations. The current study also emphasizes the importance of attempting to understand the specific effects of certain types of abuse, and the need to further examine the additive

effects of different types of abuse. The findings indicate that future work on negative childhood experiences and their psychological consequences would profit from examining types of abuse in a more complex manner than past work has.

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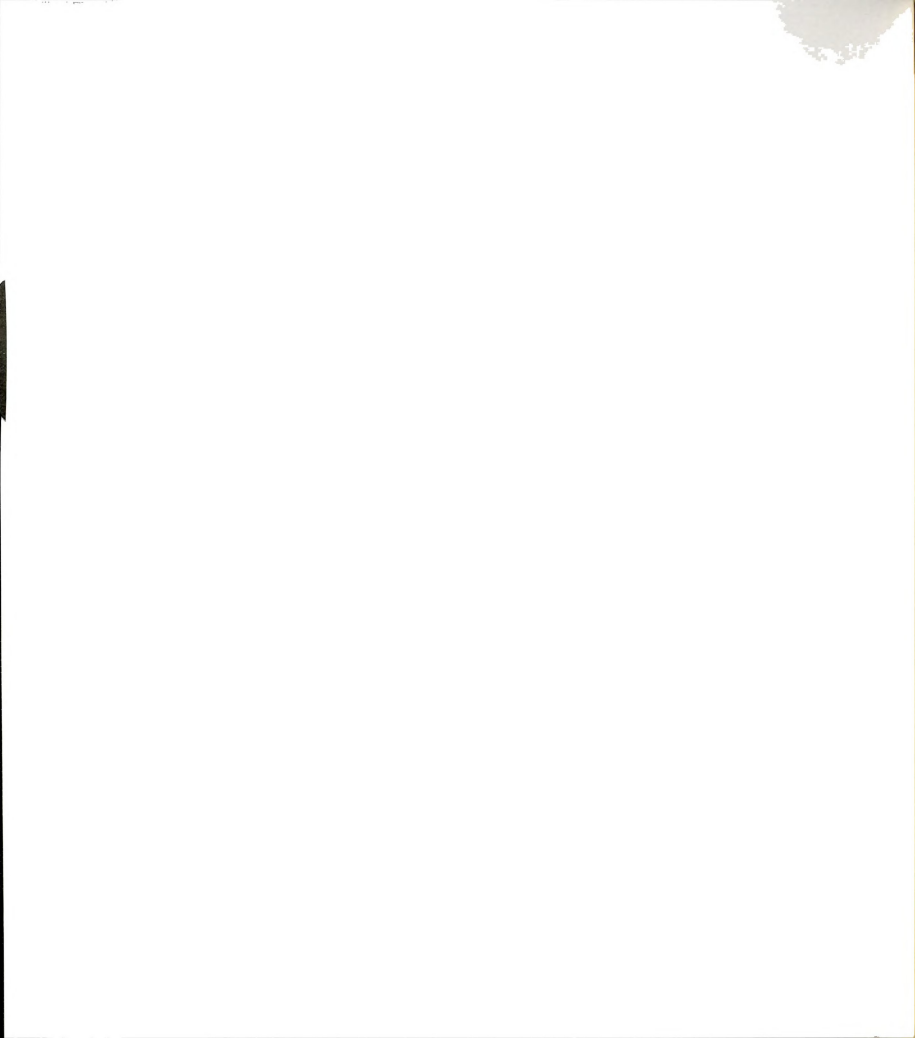
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APPENDICES

Appendix A

Experimenter Instructions for Data Collection

As subjects enter the testing room, have them pick up from a table the necessary material; first, the "Instructions" sheet describing the study, then the consent forms, and the following questionnaires in "random" order, the Relationships Questionnaire (red scantron enclosed), and the SCL-90-R (yellow scantron enclosed). The Demographics Questionnaire and the AE-III questionnaire (answered on same brown, 300-item scantron) (which will be responded to last by *all* subjects), and a scoring pencil. Ask the subjects to read the "Instructions" sheet and not to write on anything until instructed to do so. After waiting for no more than two minutes, say "Hello, my name is

_____. Let's go over the "Instructions" sheet together.

"Thanks for volunteering to help in this project. We are interested in understanding people's memories of childhood environments, as well as how people view relationships and how they feel about themselves. The first step in this research involves undergraduates, like yourselves, completing 3 different questionnaires that we anticipate will take approximately two hours to complete. In a few moments we will go over the instructions for each questionnaire and how to fill out the answer sheets for each of them. If you wish to participate in this part of the larger project, you will them complete the consent forms and then complete the questionnaires. If at any time you

have any questions about any of the questionnaires or about any item on any of them, please raise your hand and I will do my best to answer the questions.

After we score and analyze all of your answers on the questionnaires, we will then select a small group of persons, from all of those who have completed the questionnaires, and ask them to help us in several more research activities during future terms. We will be paying each selected person 5$ an hour or more for help in each of the future activities. Each of these activities will be scheduled on a date and time convenient to all.

Again, we thank you for your help now, and we hope that you would be willing to help us again in the future."

After reading the above, ask "Any questions?" Answer them to the best of your ability.

State: "Now let's go through the instructions for each of the questionnaires. Although you all have the same questionnaires, wee distributed them to you in somewhat different orders. It is important that you please keep and complete them in the order we gave them to you. But for no, find and look at the questionnaire entitled "Relationships Questionnaire." Please follow along as I read the instructions aloud... Any questions?... Please write only your student number and sex where requested on the *red* computer answer sheet."

"Let's turn now to the questionnaire entitled "SCL-90-R". Please follow along as I read the instructions aloud... Any questions?... Please write only your student number and sex where requested on the *yellow* computer answer sheet.

"Now let's turn to the demographics questionnaire and the "AE-III-R" (Mother/Father forms). (These are attached and answered on same scantron). Please skim the demographics questionnaire... Now look at the AE-III-R. Please

follow along as I read the instructions aloud... Any questions?... Please write only your student number and sex where requested on the *brown* (300 item) computer answer sheet.

State: " Please turn to the consent forms. Please read them now. If after reading them you are willing to complete the questionnaires, , now write your Code Number next to where it says STUDENT NUMBER at the top let of the first consent form. Please supply all of the other information requested on the consent form. If you would like to help us in future studies, please write your student number next to where it says student number on the second consent form and supply all the information requested on that consent form. If you have any questions, please raise your hand and I will do my best to answer them. When you have finished completing the consent forms, put them aside." (note: if a student chooses not to complete any of the questionnaires,, they are to be given one credit.)

"When you have finished all the questionnaires, please bring all material up, including the pencil, and place them in the appropriate boxes here on the table." (Make sure that you bring separate boxes to the room to receive each and every piece of material back from the undergraduate, including the scoring pencil.) "Before leaving, make sure that I complete your experiment cards so that you can receive appropriate credit for helping us. We will be sending a copy of our analysis of your answers to these questionnaires to all who have provided us with an address and we will be calling some of you some time in the future to help us again."

Appendix B

AE-III-A
Demographic Information

Please respond to the following statements on the enclosed (BROWN) computer scoring sheet using a Number Two pencil. Be sure to answer all items.

1) What is your sex?
   A) Male
   B) Female

2) What is your age?
   A) 17-18   D) 23-24
   B) 19-20   E) Over 24
   C) 21-22

3) If you are a citizen of the United States, what is your ethnic background? If you are not a United States citizen, please proceed to the next question.)
   A) Caucasian   D) Hispanic American
   B) African American   E) Native American
   C) Asian American

4) If you are not a citizen of the United States, how would you identify yourself? (If you are a United States citizen, leave this question blank.)
   A) African   D) Hispanic
   B) Asian   E) Other
   C) European

5) What is your current relationship status?
   A) Single and not dating   D) Engaged
   B) Dating several people   E) Married
   C) Dating one person

6) What is your parents' marital status?
   A) Married   D) Divorced
   B) Remarried   E) Widowed
   C) Separated

7) How many siblings do you have?
   A) None   D) 3 siblings
   B) 1 sibling   E) More than 3 siblings
   C) 2 siblings

8) What is your estimated family income?
    A) Less than $15,000   D) $50,000-$75,000
    B) $15,000-$25,000   E) Above $75,000
    C) $25,000-$50,000

9) What is your father's education?
    A) Some high school   D) College or technical school graduate
    B) High school graduate   E) Professional/ Graduate degree
    C) Some college or technical school

9) What is your mother's education?
    A) Some high school   D) College or technical school graduate
    B) High school graduate   E) Professional/ Graduate degree
    C) Some college or technical school

Appendix B (continued)

AE-III-A/ Mother

This is a questionnaire about your childhood environment. Most of the questions refer to experiences that occurred during your childhood (before age 18, or before you left your parents' house --- whichever came first), in particular involving your mother or step-mother. Many of the questions refer to your perception of events or people so they have no right or wrong answers. Please answer the questions as accurately and honestly as you can, but bear in mind that some of the questions ask for your opinion as opposed to fact. Remember, your answers to this questionnaire are anonymous and confidential.

NOTE:
**If you lived in more than one place, answer the questions in terms of the place you lived longest.
**If you lived with both your natural mother and a step-mother, answer the questions for the one with whom you lived for the longest period of time.

Please respond to all of the following statements on the enclosed computer scoring sheet using a Number 2 pencil. Using the scale found below and on top of each page, select the number of the response that you believe is most appropriate. NOTE: some of the statements ask you to estimate the number of times that an event has occurred (e.g., if "Rarely," then fill in #2) while others ask for more general opinions (e.g. if "Strongly agree", then fill in #4).

Use the following guide when responding to each statement in this booklet.

1	2	3	4
NEVER	RARELY	OCCASIONALLY	FREQUENTLY
	(about 1-5 X)	(about 6-20 X)	(more than 20 X)
or	or	or	or
Strongly disagree	Moderately disagree	Moderately agree	Strongly agree

1. My family often did things together

2. I shared alot of activities with my mother.

3. When I was a child, if my mother had a problem, she would talk to me about it.

4. My mother was too strict with me.

5. My mother used physical discipline with me.

6. My mother used to hug me when I was a child.

7. My mother used to give me piggyback rides when I was small.

8. My mother expected more from me than I was capable of doing.

9. I required medical attention for injuries caused by my mother.

10. At night, our family did things together such as playing cards or a game, working on a project together, etc.

11. My mother was inconsistent in her discipline of me. I did not know whether or not I would be punished for a particular behavior.

12. My mother did a good job of raising me.

13. My mother used to spank me.

14. My mother used to kiss me when I was a child.

15. My mother used to hold me on her lap.

16. My mother used to hit me with something other than her hands when I did something wrong.

17. My mother used harsh discipline with me between the ages of five and ten.

18. When I was a child, my mother often found time to play with me.

19. My mother was very harsh with me.

20. When I was a young child, my mother used to leave me (and my young brothers and sisters) alone when she went out.

21. When my mother was angry, she sometimes grabbed me by the throat and started to choke me.

22. I never felt that my mother really loved me.

23. My mother's use of discipline was very reasonable.

24. I would describe my relationship with my mother as very close.

25. My mother was a very strict disciplinarian.

26. I received injuries from the discipline used by my mother.

27. Our family almost always ate supper together.

28. My mother took me along with her to visit friends or relatives.

29. I was punished when I was a child.

30. My mother used to punch me when she got angry with me.

31. My mother would complain to me about my father.

32. My mother attempted to obtain information from me about schoolwork, friends, activities in a genuinely caring manner.

33. My mother used to hit me with her hands (other than spanking).

34. I felt rejected by my mother.

35. My parents were always very supportive of me.

36. My mother used harsh discipline with me before the age of five.

37. My parents seemed to agree on when I needed to be disciplined.

38. I was rejected by my mother when I was a child.

39. My mother was competent in managing day-to-day child care activities.

40. When I did something wrong, my mother sometimes tied me up.

41. I was mistreated by my mother.

42. My mother used harsh discipline with me during adolescence.

43. My mother touched me with warmth, caring, and affection. Her touches were soothing and relaxing to me.

44. My mother would completely ignore me at times.

45. My mother communicated her feelings and thoughts to me in a non-threatening way.

46. My mother yelled at me.

47. My mother smiled at me with warmth, caring, and affection.

48. My mother insulted me.

49. Our family got along very well.

50. I was severely beaten by my mother.

51. My mother ridiculed and humiliated me.

52. My mother respected my opinions and encouraged me to express them.

53. My mother embarassed me in front of others.

54. My mother was easy going and relaxed with me, yet interested and committed to my welfare and development.

55. When I was bad, my mother used to lock me in a closet.

56. My mother was unresponsive to me.

57. My mother really did not take care of me.

58. I get/got along pretty well with my mother.

59. My mother threatened me and told me I would get into trouble if I did something wrong.

60. My mother encouraged me to talk about my problems.

61. My mother seemed to demand alot of emotional support from me when I was a child.

62. My mother seemed to interact with me only when it was necessary.

63. When I was a young child, my mother provided consistent supervision for me.

64. My mother used harsh discipline with me.

65. As a child, I could rely on my mother to meet my needs.

66. My mother was inconsistent in her responsiveness to me (i.e. sometimes she would listen to me and other times she would not).

67. My mother seemed uninterested and bored when I talked to her or asked her questions.

68. We had lots of arguments in our family.

69. I did not feel safe around my mother.

70. My family was pretty easygoing.

71. My parents used to call me bad names and/or they used to insult me, tell me I was a bad child and so forth.

72. My mother used to kick me when she got angry with me.

73. My mother criticized me.

74. I have very few quarrels with members of my family.

75. My mother was accessible and available to me (i.e. she was there for me).

Appendix C

Scale Membership of AE-III (Adaptation) Items

M=Mother/ F=Father
(Item numbers for Mother AE-III-A and Father AE-III-A)

Physical Punishment (12 items)
 M/ F
 15/ 90) My mother/father used physical discipline with me.
 19/ 94) I required medical attention for injuries caused
            by my mother/father.
 23/ 98) My mother/father used to spank me.
 26/ 101) My mother/father used to hit me with something other
            than her/his hands when I did something wrong.
 31/ 106) When my mother/father was angry with me, s/he
            sometimes grabbed me by the throat and started to choke
            me.
 36/ 111) I received injuries from the discipline used by my
            mother/father.
 40/ 115) My mother/father used to punch me when s/he got angry
            with me.
 43/ 118) My mother/father used to hit me with her/his hands
            (other than spanking).
 50/ 125) When I did something wrong, my mother/father
            sometimes tied me up.
 60/ 135) I was severely beaten by my mother/father.
 65/ 140) When I was bad my mother/ father used to lock me in a
            closet.
 82/ 157) My mother/father used to kick me when s/he got angry
            with me.

 Neglect (9 items) (* = Item reverse scored)
 *28/ 103) When I was a child, my mother/father often found
            time to play with me.
 30/ 105) When I was a young child, my mother/father used to
            leave me (and my young brothers and sisters) alone
            when s/he went out.
 *49/ 124) My mother/father was competent in managing day-
            to-day child-care activities.
 *64/ 139) My mother/father was easy going and relaxed with
            me, yet interested and committed to my welfare and
            development.
 65/ 140) When I was bad, my mother/father used to lock me
            in a closet.

91
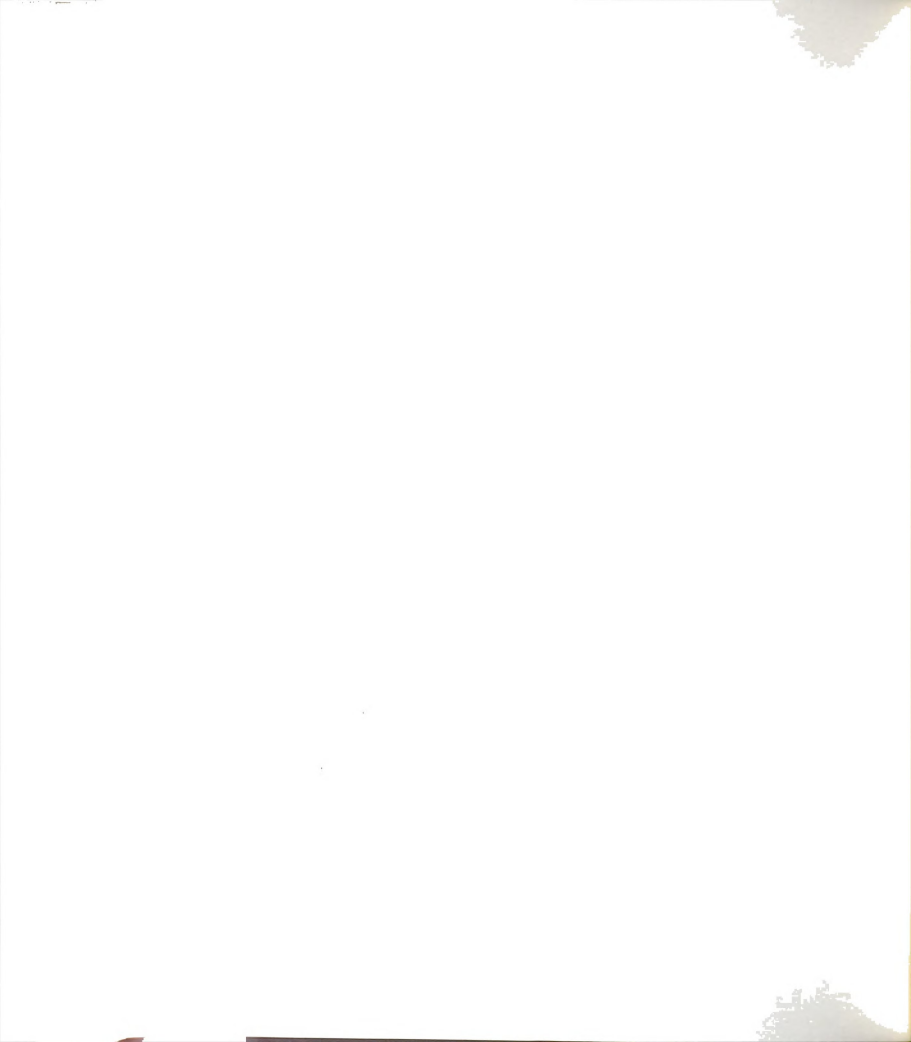
67/ 142) My mother/father really did not take care of me.
*73/ 148) When I was a young child, my mother/father
provided consistent supervision for me.
*75/ 150) As a child, I could rely on my mother/father to
meet my needs.
79/ 154) I did not feel safe around my mother/father.

Parental Rejection (7 items) (* = Item reverse scored)
*16/ 91) My mother/father used to hug me as a child.
21/ 96) My mother/father was inconsistent in her/his discipline
of me. I never knew whether or not I would be punished
for a particular behavior.
*24/ 99) My mother/father used to kiss me when I was a child.
*25/ 100) My mother/father used to hold me on his/her lap.
32/ 107) I do not feel that my mother/father really loved me.
44/ 119) I felt rejected by my mother/father.
48/ 123) I was rejected by my mother/father when I was a child.

Nonresponsiveness (11 items) (* = Item reverse scored)
42/ 117) My mother/father attempted to obtain information from
me about schoolwork, friends, activities in a genuinely
caring manner.
*53/ 128) My mother/father touched me with warmth, caring, and
affection. Her/his touches were soothing and relaxing to
me.
54/ 129) My mother/father would completely ignore me at times.
*57/ 132) My mother/father smiled at me with warmth, caring,
and affection.
*62/ 137) My mother/father respected my opinions and
encouraged me to express them.
66/ 141) My mother/father was unresponsive to me.
*70/ 145) My mother/father encouraged me to talk about my
problems.
72/ 147) My mother/father seemed to interact with me only
when it was necessary.
76/ 151) My mother/father was inconsistent in her/his
responsiveness to me (i.e. sometimes s/he would listen
and othertimes s/he would not).
77/ 152) My mother/father seemed uninterested and bored
when I talked to her/him or asked her/him questions.
*85/ 160) My mother/father was accessible and available to me.

Perception of Discipline (12 items) (* = Item reverse scored)
14/ 89) My mother/father was too strict with me.
*22/ 97) My mother/father did a good job of raising me.
27/102) My mother/father used harsh discipline with me between
the ages of 5 and 10.
29/104) My mother/father was very harsh with me.
*33/ 108) My mother's/father's use of discipline was reasonable.
35/ 110) My mother/father were very strict disciplinarians.
39/ 114) I was punished when I was a child.
46/ 121) My mother/father used harsh discipline with me before
the age of five.

*47/ 122) My parents usually seemed to agree on <u>when</u> I needed to be disciplined.
51/ 126) I was mistreated by my mother/father.
52/ 127) My mother/father used harsh discipline with me during adolescence.
74/ 149) My mother/father used harsh discipline with me.

Age-Inappropriate Demands   (5 items)
13/ 88) When I was a child, if my mother/father had a problem, s/he would sometimes talk to me about it.
18/ 93) My mother/father always expected more from me than I was capable of doing.
30/ 105) When I was a young child, my mother/father used to leave me (and my young brothers and sisters) alone when they went out.
41/ 116) My mother/ father would complain to me about my mother/father.
71/ 146) My mother/father seemed to demand alot of emotional support from me when I was a child.

Negative Family Atmosphere   (8 items) (* = Item reverse scored)
*37/ 112) Our family almost always ate supper together.
*45/ 120) My parents were always very supportive of me.
*59/ 134) Our family got along very well.
*68/ 143) I get/got along pretty well with my mother/father.
 78/ 153) We had lots of arguments in our family.
*80/ 155) My family was pretty easygoing.
 81/ 156) My parents used to call me bad names and/ or they used to insult me, tell me I was a bad child and so forth.
*84/ 159) I have very few quarrels with members of my family.

Positive Parental Contact (10 items)
11/ 86) My family often did things together.
12/ 87) I shared alot of activities with my mother/father.
16/ 91) My mother used to hug me as a child.
17/ 92) My mother/father used to give me piggyback rides when I was small.
 20/ 95) At night, our family often did things together such as playing cards or a game, working on a project together, etc.
 24/ 99) My mother/father used to kiss me when I was a child.
25/ 100) My mother/father used to hold me on her/his lap.
28/ 103) When I was a child, my mother/father often found time to play with me.
34/ 109) I would describe my relationship with my mother as very close.
38/ 113) My mother/father took me along with her/him to visit friends or relatives.

Verbal Abuse   (7 items) (* = Item reverse scored)
*55/ 130) My mother/father communicated her/his feelings and thoughts to me in a non-threatening way.
56/ 131) My mother/father yelled at me.
58/ 133) My mother/father insulted me.
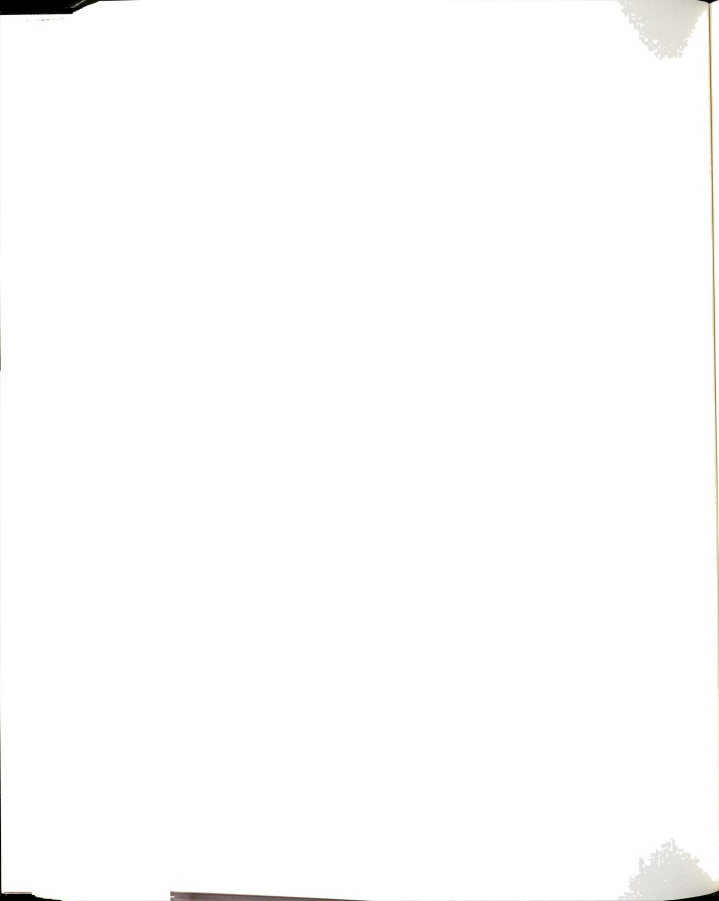
61/ 136) My mother/father ridiculed and humiliated me.

63/ 138) My mother/father embarrassed me in front of others.

69/ 144) My mother/father threatened me and told me I would get into trouble if I did something wrong.

83/ 158) My mother/father criticized me.
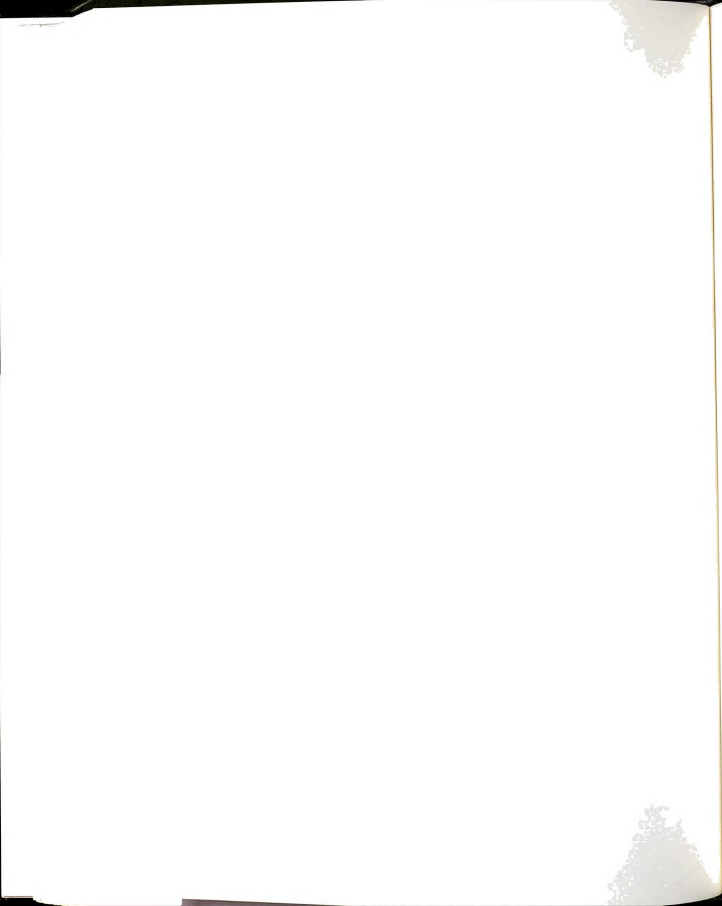
Appendix D

SCL-90-R

Below is a list of problems and complaints that people sometimes have. Read each one carefully. Using the guide below, answer the following statements on the enclosed RED computer response sheet and indicate HOW MUCH DISCOMFORT THAT PROBLEM HAS CAUSED YOU DURING THE PAST 7 DAYS INCLUDING TODAY. Remember to use a # Two pencil and to answer all 90 questions.


HOW MUCH WERE YOU DISTRESSED BY: Descriptors

1	2	3	4	5
Not at all	A little bit	Moderately	Quite a bit	Extremely

EXAMPLE: Stomach aches (if you were moderately distressed by stomach aches, fill in #3 for this question).

1. Headaches
2. Nervousness or shakiness inside
3. Repeated unpleasant thoughts that won't leave your mind
4. Faintness or dizziness
5. Loss of sexual interest or pleasure
6. Feeling critical of others
7. The idea that someone else can control your thoughts
8. Feeling others are to blame for most of your troubles
9. Trouble remembering things
10. Worried about sloppiness or carelessness
11. Feeling easily annoyed or irritated
12. Pains in heart or chest
13. Feeling afraid in open spaces or on the streets
14. Feeling low in energy or slowed down
15. Thoughts of ending your life
16. Hearing voices that other people do not hear
17. Trembling

18. Feeling that most people cannot be trusted
19. Poor appetite
20. Crying easily
21. Feeling shy or uneasy with the opposite sex
22. Feelings of being trapped or being caught
23. Suddenly scared for no reason
24. Temper outbursts that you could not control.
25. Feeling afraid to go out of your house alone
26. Blaming yourself for things
27. Pains in lower back
28. Feeling blocked in getting things done
29. Feeling lonely
30. Feeling blue
31. Worrying too much about things
32. Feeling no interest in things
33. Feeling fearful
34. Your feelings being easily hurt
35. Other people being aware of your private thoughts
36. Feeling others do not understand you or are unsympathetic
37. Feeling that people are friendly or dislike you
38. Having to do things very slowly to insure correctness
39. Heart pounding or racing
40. Nausea or upset stomach
41. Feeling inferior to others
42. Soreness of your muscles
43. Feeling that you are watched or talked about by others
44. Trouble falling asleep
45. Having to check and doublecheck what you do.
46. Difficulty making decisions
47. Feeling afraid to travel on buses, subways, or trains
48. Trouble getting your breath
49. Hot or cold spells
50. Having to avoid certain things, places, or activities that frighten you
51. Your mind going blank
52. Numbness or tingling in parts of your body
53. A lump in your throat
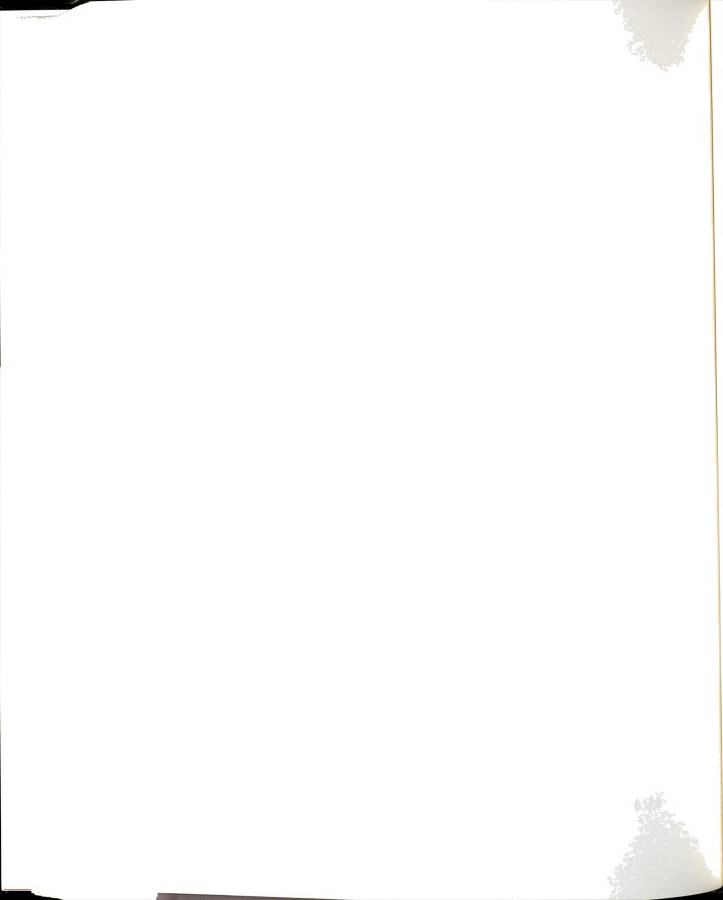
54. Feeling hopeless about the future
55. Trouble concentrating
56. Feeling weak in parts of your body
57. Feeling tense or keyed up
58. Heavy feelings in your arms or legs
59. Thoughts of death or dying
60. Overeating
61. Feeling uneasy when people are watching or talking about you
62. Having thoughts that are not your own
63. Having urges to beat, injure, or harm someone
64. Awakening in the early morning
65. Having to repeat the same actions such as touching, counting, or washing
66. Sleep that is restless or disturbed
67. Having urges to break or smash things
68. Having beliefs or ideas that others do not share
69. Feeling very self-conscious with others
70. Feeling uneasy in crowds, such as shopping or at a movie
71. Feeling everything is an effort
72. Spells of terror or panic
73. Feeling uncomfortable about eating or drinking in public
74. Getting into frequent arguments
75. Feeling nervous when you are left alone
76. Others not giving you proper credit for your achievement
77. Feeling lonely even when you are with people
78. Feeling so restless you couldn't sit still
79. Feelings of worthlessness
80. The feeling that something bad is going to happen to you
81. Shouting or throwing things
82. Feeling afraid that you will faint in public
83. Feeling that people wil take advantage of you if you let them
84. Having thoughts about sex that bother you alot
85. The idea that you should be punished for your sins
86. Thoughts and images of a frightening nature
87. The idea that something serious is wrong with your body
88. Never feeling close to another person
89. Feelings of guilt

90. The idea that something is wrong with your mind

Appendix E

SCL-90-R Scale Items

Somatization (Internalizing)
1. Headaches
4. Faintness or dizziness
12. Pains in heart or chest
27. Pains in lower back
40. Nausea or upset stomach
42. Soreness of your muscles
48. Trouble getting your breath
49. Hot or cold spells
52. Numbness or tingling in parts of your body
53. A lump in your throat
56. Feeling weak in parts of your body
58. Feeling heavy in your arms or legs

Depression (Internalizing)
5. Loss of sexual interest or pleasure
14. Feeling low in energy or slowed down
15. Thoughts of ending your life
20. Crying easily
22. Feeling of being caught or trapped
26. Blaming yourself for things
29. Feeling lonely
30. Feeling blue
31. Worrying too much about things
32. Feeling no interest in things
54. Feeling hopeless about the future
71. Feeling everything is an effort
79. Feelings of worthlessness

Anxiety (Internalizing)
2. Nervousness or shakiness inside
17. Trembling
23. Suddenly scared for no reason
33. Feeling fearful
39. Heart pounding or racing
57. Feeling tense or keyed up
72. Spells of terror or panic
78. Feeling so restless you couldn't sit still
80. The feeling that something bad is going to happen to you
86. Thoughts and images of a frightening nature

Hostility (Externalizing)
11. Feeling easily annoyed or irritated
24. Temper outbursts that you could not control
63. Having urges to beat injure or smash things
74. Getting into frequent arguments
81. Shouting or throwing things

Paranoid Ideation (Externalizing)
8. Feeling others are to blame for most of your troubles
18. Feeling that most people cannot be trusted
43. Feeling that you are watched or talked about by others
68. Having ideas or beliefs that others do not share
76. Others not giving you proper credit for your achievements
83. Feeling that people will take advantage of you if you let them

Obsessive Compulsive
3. Repeated unpleasant thoughts that won't leave your mind
10. Worried about sloppiness or carelessness
28. Feeling blocked in getting things done
38. Having to do things very slowly to ensure correctness
45. Having to check and double check what you do
46. Difficulty making decisions
51. Your mind going blank
55. Trouble concentrating
65. Having to repeat the same actions such as touching, counting, washing.

Interpersonal Sensitivity
6. Feeling critical of others
21. Feeling shy or uneasy with the opposite sex
34. Your feelings being easily hurt
36. Feeling others do not understand you or are unsympathetic
37. Feeling that people are unfriendly or dislike you
41. Feeling inferior to others
61. Feeling uneasy when people are watching you or talking about you
69. Feeling very self-conscious with others
73. Feeling uncomfortable about eating or drinking in public.

Phobic Anxiety
13. Feeling afraid in open spaces or in the streets
25. Feeling afraid to go out of your house alone
47. Feeling afraid to travel on buses, subways, or trains
50. Having to avoid certain things, places, or activities because they frighten you
70. Feeling uneasy in crowds, such as shopping or at a movie
75. Feeling nervous when you are left alone
82. Feeling afraid you will faint in public

Psychoticism
7. The idea that someone else can control your thoughts
16. Hearing voices that other people do not hear
35. Other people being aware of your private thoughts
62. Having thoughts that are not your own
77. Feeling lonely even when you are with people

84. Having thoughts about sex that bother you alot
85. The idea that you should be punished for your sins
87. The idea that something serious is wrong with your body
88. Never feeling close to another person
90. The idea that something is wrong with your mind

Additional Items
19. Poor appetite
60. Overeating
44. Trouble falling asleep
64. Awakening in the early morning
66. Sleep that is restless or disturbed
59. Thoughts of death or dying
89. Feelings of guilt

Appendix F

RELATIONSHIPS QUESTIONNAIRE (Part 1)

This questionnaire is concerned with your experiences in relationships. Take a moment to think about these experiences and answer the following questions with them in mind.

Question #1:
Read each of the four self-descriptions below (A, B, C, and D). Select the choice that you feel best describes how you feel in relationships. Indicate your choice by marking the appropriate response for question #1 on the enclosed BLUE computer scantron sheet.
(Note: the words "close" and "intimate" refer to psychological or emotional closeness, not necessarily to sexual intimacy.)

A) I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

B) I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

C) I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

D) It is easy for me to become emotionally close to others. I am comfortable depending on others and having others depend on me. I don't worry about being alone or having others not accept me.

(Questions # 2-5)

** Now please rate each of the relationship styles <u>above</u> according to the <u>extent</u> to which you think each description corresponds to your general relationship style. Fill in the appropriate number on the scantron booklet for questions 2-5.

	Not at all		Somewhat like me		Very much
Question #2:					
Style A	1	2	3	4	5
Question #3:					
Style B	1	2	3	4	5
Question #4:					
Style C	1	2	3	4	5
Question #5:					
Style D	1	2	3	4	5

RELATIONSHIPS QUESTIONNAIRE (Part 2)

Please read each of the following statements and rate the extent to which it describes your feelings about romantic relationships. If you have never been involved in a romantic relationship, answer in terms of how you think you would feel.

Answer questions # 6 to 23 (continue on the BLUE scantron sheet) using the scale below.

1	2	3	4	5
Not at all	Somewhat	Fairly	Mostly	Very

characteristic
of me

6) I find it relatively easy to get close to people.

7) I find it difficult to allow myself to depend on others.

8) In relationships, I often worry that my partner does not really love me.

9) I find that others are reluctant to get as close as I would like.

10) I am comfortable depending on others.

11) I do <u>not</u> worry about someone getting too close to me.

12) I find that people are never there when you need them.

13) I am uncomfortable being close to people.

14) In relationships, I often worry that my partner will not want to stay with

me.

15) When I show my feelings for people, I'm afraid they will not feel the same about me.

16) In relationships, I often wonder whether my partner really cares about me.

17) I am comfortable developing close relationships with others.

18) I am nervous when anyone gets too close to me.

19) I know that people will be there when I need them.

20) I want to get close to people but I worry about being hurt by them.

21) I find it difficult to trust others completely.

22) Often, people want me to be closer than I feel comfortable being.

23) I am not sure that I can always depend on people to be there when I need them.

Appendix G

Adult Attachment Scale Items (Modified)

<u>Secure</u>

6) I find it relatively easy to get close to people.

10) I am comfortable depending on others.

11) I do <u>not</u> worry about someone getting too close to me.

17) I am comfortable developing close relationships with others.

19) I know that people will be there when I need them.

<u>Avoidant</u>

7) I find it difficult to allow myself to depend on others.

12) I find that people are never there when you need them.

13) I am uncomfortable being close to people.

18) I am nervous when anyone gets close to me.

21) I find it difficult to trust others completely

22) Often, people want me to be closer than I feel comfortable being.

<u>Resistant</u>:

8) In relationships, I often worry that my partner does not really love me.

9) I find that others are reluctant to get as close as I would like.

14) In relationships, I often worry that my partner will not want to stay with me.

16) In relationships, I often wonder whether my partner really cares about me.

20) I want to get close to people but I worry about being hurt by them.

23) I am not sure that I can always depend on people to be there when I need them.

Note: There were changes made from the original Collins and Read (1990) version of the AAS in the wording of some items. Some items were also added or eliminated from the original AAS for the AAS (modified) questionnaire used in the current study. The changes were not made by the present investigator, but had already been made on the version of the AAS used in the study. This appendix explains the differences between these two versions. It is possible that there is a version of the AAS which the current investigator is unaware of. See below alterations of the original questionnaire.

<u>Secure</u>

6) I find it relatively easy to get close to people. ("Others" in original version changed to "people").

10) I am comfortable depending on others.

105

11) I do <u>not</u> worry about someone getting too close to me. ("Often" removed from original)

17) I am comfortable developing close relationships with others. ("Having others depend on me" changed to "developing close relationships with others.")

19) I know that people will be there when I need them. ("Others" changed to people)

(Items from original AAS Secure scale not used in Secure scale in the current study:

I do not often worry about being abandoned.

I am comfortable having others depend on me).

Avoidant

7) I find it difficult to allow myself to depend on others. (Added on "to allow myself")

12) I find that people are never there when you need them. (Original: "People are never there when you need them.")

13) I am uncomfortable being close to people. (Original: I am somewhat uncomfortable being close to others.)

18) I am nervous when anyone gets close to me. (Added on "to me.")

21) I find it difficult to trust others completely

22) Often, people want me to be closer than I feel comfortable being. (Original: "Often, love partners want me to be more intimate than I feel comfortable being".

Resistant

8) In relationships, I often worry that my partner does not really love me. (Added " In relationships")

9) I find that others are reluctant to get as close as I would like.

14) In relationships, I often worry that my partner will not want to stay with me. (Added "in relationships)

16) In relationships, I often wonder whether my partner really cares about me. (Item added)

20) I want to get close to people but I worry about being hurt by them.

23) I am not sure that I can always depend on people to be there when I need them. (Changed "others" to "people")

Self-Report Attachment Style Prototypes (Bartholomew and Horowitz, 1991)

Secure
It is easy for me to become emotionally close to others. I am comfortable depending on others and having others depend on me. I don't worry about being alone or having others not accept me.

Dismissing (Avoidant)
I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

Preoccupied (Resistant)
I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

Fearful (Avoidant)
I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

Note: for the purposes of analyses, the two Avoidant categories were recoded into a single Avoidant dimension

Appendix I

Relationship between demographic variables and indices of neglect and
physical abuse

Correlational analyses using demographic variables and Neglect and

Physical Abuse as continuous variables indicated that there was a significant

negative relationship between family income and reports of Neglect, $\underline{r}$(N =

509) = .14, $\underline{p}$ < .001, and on reports of Physical Abuse, r = -.28, $\underline{p}$ < .001, and

Physical Abuse, $\underline{r}$ = -.16, $\underline{p}$ < .001. Subjects from lower income families reported

more Neglect and Physical Abuse than subjects from higher income families.

Analyses also indicated that there was a significant negative

relationship between father's education and reports of Neglect, $\underline{r}$(N = 511) =

-.14, $\underline{p}$ < .001, and reports of Physical Abuse, $\underline{r}$ = -.13, $\underline{p}$ < .001. There was also a

significant negative relationship found between mother's education and

Neglect, $\underline{r}$ = -.18, $\underline{p}$ < .001, and Physical Abuse, $\underline{r}$ = -.15, p < .001. Subjects with

less educated parents reported more Neglect and Physical Abuse than subjects

with more educated parents. There was no significant relationship found

between number of siblings and reports of Neglect or Physical Abuse, $\underline{r}$'s = -.03

and -.02, respectively.

Analysis of variance using parent's marital status as a categorical

variable and Neglect and Physical Abuse as continuous variables indicated that

there was a signifnat effect for parents' marital status on reports of Neglect,

F (4, 504) = .22.87, p < .001, and no effect for marital status on reports of

Physical Abuse, F = .71. Subjects whose parents were married or remarried

reported less Neglect than subjects whose parents were divorced.

Analysis of variance revealed a nonsignificant effect for educational

level of fathers on all the dependent variables; Global Severity Index, (F [1,

510] = .40, p < .81), on Secure Attachment, (F [1, 510] =.32, p< .87), Avoidant

Attachment (F[1,510], = .37, p < .83), and on Resistant Attachment, (F [1,510], =

.43, p < .78). Analysis of variance also revealed a nonsignificant effect for

educational level of mothers on all the dependent variables; Global Severity

Index, (F [1, 510] = .52, p < .72), on Secure Attachment, (F [1, 510] =.81, p< .52),

Avoidant Attachment (F[1,510], = .42, p < ..80), and on Resistant Attachment, (F

[1,510], = .51, p < .73).

Analysis of variance revealed a nonsignificant effect for family income

on all the dependent variables; Global Severity Index, (F [1, 510] = .78, p < .54),

on Secure Attachment, (F [1, 510] =.51, p< .73), Avoidant Attachment (F[1,510], =

.58, p < .67), and on Resistant Attachment, (F [1,510], = .81, p < .52).

Finally, analysis of variance revealed a nonsignificant effect for

parents' marital status on Global Severity Index, (F [1, 510] = .34,

p < .85), on Secure Attachment, (F [1, 510] =.69, p < .60). A marginally

significant effect for parents' marital status was found for Avoidant

Attachment (F[1,510], = .2.23, p < .07), and on Resistant Attachment, (F [1,510], =

2.17, p < .07).

Appendix J

Results for the combined scale titled Overall Neglect

134 subjects were categorized in the high Overall Neglect group, (combining Neglect, Rejection, and Nonresponsiveness scales), and 181 subjects were categorized in the low Overall Neglect group. Analysis of variance revealed a significant effect for Overall Neglect (combined Neglect + Rejection + Nonresponsiveness scales) on the Global Severity Index, $F(1,162)$ = 15.93, $p < .001$). No effect was found for Physical Abuse, $F(1,162)$ = 1.10, $p < .30$, and no interaction was found between Physical Abuse and Neglect. Analysis of Variance also revealed a significant effect for Overall Neglect on Secure Attachment, $F(1,162)$ = 13.32, $p < .001$, and Resistant Attachment, $F(1,162)$ =14.69, $p < .001$. Analyses revealed a significant effect for Overall Neglect, $F(1,162)$ = 17.78, $p < .001$, and Physical Abuse, $F(1,162)$ = 4.26, $p < .04$ on Avoidant Attachment,, with a stronger effect for Overall Neglect. There were non-significant effects for Physical Abuse on the other three dependent measures: GSI, $F(1, 162)$ = 1.09, $p < .30$, Secure Attachment, $F(1, 162)$ = 1.25, $p < .30$, and Resistant Attachment, $F(1, 162)$ = 1.48, $p < .23$.