

Abstract

KENNARD, NEARS. Resilience in Maltreated Children. (Under the direction of Mary E. Haskett, PhD)

The purpose of this study was to examine the differences of various aspects of social competence in two groups of children ranging in age from 5 to 10 years old, a substantiated maltreated group (N=74) and a matched comparison group (N=78). Three facets of social competence were assessed: teacher report, actual observation of conflict management skills and social play interaction during peer interactions (playground observation), and parent perception of child adjustment and behavioral problems. Results comparing the two groups demonstrated that they did not differ on 10 of the 11 measures of social competence. This may be because the two groups were well matched, because there were no seriously abused families in the study, or because all children lived with their parent(s) (no out of home placement). Maltreated children's measures of social competence were standardized and summed to determine if social competence could be predicted in these children. An analysis was performed on three protective measures. The protective measures used were: IQ, hostile intent, and problem solving skills. Results indicated that problem solving skills accounted for the differences in adaptive functioning among maltreated children.

RESILIENCE IN MALTREATED CHILDREN

by
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DEDICATION

I would like to dedicate this accomplishment to my mother, Silver Lee Nears (June 29, 1928 to June 5, 2003) who was always there for me, and who provided unconditional love.

Biography

I was born in Berkeley California. At the age of sixteen, I graduated from high school and was accepted into a land surveying program. After graduating from the land surveying program, I was one of the first African-Americans accepted into the Operating Engineers as an apprentice land surveyor in San Jose, California. To become a journeyman, eight grades or levels must be passed. This requires two years of apprenticeship training, attending classes and successfully passing each test to promote to the next level. After my third level, my employer decided I was better qualified than most journeymen. He consequently promoted me to a journeyman, allowing me to skip the last five promotion levels. This accomplishment was published in the Operating Engineer's national newspaper. My experiences also include working for the California Department of Transportation (Caltrans). I began as a junior Engineer Technician, working my way up to an Engineer Technician, and then to a Civil Engineer (Caltrans). This required passing exams and scoring high in the interviewing process.

While working for Caltrans, I was elected section President (Fresno), then section Director (Fresno) in our union, "The Professional Engineers in California Government" (PECG). I testified before the California legislature on union issues and conducted several television news interviews in Fresno and Sacramento. I was in charge of conducting section meetings representing more than 400 civil engineers locally and more than 10,000 civil engineers Statewide. While I was president of PECG, Fresno won the section of the year, over twelve other sections throughout California, which included Los Angeles, San Francisco, Sacramento, and Orange County. Not only had Fresno never before won this award, but also we won two years in a row, which no section had ever done before. I sat on the board of directors and on a four-member appropriation committee within the union, a committee that was in charge of a two

million-dollar appropriation fund. I chaired interviewing panels at the State level, conducted interviews for Senior Civil Engineers, Secretaries, and Highway Patrol Officers for job placement and promotions. Also while working at Caltrans, I served as chairperson for the Black Advisory Committee and started a mentoring program for minorities at the middle-school level in Fresno. I was in charge of setting up scholarships for those students in need, and recruiting minorities in an attempt to reach parity within the State of California Government. While mentoring, I decided to go back to school to pursue my passion, working and counseling with children in need.

After returning to college I was accepted into the Ronald E. McNair Post-Baccalaureate Achievement Program. Admission into this program was highly competitive. Its purpose is to encourage promising college students to pursue doctoral study through participation in an extensive yearlong program. In October of 1998, I received the McNair Director's Award. Each year the McNair Program Director selects one McNair scholar to receive the Director's Award. This award acknowledges the outstanding work the scholar has done while participating in the yearlong McNair Program. The award goes to the scholar who exceeds expectations for performance in the McNair program, who exhibits leadership qualities and collegially demonstrates the greatest degree of academic and personal growth, from the program orientation to submission of the final research paper.

In addition to receiving the Ronald E. McNair director's award, I was awarded In March of 1999, the "Outstanding Student Achiever's" award by Kappa Alpha Psi Fraternity at California State University, Fresno. This award was given for outstanding academic achievement in the field of psychology, as well as continuous support of our campus community. In 1999, I was awarded the "Pickford Scholarship" for outstanding achievement and

scholarship. In 1999, I was also awarded the “Sally Casanova Pre-Doctoral Scholarship” and was provided with funds to visit graduate schools around the country. I began my graduate studies at North Carolina State University, in August 2000. I will graduate with a Master of Science degree in May 2004 and then continue to pursue a doctorate in the Department of Counselor Education.

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I would like to thank my committee members, Dr. Mary Haskett Chairperson, Dr. Edwin Gerler Co-Chairperson and Dr. Sylvia Nassar-McMillan, for their encouragement and support. I would also like to thank them for providing me with an opportunity to complete this thesis on such short notice. Your understanding and commitment is greatly appreciated. A special thanks to Dr. Haskett for providing me with an opportunity to work with her on the research team and on the PACT project. The advice and guidance she provided has been invaluable in helping me develop through both my graduate program and this thesis project. I would also like to thank Dr. Ann Shulte, who mentored me throughout my first year in graduate school. Dr. Shulte's dedication, interest in her students' success, and caring personality are greatly appreciated. Thanks to my colleagues in both the Counselor Education Department and the School Psychology Department, for their support and encouragement, and for helping me through difficult times.

Special thanks go to my wife Irene and my three daughters, Sara, Meredith, and Keeauna, who have supported me through the last few years. Thanks for going in the other room to watch television while your father studied and worked on his papers. Thanks to my grandmother who had always encouraged her grandchildren with these inspiring words, "stay in school and in church, and you'll do alright." I would like to dedicate this accomplishment to my mother, Silver Lee Nears (June 29, 1928 to June 5, 2003) who was always there for me, and who provided unconditional love.

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Introduction

Child maltreatment is an act that results in physical or emotional harm to a child. The term child maltreatment covers a wide range of behaviors, from physical abuse, psychological or emotional abuse, sexual abuse or neglect of the child's basic needs by a child's parents or other adult caregivers. It is believed that the various types of maltreatment generally overlap and rarely occur in isolation (Wolfe & McGee, 1994). Historically, laws and societies have sanctioned child maltreatment. In the early nineteenth century, laws in the United States were initiated to protect children, but not until the early 1970s did the federal government requires all states to pass child abuse reporting laws and fund research on child maltreatment outcomes, risk, and prevention.

Historically, research has indicated that child abuse and neglect has detrimental effects on physical, psychological, cognitive, and behavioral development. Abused and neglected children may exhibit more depression, lower self-esteem, more aggressiveness, hopelessness, poorer coping skills, poorer impulse control, and poorer academic functioning than their non-abused counterparts.

Researchers studying child maltreatment began to discover that not all maltreated children developed or exhibited negative outcomes associated with child maltreatment. Consequently, some researchers have labeled these children as resilient. Further research on resilient children has demonstrated that protective factors (i.e., average IQ, parental warmth, good coping and problem solving skills) were involved in redirecting these children from negative outcomes to normal or positive outcomes. This paper will begin with a history of child maltreatment followed by definitions of child maltreatment, a description of the main types of maltreatments, the epidemiology of child maltreatment, a description of research on child

maltreatment outcomes, and research on resiliency to child maltreatment. After laying a foundation, the present study's methods and results are described and discussed.

History of Child Maltreatment

For centuries, children were considered exclusive property of their parents and parents had sole responsibility for raising them. Children were frequently subjected to harsh and inhumane treatment by their parents or other caregivers. Interestingly, child maltreatment has existed since the beginning of civilization.

The Code of Hammurabi

The Code of Hammurabi is the oldest known set of written laws. Hammurabi ruled Babylon from 1792 to 1750 B.C. He created 282 rules for the kingdom, each accompanied by exact punishments. Many of the rules applied severe penalties, applying the dictum 'an eye for an eye, a tooth for a tooth.' One rule was specifically aimed at children who disobeyed their parents, for example, "If a son strikes his father, one shall cut off his hand." Adopted children who denied the parentage of their adoptive family would have their tongues cut out. If they were to return to their biological parents, then their eyes would be plucked out (Pogrebin, 1983).

Early Americans did not fare much better. In November of 1641, the General Court of Massachusetts Bay Colony passed the "stubborn child law," which stated that children who disobeyed their parents could be put to death (Greven, 1991). The text of the statute was drawn almost verbatim from the Book of Deuteronomy (21:18-21) in the Old Testament. The law stated:

If a man has a stubborn or rebellious son of sufficient years and understanding, viz. sixteen years of age, which will not obey the voice of his father or the voice of his mother, and that when they have chastened him will not harken unto them:

then shall his father and mother, being of natural parents, lay hold on him and bring him to the magistrates assembled in Court and testify unto them, that their son is stubborn and rebellious and will not obey their voice and chastisement, but lives in sundry notorious crimes, such a son shall be put to death (Haskin, 1968).

The problem of child maltreatment continued throughout history because children had few, if any rights, and no course of action to take if they were maltreated. Many parental actions that are presently considered abusive (e.g., using a belt or other object to beat a child, using degrading or embarrassing forms of punishment) were widely accepted. However, public awareness took a major change in response to widespread media attention concerning severely injured and mistreated children, which set the stage for public outcries over such discoveries and public demands to seek answers to such tragic events (Wolfe, 1987).

For example, in 1874, New York laws preventing cruelty to animals had to be invoked to remove an abused child from the home of her foster parents (Pogrebin, 1983). The case involved 8-year-old Mary Ellen Wilson, who was living in the home of her foster parents. Mary was abused and neglected, beaten and not clothed properly. When Mary's situation was discovered by a charity worker, the case was referred to the New York City Department of Charities, but the case was turned away because the agency did not have custody of the girl. When Henry Berge, founder of the American Society for Prevention of Cruelty to Animals was advised of Mary's circumstance he brought the matter to the attention of his colleague, Elbridge Gerry. Gerry petitioned the Court to hear the case on the grounds that, since Mary was a member of the animal kingdom, she was entitled to the same protection as abused animals, and the child needed protection. The Court heard the case and the foster mother was tried and convicted of assault and sentenced to one year of hard labor in the state penitentiary. The case of Mary Ellen Wilson

was the first child abuse case in the United States (Gelles, 1995).

Once children had been brought forward as a group that needed protection, special laws could be created specifically for them. Until this time both the federal government and individual states had given relatively little attention to the lives of children, and rarely if at all, did the government involve itself in family matters. For example, in 1916, congress passed the “Keating Owen Act,” which increase the legal work age to 14 and limited the workday for children between ages 14 and 16 to no more than 8 hours; soon after, the doctrine of “*Parens Patriae*” was introduced. This doctrine defined the state as the ultimate guardian of every child. As such, the state could assume parental responsibilities and intervene in family matters necessary to protect children. *Parens Patriae* means literally, “parent of the country.” It refers, traditionally, to the role of States as sovereign, and as guardians of persons under legal disabilities. *Parens Patriae* originated from the English common law in which the King had royal prerogative to act as guardian to persons with legal disabilities, such as infants.

Public awareness was further emphasized by a description of the “battered child syndrome.” In the early 1960s, researchers Kempe, Silverman and Steele (1962), laid the foundation for child abuse legislation and mandatory reporting laws. Alarmed with the increasing number of non-accidental injuries of children admitted to the pediatric clinic, Kempe and his colleagues conducted a symposium on child abuse at the annual meeting of the American Academy of Pediatrics. Soon after the symposium, Kempe and his colleagues published an article in the Journal of the American Medical Association describing the seriousness of child maltreatment, coining the term “battered child syndrome.” As a result of the article, new child abuse laws were passed, requiring all 50 States to have in place child abuse reporting laws before the year 1970. Society began to heighten its sensitivity to the needs of children and other

disadvantaged sectors of society. For example, the Regional Center for Retarded Children, Project Head Start, and Medicaid, all were initiated in the early 1970s (Masten & Reed, 2002).

Such laws required, for the first time, that anyone who came into contact with children as part of their professional responsibilities (i.e., teachers, doctors, counselors, and psychologists) must report any suspicion of child abuse to child protection officials or police. Not until the passage of the first Child Abuse and Neglect Treatment Act in 1974 were funds made available specifically for research on the causes and effects of child maltreatment (Masten & Reed, 2002).

The National Center on Child Abuse and Neglect (NCCAN), established by the Child Abuse Prevention and Treatment Act of 1974 (P.L. 93-247), an agency within the Administration on Children, Youth and Families, is responsible for assisting states and communities in the prevention, identification, and treatment of child abuse and neglect. The NCCAN grants congressionally appropriated funds to states to improve and increase their prevention and intervention efforts. Child abuse and neglect are defined in both federal and state legislations. Federal legislation provides a foundation for states by identifying a minimum set of acts or behaviors that defines physical abuse, neglect, and sexual abuse.

Definitions of Child Maltreatment

The Child Abuse Prevention and Treatment Act (1984) defined child abuse and neglect as follows:

The physical or mental injury, sexual abuse or exploitation, negligent treatment, or maltreatment of a child under the age of eighteen, or the age specified by the child protection laws of the State in question, by persons (including any employee of a residential facility or any staff person providing out-of-home care) who is responsible for the child's welfare under circumstances which indicate that the

child's health or welfare is harmed or threatened thereby, as determined in regulations prescribed by the Secretary.

This general definition separated abuse into two categories: (1) moderate injury or impairment not requiring professional treatment but remaining observable for a minimum of 48 hours, and (2) serious injury or impairment involving a life-threatening condition, long-term impairment of physical capacities, or treatment to avoid such impairment.

Each state is responsible for providing its own definitions of child abuse and neglect within the civil and criminal codes. In the State of North Carolina (NC), the General statute defining child abuse is in N C General Statute § 7B-101 (2001), which states that the child must be less than 18 years old, and that the child's parent, guardian, custodian or caretaker inflicted or allowed infliction upon the child a serious physical injury by other than accidental means. Although this study will focus on physical abuse only, it is important to have a general knowledge of maltreatment to put physical abuse in perspective.

Main Types of Maltreatment

There are four types of maltreatment: physical abuse, neglect, sexual abuse, and emotional abuse. While states' definitions may vary, the National Clearinghouse on Child Abuse and Neglect Information (2002) defines child maltreatment as follows:

Physical Abuse

Physical abuse is characterized by the infliction of physical injury as a result of punching, beating, kicking, biting, burning, shaking or otherwise harming a child. The parent or caretaker may not have intended to hurt the child, rather, the injury may have resulted from over-discipline or physical punishment.

Child Neglect

Child neglect is characterized by failure to provide for the child's basic needs. Neglect can take the form of physical, educational, or emotional. Physical neglect includes refusal of, or delay in, seeking health care, abandonment, expulsion from the home or refusal to allow a runaway to return home, or inadequate supervision. Educational neglect includes the allowance of chronic truancy, failure to enroll a child of mandatory school age in school, and failure to attend to special educational needs. Emotional neglect includes such actions as marked inattention to the child's needs for affection, refusal of or failure to provide needed psychological care, spouse abuse in the child's presence, and permission of drug or alcohol use by the child. The assessment of child neglect requires consideration of cultural values and standards of care as well as recognition that the failure to provide the necessities of life may be related to poverty.

Sexual Abuse

Sexual abuse includes fondling a child's genitals, intercourse, incest, rape, sodomy, exhibitionism, and commercial exploitation through prostitution or the production of pornographic materials. Many experts believe that sexual abuse is the most under reported form of child maltreatment because of the secrecy or "conspiracy of silence" that so often characterizes these cases.

Emotional Abuse (psychological/verbal abuse/mental injury)

Emotional abuse includes acts or omissions by the parents or other caregivers that have caused, or could cause, serious behavioral, cognitive, emotional, or mental disorders. In some cases of emotional abuse, the acts of parents or other caregivers are sufficient to warrant Child Protective Services (CPS) intervention, without any harm evident in the child's behavior or condition. For example, the parents/caregivers may use extreme or bizarre forms of punishment, such as confinement of a child in a dark closet. Less severe acts include habitual scapegoating,

belittling, or rejecting treatment. Emotional abuse is often difficult to prove and, therefore, CPS may not be able to intervene without evidence of harm to the child (National Clearinghouse on Child Abuse and Neglect Information, 2002).

Epidemiology Child of Maltreatment

In 1999, there were an estimated 826,000 victims of child maltreatment nationwide. Fifty-four percent suffered physical abuse, 11.0 % were sexually abused, and 35.0 % were victims of other types of maltreatment (States to the 1999 National Child Abuse and Neglect Reporting System). The National Child Abuse and Neglect Reporting System (NCANDS) 1999 reported that the rates of many types of child maltreatment were similar for male and female children, but that the sexual abuse rate for female children was higher than for male children. The victimization by race ranged from a low 4.4% for Asian/Pacific Islander victims per 1,000 to a high 25.2% for African American victims per 1,000.

According to the same source, three-fifths (61.8%) of the perpetrators were female and female perpetrators were typically younger than their male counterparts. Forty-one percent of the female perpetrators and 31.2 % of male perpetrators were younger than 30-years-old. Almost nine-tenths (87.3%) of all victims were maltreated by at least one parent and the most common pattern of maltreatment was from the female parent acting alone (44.7%) (National Child Abuse and Neglect Reporting System, 1999).

Fatalities

Based on data recorded by Child Protective Services and other agencies from different states who report to the National Child Abuse and Neglect Reporting System 1999 (NCANDS), an estimated 1,100 children died in 1999 from abuse and neglect, a rate of approximately 1.62 deaths per 100,000 children in the general population. Slightly more than 2% of all fatalities

occurred while the victim was in foster care. Children younger than one year old accounted for 42.6% of the fatalities and children under 6 years old accounted for 86.1%. Maltreatment deaths were more often associated with neglect (38.2%) than with any other type of abuse.

Estimated Cost of Child Abuse

Beyond the trauma inflicted on individual children, child maltreatment also has been linked to long term, negative societal consequences. For example, studies show that child maltreatment is associated with increased risk of low academic achievement, drug use, teen pregnancy, juvenile delinquency, and adult criminality (Kelly, Thornberry, & Smith, 1997). These consequences cost society by expanding the need for mental health and substance abuse treatment programs, police and court intervention, correctional facilities, and public assistance programs.

Cost of child abuse can be described as either, direct costs (those costs associated with the immediate need of abused children) or indirect cost (those costs associated with long-term and secondary effects of child abuse). The following data have been provided by the Department of Health and Human Services, the Department of Justice, the U S Census and others agencies in 1999, and compiled by the Prevent Child Abuse of America organization.

Hospitalization cost annually has been estimated at \$6 billion, chronic health problems at an annual cost of \$2 billion, mental health problems at \$425 million, and health care at \$44 billion.

Juvenile delinquency has been estimated at an annual cost of \$8 billion assuming a cost per year per child for incarceration at \$63,000. Rationale for estimated cost is based upon estimated adult criminality at an annual costs of \$55 billion, and according to the National Institute of Justice, 13% of all violence can be linked to earlier child maltreatment (Miller, Cohen,

Wiersema 1996).

These statistics represent an attempt to document a portion of the nationwide cost related to child abuse and neglect, but these costs are conservative estimates only, and should not be considered as a direct link to child abuse alone. It is very difficult to determine a single risk factor from a particular outcome, because risk factors have a tendency to co-occur. It is also very difficult to determine a single effect of child maltreatment without considering confounding effects of other multiple risk factors (Mash & Barkley, 1996). For example, maltreatment frequently occurs in conjunction with other potential stressors, such as low social economic status (SES), marital status, depression, and psychopathology of parents.

Child maltreatment has also been linked to negative individual consequences. Child maltreatment has detrimental effects on the physical, psychological, cognitive and behavioral development of children (National Research Council, 1993). These consequences range from minor to severe physical injuries, including brain damage, chronic low self-esteem, problems with bonding and forming relationships, developmental delays, learning disorders, and aggressive behavior (Mash & Barkley, 1996). Clinical conditions associated with abuse and neglect includes depression, post-traumatic stress disorder, and conduct disorder.

Outcomes of Child Maltreatment

Researchers have linked child maltreatment to various negative outcomes. In some studies, physically abused children exhibited more depression, lower self-esteem, more hopelessness, and more external locus of control than their nonabused peers (Allen & Tranowski 1989, Cerezo & Frias 1994). Hjorth and Ostrov (1982) reported that physically abused adolescents had poorer coping skills, poorer impulse control, poorer family relationships, and less orientation to vocational and educational goals than non-abused adolescents.

Maltreated children, particularly physically abused children, seem especially prone to hostile or reactive aggression. Physically abused children tend to show high levels of arousal, anger, and aggression when exposed to potentially threatening situations such as interpersonal anger and conflict (Cummings et al., 1994). Physically abused children also tend to be more vigilant about aggression stimuli and more likely to attribute hostile intent in ambiguous social situations, suggesting that they may experience an exaggerated need to defend themselves from perceived social threats (Dodge, Pettit & Bates, 1990). Children who are reared in physically abusive homes also may have a limited repertoire of adaptive behavior responses to provocation or threats, as they may learn that violence is an acceptable means of expressing anger and managing conflicts. Negative outcomes of child maltreatment can be divided into two domains: cognitive development and socioemotional development.

Cognitive Development

One important factor in measuring maltreated children's outcomes is their academic performance. Eckenrode, Laird, and Doris (1993) compared the school outcomes (e.g., grade, standardized reading and math tests, grade repetitions, discipline referrals, and suspensions) of 420 maltreated children in kindergarten through 12th grade to those of 420 nonmaltreated children. Children were matched on gender, school grade level, residential neighborhood, and if at all possible, classrooms. Effects were examined for five pure or mixed types of maltreatment: neglect, physical abuse, sexual abuse, physical abuse and neglect, and sexual abuse and neglect. Overall, maltreated children were 2.5 times more likely than nonmaltreated children to have experienced grade repetition. Neglected children had lower scores on the standardized math and reading tests than did the nonmaltreated groups. Children who were neglected or both neglected and physically abused had lower English grades than did nonmaltreated children, and neglected

children had lower math grades than the nonmaltreatment children. Physically abused children had more discipline referrals and suspensions than the comparison and other maltreated groups. In sum, neglect was associated with lower academic achievement, whereas physical abuse was associated with more discipline referrals and suspensions.

Leiter and Johnson (1994) compared three groups of children on a variety of school outcomes. The groups were composed of maltreated children, a comparison group from the general school population, and a comparison sample of children receiving social services because of poverty and adverse environmental conditions. Maltreated children had poorer outcomes on grades, standardized test scores, more absences, higher dropout rate, and grade retention.

Rowe & Eckenrode (1999) conducted a study to examine the relationship between child maltreatment and timing of academic difficulties. Three types of academic difficulties were examined grade retention, poor English grades, and poor math grades. They found that patterns of risk vary according to the type of academic difficulty. For example, maltreated children were at substantially higher risk than nonmaltreatment children of repeating kindergarten and the first grade. From second through six grade, maltreated children were indistinguishable in their risk of repeating a grade for the first time. Maltreated and nonmaltreatment children shared the same peak in risk, in the first grade for their first repetition, and kindergarten for their first poor English and math grade.

These findings are significant in demonstrating within group differences in the maltreated population, emphasizing the distribution of risk so that interventions can be initiated with specific groups at the appropriate time, and so that interventions can be implemented when they will have the most impact.

Another important element in examining maltreated children's academic competence is their perception of their academic performance. Kinard (2001) conducted a study to determine if maltreated children differed from nonmaltreated children in their accuracy of estimating academic competence. He also attempted to determine if discrepancies between children's actual academic competence related to children's perceptions of support from mothers, teachers, and peers. Kinard (2001) sampled 195 maltreated children to a control group of 179 nonmaltreated children ranging in age from 6 to 12 years. Although maltreated children had significantly lower achievement scores than did nonmaltreated children, the two groups did not differ on perceived academic competence. With regard to discrepancies between perceived and actual competence, maltreated children were more likely than nonmaltreated children to overestimate their level of competence, particularly for reading and arithmetic. Children who reported low maternal support seemed likely to overestimate abilities, whereas nonmaltreatment children with low support seemed likely to underestimate competence. Past research has demonstrated that maltreated children have negative outcomes on their academic performance, compared to nonmaltreated children. Maltreated children also perceive that their academic performance is similar to nonmaltreated children. Another important area in assessing maltreated children's outcomes is their socioemotional development.

Socioemotional Development

Chronic abuse and neglect may impede a child's development of emotional security and prosocial skills. Abuse and neglect represent a degree of parental rejection and unresponsiveness to children's basic needs for security and care (Bolger, & Patterson, 2001). Children who are abused or neglected have increased aggressive behavior and peer rejection (Bolger & Patterson, 2001). Bolger and Patterson (2001) found that chronic maltreatment was

associated with both increased aggressive behavior and a greater likelihood of being rejected by peers. From middle childhood to early adolescence, chronically maltreated children were reported by teachers, peers, and themselves to be significantly more aggressive than other children. Chronically maltreated children were more likely to be rejected by peers, not only on a single occasion of measurement but also across multiple years from second to seventh grade. Heightened levels of aggressive behavior accounted substantially for increased risk of peer rejection, including repeated peer rejection (Bolger & Patterson, 2001).

Research on aggression as a mediator between maltreatment and peer rejection has demonstrated that experiencing maltreatment leads children to become more aggressive, and in turn, their aggressive behavior causes them to be disliked by their peers, especially boys. A number of studies brought together unacquainted children to examine peer relations and social status within groups. Results of these studies demonstrated that children who showed high aggression tended to be rejected in the newly formed peer groups (Bolger & Patterson, 2001).

Herrenkohl & Russo, 2001, examined the relationship between maltreatment and early childhood aggression. The participants were comprised of five groups: abused families, families labeled neglectful but not abusive, children in head start programs, children in day care programs, and middle income children enrolled in a private nursery school programs. Parent's behaviors were assessed terms of: physical discipline and quality of the mother-child interaction. The measure of severity of discipline was based on the mother's responses, including both physical and emotional methods of discipline. The measure of severity of physical discipline consisted of a number of physical methods, ranging from nonabusive techniques, such as spanking, to severely abusive techniques such as burning, hitting, or bruising the child. The developmental outcome measures included the destructive and acting out behaviors as well as

the angry and negative affects of the child.

The results indicated that a mother's negative emotional reaction in her parenting of the preschool children were associated with anger and destructive behavior of the children at school age. At school age, the severity of the discipline was related to anger and destructiveness. However, a negative mother-child interaction was not significantly related to aggression by the child. In sum, preschool age physical discipline is significantly related to school age physical discipline, which in turn, is significantly related to aggression (Herrenkohl & Russo, 2001). These findings also indicate that the relationship between the negative quality of maternal preschool interaction and the child's level of school age aggression is statistically significant. The relationship between maternal school age interaction and school age aggression was not statistically significant. This suggests that at least as far as aggression is concerned, quality of interaction asserts its effect at or before preschool age (Herrenkohl & Russo, 2001).

Shields and Cicchetti (1998) examined the relationships among aggression, emotion, and attention, with a central focus of exploring mechanisms of maltreatment's harmful effects on behavioral and emotional regulation. Participants were 141 maltreated children (50 females, 91 males), and 87 nonmaltreated children (32 females, 55 males). Children's age ranged from 6 to 12 years. On the aggressive subscale, main effects were found for both maltreatment status and gender. Maltreated boys, as opposed to girls, were rated as more aggressive. Similarly, both maltreated children and boys evidenced attention deficits, as main effects were found for both maltreated status and gender. Maltreated children were more likely than nonmaltreated children to be aggressive, with the findings suggesting that physically abused children were at a heightened risk for reactive aggression. Subclinical or non-pathological dissociation was more likely among children who had experienced physical or sexual abuse (Shields & Cicchetti,

1994).

Aggression in children is very significant in their development and within the child's family and society because aggressive children often become violent adolescents and adults (Miller, Cohen, Wiersema, 1996). Aggressive young children have more problems with peers, behavior problems, emotional problems and experience more isolation than their nonmaltreated counterparts (Cicchetti & Torts, 1995).

Studying the effects of maltreated children who are rejected by their peers, who exhibit more negative social interactions, perform poorly in school, have fewer prosocial skills, or have more externalizing behavior and poorer socioemotional development is important in helping those children overcome these negative developmental outcomes. What is equally important is studying maltreated children who seem to be coping successfully despite having experienced maltreatment. Some of these children acquired good or normal outcomes in spite of the serious threats to their adaptation or development.

There are a number of reasons for why some children may escape the negative consequences of abuse. It may be that children who do not develop psychopathology are simply those who have experienced relatively low levels of abuse that do not result in detectable levels of psychopathology. A second possibility is that children who have been abused acquired protective factors that buffered them from forming psychopathology and other negative consequences. This phenomenon is characterized as "child resiliency." Research in this resiliency area can determine what protective factors help buffer the child from developing negative outcomes.

Resiliency

In the early 1970s, studies of resilience had emerged from research on children at risk for

problems and psychopathology. Researchers had begun to study children they believed to be at risk for serious problems because of their life adversities such as environmental factors (e.g., poverty), biological heritage (e.g., parents with schizophrenia) and traumatic events (e.g., maltreatment). These researchers were astounded by the observation that some children developed quite well despite their high risk for psychopathology (Masten & Reed, 2002).

In the early publication of resiliency research, successful children who were at high risk for developing psychopathology were referred to as *resilient kids*, *super kids*, *invincible*, *invulnerable*, *stress-resilient*, or *resilient children*. Early images of children who displayed resilience implied that there was something special or extraordinary about these children. One of the first articles about resilient children was published in the *APA Monitor*, describing these children as invulnerable (Masten & Reed, 2002). Further examples of the idea of the super kids could be found in the *Washington Post* on March 7, 1976 with an article titled “*Trouble: a Bubble to Some Kids*” and a book review on resilience in inner-city children, titled “*Super Kids of the Ghetto*” (Masten, 2001). Eventually “resilience” became the most prominent term used by researchers to describe this phenomenon (Masten & Reed, 2002).

Current research has changed the perception of resilience. Resilience appears to be a common phenomenon which results in a child operating at a basic level of human development and adaptation. If the normal development of a child is robust and the child has good normal protective factors in place, even in the face of severe adversity and risk, the risk for developmental problems may be reduced, particularly if the environmental risk factors are not prolonged, such as in the case of continued maltreatment (Masten & Reed, 2002).

Children are not considered resilient if there has never been a significant threat to their development. In general, resilience is defined by a “good adaptation under extenuating

circumstances and from a developmental perspective, meeting age salient developmental tasks in spite of serious threats to development” (Masten & Reed, 2002). A child is resilient to maltreatment if he or she displays competent functioning in certain areas despite past or present maltreatment (Heller, Larrieu, Imperio, Boris, 1999). Cicchetti & Garmezy (1993) described resilience as a child’s success in meeting societal expectations or developmental tasks. Others consider resilience to be absence of psychopathology in a child.

Studies that examine resiliency in children consider protective factors and risk factors. Protective factors are psychological or environmental factors that reduce the risk or harm to a child. Risk factors are psychological or environmental factors that increase the risk or harm to a child. Often protective and risk factors are examined on a continuum of the same variable. For example, problem-solving skills can be either a risk factor or a protective factor, depending on whether they are effective or ineffective. Self-esteem can also be a protective or risk factor depending on whether the self-esteem is high or low. Protective and risk factors that have been described in the literature can be divided into two categories, individual and environmental. This paper will examine individual protective factors in an attempt to identify variables, which can be used for intervention. The individual protective factors will be divided into two categories, intellectual and problem solving skills.

Individual Protective Factors

The individual protective characteristics include highly developed cognitive skills, average or above average IQ, positive responsiveness to others, alertness, enthusiasm, multiple interest, goal setting behavior, high self-esteem, child’s positive temperament, high self-efficacy, internal locus of control, well developed interpersonal relationships, higher educational aspirations, high achieving academic performance, social competence, good physical health,

effective problem solving abilities, and positive views on their future (Heller, et al. 1999). Many studies of physically abused and neglected children report a significant difference in IQ scores between maltreated children and a control group. These studies also considered average or above IQ to be one of the salient predictive factors on resilience to maltreatment.

Intelligence

Average or above average intelligence has been found to buffer (moderate) maltreated children from negative outcomes. Salzinger, et al. (1984) conducted a study to assess the amount of intellectual and behavioral dysfunction found in children from families in which child maltreatment had occurred. The sample consisted of 64 children from 29 families who were referred to a treatment program by Child Protective Services, and 48 children and 22 families who were nonmaltreated. Three sets of data were collected, the children's academic and intellectual performance, rating of the behavior by their caretaker, and classroom behavior. IQ was assessed using the WISC-R and achievement was assessed using the WRAT reading and math. IQ data were coded for whether the child's IQ was below 1 standard deviation from the mean IQ.

On English and math tests, significantly more maltreated children were found to be performing at 2 or more years below grade level. There were no more children among the maltreated sample than the control sample who had IQs lower than one standard deviation below the mean. However, a comparison of the mean IQ scores of the two groups showed that the nonmaltreated children's IQ scores were significantly higher than the maltreated children. The authors suggested that the lack of IQ differences between the maltreated and control group may be due to the different assessment tools. The maltreated group was tested using the WISC-R and the control group IQ was obtained from past group tests and reports in school records. As a

result, the authors believed that the maltreated group IQ scores may be elevated.

Intelligent quotient have been found to be a necessary, though not sufficient, condition for a minimum level of success for abused and neglected children. In 1976, Herrenkohl, Herrenkohl, & Egolf (1994) conducted a longitudinal study of 457 children, 18 months to six years old. A follow-up study of 345 children was conducted in 1980-1982 (only 345 children were located) when they were in elementary school, and again in 1990-1992 when they were in late adolescence (age 15-21). Cognitive functioning, social functioning, emotional function, and physical problems were assessed. Those children who received scores placing them in the top 40% of the study were labeled as high functioning. Of this high functioning group, 25 out of the 88 children were labeled resilient because they were functioning at a level higher than might have been expected given their maltreated status.

Of the original 25 high-functioning children, 23 were located in the last study. The data on these 23 participants suggested that resilience can change over time so that successful functioning at one point does not guarantee similar success at a later point in time. The 23 maltreated subjects had all exhibited better than average functioning in elementary school, and 14 had graduated from or were attending high school. The study concluded that the intellectual capacity of the children was a relevant variable. All 14 successful adolescents were of average or above IQ.

Perez & Widom (1994) investigated long-term intellectual and academic outcomes using 413 previously abused and neglected individuals and 286 nonmaltreated individuals. IQ (Quick test) and reading ability (WRAT-R) were assessed at approximately age 28, and differences between the groups were compared via multivariate analyses. Abused and neglected individuals had significantly lower IQ scores than the non-abused group as measured by the Quick Test.

The difference between the groups was about one standard deviation. In terms of reading ability, abused and neglected individuals had an average WRAT-R reading score comparable to a sixth grade level, whereas the non-abused group reading level was about eighth grade.

Other research suggests that IQ may serve as a protective factor for abused and neglected children. Frodi and Smetant (1984) found that controlling for IQ eliminated differences between maltreated and nonmaltreated children in their ability to discriminate emotions. Furthermore, high IQ children have been found to maintain good achievement test performance at both low and high levels of stress, whereas low IQ children show a drop in performance under high stress (Garmezy, Masten, & Tellegen, 1984). Thus high intelligence and good scholastic attainment may exert a protective effect in the context of an abusive environment. Intelligence may play a direct role or it may operate as a protective influence, mediating such factors as school performance, problem solving skills, or levels of self-esteem, which may then be related to levels of involvement in problem behavior Perez & Widom (1994). These findings demonstrated that a greater percentage of physically abused individual are functioning at lower levels of IQ and reading ability than non-abused individuals.

Social Information Processing

Well developed problem solving skills used by resilient children are demonstrated by contemplation on situations before acting and well developed impulse control. When asked to respond to inquiries from a variety of situations, these children carefully think about how they phrase their answers before responding instead of immediately responding (Milgram & Palti, 1988.). Dodge (1986) proposed a theory stating that when children are faced with a social situation they will engage in four mental steps before enacting competent social behaviors which are: encoding, representation and interpretation of those cues, mental search for possible

responses to the situation, and selection of a response.

Crick and Dodge, (1994) modified the model by making revisions that would reflect recent conceptual and empirical innovations in the area of psychology and other fields. In the reformulated model, it was proposed that children come to a social situation with a set of biological limited capabilities and a database of memory of past experiences. Crick and Dodge (1994) proposed a model of six processing steps, including, (1) encoding of external and internal cues, (2) interpretation and mental representation of those cues, (3) clarification or selection of a goal, (4) response access or construction, (5) response decision, and (6) behavioral enactment.

During steps one and two, the authors proposed that children would selectively attend to particular situations and internal cues, encode those cues and then interpret them. After steps one and two, Crick and Dodge suggest that children will select a goal or desired outcome for the situation (Step three). In step four, it was hypothesized that children would access from their memory a possible response to the situation, or if the situation is novel, they may construct new behaviors in response to immediate social cues. The above responses may or may not be triggered by the goal selection. In step five, children would evaluate the previously assessed or constructed responses, evaluate the most positive response, and then select that response. In the last stage, the children would behaviorally act on the chosen response.

Several studies have used the theory of social information processing. Many of these studies used hypothetical social situations and designed questions to elicit a response. In these studies, the stimulus usually involved reading the situation to the participant, sometimes accompanied by illustration. The situations examined included, peer group entry, peer provocation or conflict, friendship initiation, peer rebuff, and object acquisition (Crick & Dodge, 1994). As will be mentioned in more detail, the present study used hypothetical situations to

assess participants' acquisition of intent and problem solving skills.

In a study conducted by Haskett (1990), nine abused and nine nonabused children between four and six years of age were assessed on their problem solving ability. The children were matched on age, daycare setting, gender, race, level of IQ, verbal functioning, monthly family income, mother's marital status and educational level. Haskett (1990) administered the Preschool Interpersonal Problem-Solving Test, measuring a child's ability to solve hypothetical problem situations. Abused children were found to be less competent in interpersonal problem-solving skills than were nonabused children. Abused children also generated fewer alternative solutions and repeated negative solutions at a higher rate. Haskett (1991) concluded that interpersonal problem-solving may be a specific deficit in their social cognitive development of abused children.

Research on Resilience in Maltreated Children

Cicchetti & Rogosch (1997) reported findings from a longitudinal study of 213 low social economic status children who attended a weeklong summer day camp, 133 of the children had been maltreated. Children were invited back to the summer camp for three consecutive years, allowing for longitudinal investigation of children's functioning over time. The children in the study experienced a variety of risk factors to their development, including single parenting, relationship instability, limited maternal education, family unemployment, persistent poverty, families on Aid to Families with Dependent Children, minority status, and parental psychopathology. The two groups did not differ in terms of the child's age, number of adults in the home, per capita family income, current receipt of AFDC, social economic status, or marital status. The children did differ in terms of racial ethnicity and number of children in the home.

Across the three years of assessment, maltreated children were found to exhibit

significantly more externalizing symptoms, less prosocial behavior, and more difficulty in school adjustment. In year one and two, maltreated children were characterized as more disruptive in their social interaction as rated by peers and counselors. In year two, maltreated children also reported higher levels of depressive symptoms. The longitudinal perspective suggests that many of these difference outcomes emerged across multiple years of assessments, indicating that the difficulties of maltreated children are not transitory in nature (Cicchetti & Rogosch 1997).

Earlier, Cicchetti et al. (1993) conducted a similar study on resilience in maltreated children. Participants were 127 disadvantaged maltreated boys and 79 nonmaltreated boys, all boys, ranging in age from 8 to 13 years. These children attended a weeklong summer day camp program. The majority of the children were African Americans (63%), Hispanics represented 5 percent and the remaining 32 percent were White. Forty-nine percent of the maltreated children were neglected, 47 percent were physically abused, and 8 percent were sexually abused. Percentages do not add-up to 100 percent because forms of maltreatment usually co-occur. The majority of maltreated and nonmaltreated children were from impoverished and disadvantaged families, with 57 percent living below the poverty line, and 83 percent of the families receiving AFDC.

Cicchetti et al. used several measures to assess children's resilience including peer measures, counselor measures, and school measures. The maltreated children and nonmaltreated children were compared on prosocial, disruptive-aggressive, withdrawn, child depression inventory, internalizing, externalizing, school risk index, and adaptive composite. As predicted, maltreated children were shown to exhibit greater disruptive-aggressive behavior, greater social withdrawal, and more internalizing symptoms than nonmaltreated children. No significant

differences were found for prosocial behavior, child-report depression, externalizing symptoms, or school risk.

After assessing outcome measures, Cicchetti et al (1993) examined predicted functioning to determine whether they could account for the differences between the maltreated and nonmaltreated children. These protective variables included ego-resiliency, ego-control, self-esteem, and cognitive maturity. Significant differences were found on ego-resiliency and intelligence. Maltreated children, on average, evidenced lower ego-resiliency and intelligence than nonmaltreated children. Maltreated and nonmaltreated children did not differ significantly on ego-control and self-esteem.

One study attempted to examine the underlying structure of child maltreatment and relate this structure to current underlying adjustments. Participants for this study included 162 adolescents, 71 boys and 91 girls, between the ages of 11 and 16. These adolescents were currently receiving Child Protective Services. This study used the Child Behavior Checklist (CBCL) as a dependent measure to serve as the criterion of adolescent adjustment. The CBCL is a valid global indicator of overall behavior adjustment for children. For the protective variable, this study used the Record of Maltreatment Experience (ROME), an 87-item instrument used to document the complete victimization history of a child or adolescent. The ROME has five subscales: (a) constructive parenting practices (25 items), (b) psychological maltreatment (24 items), (c) exposure to family violence (9 items), (d) sexual abuse (17 items), and (e) physical abuse (12 items). Respondents rated the frequency of a specific behavior along a 4-point scale from 0 (never occurring) to 3 (occurs/occurred often or very often), (e.g., “parents or caregiver burns or scalds child”) (Wolfe, & McGee, 1994).

The study demonstrated that actions commonly associated with child neglect clustered

together and were distinguishable from other types of maltreatment, and distinguishable by gender. Boys' current adjustment was accounted for by the interaction of physical and psychological abuse, neglect, and witnessing domestic violence during early childhood. For girls, the current adjustment was related to developmental period in which maltreatment had occurred. These findings point to gender difference in how maltreatment affects development. The authors suggested that boys may be highly affected by concrete, observable aspects of their mother's adjustment, whereas girls may be more attuned to the internal experiences and emotional expression of their mothers (Wolfe, & McGee, 1994).

McGloin & Widom (2001) attempted to operationalize the constructs of resilience across a number of domains to determine the extent to which abused and neglected children demonstrated resiliency later in life. The sample included child abuse and neglect cases drawn from the records of the juvenile courts and the adult criminal courts from 1967 through 1971. This period was chosen by the authors to ensure that most of the maltreated cases would be closed and the problems associated with much older files would be avoided. The study began with 2,623 cases of juvenile court petitions. These cases were divided into neglect, physical abuse, and sexual abuse. After excluding cases for adoption of the child as an infant and involuntary neglect, a total of 774 juvenile court cases were used.

The cases of extreme abuse and neglect were obtained from adult criminal courts. Records included rape, incest, assault and battery with intent to gratify sexual desires, sodomy, kidnapping, cruelty and neglect, and desertion of a child. This procedure yielded 134 cases of physical abuse, sexual abuse and neglect, for a total of 908 cases. The control group (N = 673) were matched on age, sex, race, ethnicity and family background, for total of 1,575 cases (McGloin & Widom, 2001).

In 1989 and again in 1995, two-hour follow-up interviews were conducted, covering a broad range of domains of functioning, as well as a psychiatric assessment. Of the 1,575 cases, 1,307 individuals were located and 1,196 participated in the interviews. To operationalize resilience, the authors assessed employment, homelessness, education, social activity, self-reported violence, psychiatric disorder, substance abuse, and criminal behavior.

For the abused and neglected group, percentages ranged from a low 9.3 percent (of the respondents meeting the criterion for success on employment domain) to a high 75 percent (meeting the criteria for the homeless domain). Maltreated and control groups differed significantly for success on six of the eight domains of functioning, with the control group having a higher proportion of individuals who met the criteria for success in the domain of employment, homelessness, education, psychiatric disorder, official criminal records, and self report of violence. The groups did not differ significantly on substance abuse and social activity. Maltreated males appeared successful on the fewest domains of functioning, whereas the control group of females appeared successful across most domains.

Females were more successful across the individual domains of functioning, had a higher mean number of domains in which success was met, and were more likely to meet the criterion for overall resilience than the male sample. Some maltreated participants met the criteria on all eight domains. About 22 percent of the maltreated individuals met the criteria despite their risk and adversities. The study also determined that sexual abuse and neglect were significantly negative predictors of resilience, whereas physical abuse was not (McGloin & Widom, 2001).

Sagy & Dotan (2001) conducted a study to determine resources associated with resilience in maltreated children, as manifested by perceived competence and levels of psychological distress. The study focused on parameters of the child's ecological circle (family, school and

community) as moderating factors that may explain variance in levels of the maltreated children's adjustment and resilience. The study used the Salutogenic approach to define resilience on a continuum of positive variables (perceived competence) that pertain to the child's self-assessment, that is, the extent to which the child deems himself cognitively, socially, physically and generally able (Sagy & Dotan, 2001).

The study found a significant difference between maltreated children and nonmaltreated children in perceived competence (higher for nonmaltreatment children) and psychological distress (higher for maltreated children). The moderating variables were found to have a differential effect on the dependent variable within the two groups. Sense of family cohesion was found to be the main contributor of perceived competence among the maltreated children, while sense of school membership had the main effect among nonmaltreatment children. This study suggested that the sense of family cohesion was significant in the ability of maltreated children to cope with maltreatment. Parents that maltreats their children can serve as a source of strength, enabling them to develop a high level of competence if the parents are structurally stable, presents orderly and clear rules, has expectable goals, and copes with problems in reliable a way. (Sagy & Dotan 2001).

Summary and Limitations of Past Research on Resilience to Child Maltreatment

Past research on resilience to maltreatment has determined that despite the trauma of maltreatment, some children demonstrate normal development. Several protective factors have been shown to mediate or moderate the affects of maltreatment (i.e., average or above average IQ, good coping skills, problem solving skills). Resilience to maltreatment research has also demonstrated that there are gender differences in maltreated and nonmaltreated children, with female showing more promising outcomes than males. A child may demonstrate resilience at

one point in development, but not demonstrate resilience at other points in development. In fact, a child may demonstrate resilience on one context, but not another (i.e., at school, but not at home, or with internal factors, but not external factors).

There have been several problems with the resilience research. One problem is operationally defining resilience across measures. Thus there has been no agreement on a universal definition of resilience. Each study is left to determine its own definition, which may vary widely. There have been a handful of empirically based studies over the past ten-years examining resilience to maltreatment. Some studies may use only low social economic status, while others use only male participants. Other studies will use one protective variable, while others will not examine any protective variables, only outcome variables. The present study will use a wide range of social economic variables, both males and females, and several protective variables.

Present Study

There is a large body of research on child maltreatment outcomes, and there is a growing body of research on resilience, however, there exists very little research on resilience in maltreated children. The present study adds to the body of empirically based research on resilience to maltreatment by examining the effects of maltreatment outcomes across various contexts (i.e., parents and teachers reports, school performance, and aggression), and testing the differences between maltreated children and nonmaltreated children on three outcome measures of social competence: the Eyberg Child Behavior Inventory (ECBI), Social Behavior Scale (SBS), and playground observations. The present study will also evaluated whether IQ, problem solving skills, and attributions of intent serves as protective factors for maltreated children. Based on prior research, it was hypothesized that:

1. There would be significant differences between maltreated and nonmaltreated children on all 11 indicators of social competence, with nonmaltreated children demonstrating greater competence than maltreated children.
2. IQ, problem solving skills, and attribution of intent would serve as protective factors for maltreated children. A significant correlation was expected between resilience scores of abused children and all three protective factors.
3. Despite group differences, it was expected that a subgroup of maltreated children functioning at a comparable level to the nonmaltreated children would be found.

Method

Participants

Participants in this study consisted of 74 maltreated and 78 nonmaltreated (comparison) children. The children ages ranged from 5 to 10 years (mean age = 7.43 years, SD = 1.63) for the maltreated group and (mean age = 7.10 years, SD = 1.41) for the nonmaltreated group.

The maltreated group consisted of 39 (53%) males and 35 (47%) females. The nonmaltreated group consisted of 38 (48%) males and 41 (52%) females. A majority of the students were from a racial minority background. Forty three (72%) were African American, 18 (24%) were Caucasian and 3 (4%) were Hispanics. In the nonmaltreated group, there were 52 (66%) African American, 25 (32%) Caucasian, and 2 (2%) Hispanic.

Participants in the present study were part of a larger study named Parents and Children Together (PACT). The purpose of the initial study was to further the understanding of the impact of maladaptive parents on children's social adjustment. Parents in the maltreated group had either substantiated reports of abuse for their child between the ages of 5 to 10 years, or the participating parent was a spouse of the abuser. Maltreated participants in the initial study were

identified by Child Protective Services as having a substantiated case of physical abuse or neglect involving inappropriate discipline. No cases involving sexual abuse were included. Nonmaltreated (comparison) families had no history of abuse. Children in both groups resided with their parents, therefore, there were no out of home placement.

Procedures

After Wake County Department of Social Services (DSS) substantiated families' physical abuse, parents were given a written and verbal description concerning the purpose of the research. Parents received the description after the investigation was completed and their case referred for treatment about one month after the abuse was reported. Parents interested in participating in the study returned a response card which included their name phone number and address. Families were paid \$75.00 for their participation in the study. It was determined that \$75.00 would be an incentive to attract a high percentage of participations, including families in the middle and low income range. To insure a high percentage of participants, travel was provided to the data collection facility. Babysitting service was also provided by trained undergraduate students.

The nonmaltreated sample was determined by comparing the demographic characteristics with the demographics of the abused sample of families in Wake County. Comparison families were also matched on age, gender, race, IQ, and the marital status of parents. The comparison group was recruited through a number of sources (e.g. flyers being placed in laundry rooms and grocery stores in the neighborhoods where the abusive families lived). Comparison families also received \$75.00 for participation.

Participating parents accepted into the study first completed a psychosocial interview by a doctoral level psychologist. The interview was designed to collect demographic information

and to screen the families for exclusionary criteria of substance abuse and severe marital violence by the parent and sexual abuse of the child. If parents were accepted into the study, they were scheduled for an appointment at the psychological clinic in the evenings or on a Saturday.

After arriving to the clinic, parents were introduced to the research staff members and completed an informed consent form. No parent refused participation. After data collection was completed, parents received \$75.00 and a booklet containing information on family support resources in the local community. Parents were also given an opportunity to review results of the assessments with the project director at a later date.

Permission was sought from child participants' principals and teachers to complete school based data approximately six months after the family completed data collection in the psychological clinic. Each teacher was contacted to schedule a playground observation of the participating child, undergraduate research staff traveled to the schools to conduct the observations. Teachers completed the Social Behavioral Scale and returned them to the research clinic about two weeks after the playground observation was collected (see appendix A).

Instruments

Measures of Social Competence

The Eyberg Child Behavior Inventory (ECBI)

The ECBI is an assessment inventory given to parents to assess their perception of their children's adjustment. This assessment tool is a brief, paper and pencil behavioral rating scale of externalizing or conduct disorder problems in children age 3 through 16 years. The ECBI is a 36 item 7 point intensity rating scale of common child behavior problems. The second portion of the measure asked the parents if they consider the behavior a problem by answering "yes" or

“no.” The present study will use the intensity rating scale. The assessment takes approximately two minutes to complete and can be scored by hand. Mean Intensity scores of 3.5 (raw score of 127) and Problem scores of 11 are considered to be within “conduct problem” range. The ECBI is empirically validated, has strong psychometric properties, and is a widely used parent report measure of disruptive behavior problems (see appendix B).

Burns et. al., (2000) conducted a factor analysis on the ECBI using 1,263 children and adolescences. The analysis identified three 3 meaningful factors: oppositional defiant behavior toward adults, inattentive behavior, and conduct problem behavior. The authors conducted a second confirmatory factor analysis, evaluating the fit of the 3 meaningful factors and determined that the 3 factor model with 2 correlated errors provided an excellent fit. Multiple group confirmatory factor analysis indicated that the factor pattern, factor loading, factor correlation, and correlation error were equivalent across the samples.

Social Behavior Scale (SBS)

The Social Behavior Scale (SBS) is a 39-item teacher report which was developed from three published empirically supported measures of social behaviors (Crick, Casas, & Mosher 1997). The SBS was designed by the PACT team to measure teacher perception of social behavior of young children. The SBS has seven subscales: (a) Prosocial Behavior, (e.g., the child is helpful to peers), (b) Relational Aggression (e.g., the child tells others not to play with or be a peer’s friend), (c) Overt Aggression (e.g., the child verbally threatens to hit or beat up other children), (d) Asocial (e.g., the child withdraw from peer activities), (e) Excluded (e.g., the child is ignored by peers), (f) Depressed (e.g., the child doesn’t smile much), and (g) Victimized (e.g., peers say mean things to this child at school).

The child’s teacher completed the SBS, indicating the degree to which each item

described the child. The responses ranged from 1 (never true) to 5 (almost always true). In addition to the seven subscales, teachers assigned a grade from “A” to “F” representing each child’s overall academic performance, and were reported on the SBS (SBS-GRD) during data collections. The range of time teachers had known the child being rated was from one to nine month. All seven subscales and the overall academic grades were used in this study (see Appendix C).

A factor analysis was preformed by Haskett and Willoughby, (2002), providing strong support for the 7 factor structures of the SBS. A Cronbach's alphas was also performed for the two scales, Relational and Overt Aggression and were found to be .92 and .91 respectively, indicating that the SBS had strong internal consistency.

Playground Observation

Children were observed for 30 minutes during an unstructured play session on the school playground. During the one 30 minutes observation, data were collected in 15-second intervals. The coder recorded whether the behavior occurred (not each time the behavior occurred) in the 15-second interval. Therefore, each 15-second interval had one record of the target behavior. The target behaviors were (a) Engagement (verbal or physical behavior directed to another peer or group of peers), (b) Negative behavior (negative verbal or guttural behavior directed to another child, or saying negative things about another child), (c) Rough Play (physical contact with a peer that is rough and negative but not of sufficient strength to be aggressive), and (d) Aggression (physical contact with a peer or object that constitutes an attack with clear potential to harm or taking something belonging to another child).

Undergraduate research assistants were trained on the coding procedure and conducted playground observations (see appendix D). A reliability coefficient of at least .80 was reached

for training, and 31% (n=10) of all observations were checked for reliability by having a primary coder and a second coder for the same child at the same occasion. Two scores were obtained by these measures (a) percent of intervals in which participants were engaged, and (b) a composite score representing percent of intervals in which participants were engaged in any of the three negative behaviors (Negative, Rough Play, and Aggressive). A composite score was utilized due to the low rates of the three negative behaviors. A Pearson correlation coefficient of .97 for Engagement and .83 for the Composite Negative behavior was obtained (Haskett & Kistner, 1991).

Measures of Protective Factors

Protective factors are correlations of good outcomes in at-risk children (a positive moderator of risk and adversity), which buffer the child from developing negative outcomes. The protective factors used in the present study are intellectual, attribution of intent, and problem solving which are described as follows:

Kaufman Brief Intelligence Test (Intellectual functioning)

The Kaufman Brief Intelligence Test (K-BIT) is a measure of intelligence that takes 15 to 30 minutes to administer. The K-BIT is a short measure of verbal and nonverbal abilities for children and adults ages 4 through 90. The K-BIT generate scores for: Verbal (which is composed of two subtests, Expressive Vocabulary and Definition), Nonverbal (composed of one subtest, Matrices) and Composite IQ. Expressive Vocabulary requires the naming of pictured objects, and Definitions requires the identification of words corresponding to a verbal description and a partial spelling of words. Matrices subtest is a multiple-choice task that requires the recognition of relationships among visual stimuli.

The K-BIT has proven to be a valid estimate of intelligence in a wide range of non-

disabled children and adolescents. The Verbal, Nonverbal, and Composite scores have composite reliabilities of 0.93, 0.88, and 0.94, respectively, which is consistent with composite reliabilities on the WAIS-R (Kaufman & Kaufman, 1990). Chin (2001) conducted a study with 65 children from Atlanta, Boston, and Toronto who ranged from six to seven years of age at the time of testing. Correlations between the Verbal, Nonverbal, and Composite scale of the K-BIT and WISC-III were 0.60, 0.48, and 0.63 respectively (the K-BIT has a mean of 100 and a standard deviation of 15).

Child Attribution Questionnaire (CAQ), (attribution of intent)

Researchers of the Fast Track Project (Conduct Disorders Prevention Group, 1994) developed the Home Interview with Children, renamed for the present study as the Child Attribution Questionnaire (CAQ). The CAQ assesses children's attribution style concerning peer intent. Trained undergraduates administered the CAQ. While reading a description of the situation, interviewers showed the children a series of eight drawings that depicted two types of social situations. The situations involved either (a) "ambiguous minor harm" (the child is asked to pretend that he or she has been harmed in some way by a peer's behavior) or (b) "unsuccessful peer entry" (the child is to imagine being rebuffed by a child or group of children with whom he or she would like to play).

After a situation was read to the children, they were asked why the peers in the story responded as they did to the situation. The children were also asked what they would do in response to the peer's described action. As recommended by the author, children's responses to the situations were coded as Hostile ("he doesn't like me"), Nonhostile ("he didn't see me there") or Don't Know (if the child did not respond or did not generate an answer). Scores range from zero to eight, with zero representing no hostile attribution and eight represents hostile

attribution for every situation (see appendix E).

Using a non-clinical sample of 387 children, the test developer assessed internal consistency of the Child Attribute Questionnaire (CAQ) using Cronbach's alpha. The inter-item reliability coefficient for the attribution score was .80 (Conduct Disorder Prevention Research Group, 1994). Using the Pearson Product-Moment correlations, inter-rater reliability of coding was assessed for a subsample of 35 participants in the PACT project. The inter-rater reliability was found to be .87 for the full measure, .76 for the ambiguous minor harm problems, and .88 for the unsuccessful peer entry problems. The use of hypothetical vignettes is used frequently in the field and is the standard measure for evaluating children's attributions.

Child Problem Solving Measure (CPSM) (problem solving)

Researchers of the Fast Track Project (Conduct Disorders Prevention Group, 1994) also developed the Social Problem Solving Measure, which was renamed for the purpose of the present research as the Child Problem Solving Measure (CPSM). The CPSM was used to measure children's ability to generate solutions to hypothetical interpersonal problems. The measure has eight pictures depicting various interpersonal problems. The interviewer gave a brief account as the child is shown the first picture. The interviewer asked the child to verbally state all the things that they could do or say to solve the problem. If the child repeats an answer, or could not come up with any additional answers, the interviewer prompted the child (maximum of three prompts). For example, the interviewer would ask "What else could you do?" "What else could you say?" or "What is something different things you could say or do?" to help the child generate more solutions. Once the child generated six different solutions or could not generate any new solutions, a new story was presented.

The Total score on the CPSM was the total number of different solutions generated by

the child for all eight vignettes. The categories were (a) Ask for Something/Borrow/Trade (i.e., can I have the marker?), (b) Entry Conversation (i.e., What is your name?), (c) Please (i.e., When the child used the word please), (d) Passive/Interacted/Playing with Another Object (i.e., ignore them, run away), (e) Problem Identification (i.e., tell them “you took my turn”), (f) Authority Aid/tattle (i.e., I’m going to get the teacher), (g) Cry, (h) Trick/Finagle (i.e., any response which would trick the child) and (i) Command (i.e., any verbal command) (see appendix F).

Based on a non-clinical sample of 355 children, the test developers tested reliability coefficient of the Child Problem Solving Measures, by coding responses into six categories. The inter-item reliability for the six categories ranged from .71 (Aggressive response) to .40 (Irrelevant responses). To provide further validity for the CPSM, scores on the Aggressive and Competent scales were assessed. There was a positive correlation on the Aggressive scale scores with behavior scores on a teacher report of child adjustment. Also, Children in the treatment program for conduct disorder obtained significantly higher scores on the Aggressive scale than the non-conduct disorder sample.

Standardizing scores

In order to ensure that all measures weighted equally, scores were standardized. To standardize scores, several steps were used. First, the Social Behavior Scale (SBS) scores were standardized. The SBS has eight submeasures, possible scores ranged from 1-5 with higher scores demonstrating more problematic behavior, except for the SBS-PRO. SBS-PRO scores were subtracted by 6 (i.e., an SBS-PRO score of 5 was subtracted by 6, giving that subject a absolute value of 1) therefore, all SBS-PRO scores were similar to the other submeasures with higher scores indicating more problematic behavior. The scores were then divided into thirds. Lower third received a score of "1", middle third received a score of "2", and the highest third

received a score of "3". Similar to SBS scores, the ECBI was divided into thirds and participants received scores from "1" to "3" with higher scores indicating more problematic behavior. The playground measure has two subscales, ENG for percent of intervals in which participants were engaged, and the NRA a composite score representing percent of intervals in which participants were engaged in any of the three negative behaviors (Negative, Rough Play, and Aggressive). Similar to SBS-PRO, the ENG was inverted by assigning low scores to the highest third, and high scores to the lowest third. The ENG and the NRA was then divided into thirds. There were three levels of children's measures of social competence, the lower one third, middle one third and the highest one third on each of the competent functioning measures. Scores were summed for each of the 11 domains, ranging from 11 to 26 (possible scores range from 11 to 33).

Operationalizing Resilience

The child was labeled resilient if he or she received a score between 11 and 15. A score between 16 and 20 represents a marginally functioning child, and a score between 21 and 26 represents a child that is functioning at a low level. The low scoring group is labeled resilient because they are functioning at a level higher than expected given their maltreated status. A number of studies have used this approach to define resilience (Bradly et al., 1994; Cicchetti, 1993; Grizenko & Pawlink, 1994; Kaufman, 1994; and Spaccarelli and Kim, 1995).

Results

Group Difference Measures of Social Competence

First, to examine significant difference between maltreated and nonmaltreated children, *t* tests were performed on all dependent measures, see (Table 1). Maltreated children were shown to exhibit significantly more conduct problem behaviors at home, as evident by the significant

difference on the ECBI, $t(151) = 2.60, p < .01$. There was no significant difference between the groups on any other measure.

Table 1

Maltreated and Nonmaltreated Children's Raw for each Measure of Social Competence

Measures	<u>Maltreated</u>	<u>Nonmaltreated</u>	t value	P
	M (SD)	M (SD)		
ECBI	3.15 (.95)	2.77 (.83)	2.46	.01
SBS-PRO	3.51 (.77)	3.71 (.71)	1.70	.09
SBS-RA	1.72 (.64)	1.69 (.78)	0.28	.77
SBS-OVT	1.78 (.79)	1.58 (.70)	1.62	.10
SBS-ASC	1.83 (.69)	1.75 (.61)	0.78	.43
SBS-EXL	1.97 (.91)	1.78 (.74)	1.42	.15
SBS-DP	2.12 (.97)	1.88 (.76)	1.69	.09
SBS-VIT	1.75 (.79)	1.60 (.57)	1.34	.18
SBSGRD	2.77 (1.00)	2.53 (1.1)	1.41	.15
Play-Eng	65.31 (24.5)	66.76 (24.1)	-36	.71
Play-NRA	8.67 (9.27)	8.93 (9.89)	-.16	.87

Relationship Between Resilience Scores and Predictors

Second, a multivariate correlation was performed on all measures to determine if the variables have something unique to offer in predicting or explaining resilience. As seen in Table 2, the CPSM has the highest correlation with resilient scores followed by the CAQ, and finally the K-BIT.

Table 2

Multivariate Correlations for Abused Children Only

	Resilience Score	KBIT	CAQ	CPSM
Resilient	1.0000			
KBIT	0.001	1.000		
CAQ	0.125	0.006	1.000	
CPSM	0.229	0.032	0.236	1.000

Predicting resilience

To determine whether each variable or set of variables accounted for a significant amount of variance in resilience scores among the maltreated group, a Backward Elimination regression model was tested. In this backward elimination procedure, the beginning model included all predictors (K-BIT, CAQ, and CPSM). After computing the model, an examination of the output indicated that there were no significant variables, therefore, the variable that contributed least was removed (K-BIT, $p = .958$). Further computation of the remaining two variables indicated that the CPSM ($p = .0499$) accounted for significance amount of the variance, while the CAQ did not ($p = .530$). The CAQ was then removed and the CPSM entered as a single variable. After removing the CAQ, the CPSM improved its significance to ($p = .0490$). Table 3 examines each of these models.

Table 3

Summary of Regression Model to Predict Resilience Scores

Models	Adjusted R Square	p value
Model 1 (K-BIT, CAQ, CPSM)	.018	.985
Model 2 (CAQ, CPSM)	.032	.530

Model 3 (CPSM)

.040

.05*

Note. *p < .05

There were no computations performed to address hypothesis 3, (that despite group differences, there would be a subgroup of maltreated children who are functioning at a comparable level to the matched nonmaltreated children) because no significance between the two groups were found. However, 25 maltreated children were labeled resilient, 31 were marginally functioning, and 17 maltreated children were functioning at a low level.

Discussion

The main goal of this study was to determine whether maltreated children's competence could be predicted by several protective factors. This is an important area of research because maltreated children often exhibit more depression, lower self-esteem, more hopelessness, and more external locus of control than their nonmaltreated peers (Allen & Tranowski, 1989; Cerezo & Frias, 1994). Maltreated adolescences have poorer coping skills, impulse control, family relationships, and less orientation to vocational and educational goals than do nonmaltreated adolescences (Hjorth & Ostrov, 1982). Attempting to find protective factors to help with intervention techniques should be a social and interdisciplinary priority, given the many negative developmental, academic, emotional and behavioral outcomes of maltreated children.

If the normal development of a child is robust and has normal protective factors in place, (even in the face of severe adversity and risk) the risk for developmental problems may be reduced, particularly if the environmental risk factors are not prolonged, such as continued maltreatment (Masten & Reed, 2002). Increased understanding of maltreated children who display competent functioning regardless of their status (resilience) will allow us to identify

those qualities or protective variables, to effectively direct intervention efforts. .

Difference Between Maltreated and Nonmaltreated Children on Competent Outcome Measures

Based on prior research, maltreated children demonstrated significantly less behavioral competent functioning than their nonmaltreated counterpart. Contrary to prior research, the present study did not find a significant difference between groups on the Social Behavioral Scale (SBS).

Social Behavioral Scale (SBS)

The present study did not find significance on any of the 7 domains or the reported overall academic grades on the SBS assessment. The SBS is a 36 item teacher report of the targeted child. In other than extreme cases, which are unlikely with the population in the present study, teachers may not observe any extreme behavioral problems presented in the SBS. For example, on the SBS-RA (relational aggression), there are no scores of 4 or 5, Often true (4), and almost always true (5). Same is true for the SBS-OVT (overt aggression), which had only one 4, as the highest score, followed by four scores of 3s (sometimes true), followed by twos (rarely true) and ones (never true). Another reason why significance was not found, is that the maltreated and nonmaltreated groups were well matched and there were no extreme cases of abused children, demonstrated by the fact that all participating children were in the care of their parents, and not in foster care. Since these maltreated children do not exhibit extreme behavioral problems, noticeable behavioral problems may not be observable at school with their teachers, but observable at home with their parents, as was demonstrated with the ECBI.

Eyberg Child Behavior Scale, Parent Report (ECBI)

The present study did find significance between groups on the ECBI ($p < .01$). The ECBI is a 36 item 7 point assessment inventory given to parents to assess their perception of

their child's adjustment and behavioral problems. Caution should be taken in assessing parent reports, because parents are closely vested in their child's behavior and emotions are usually involved. Their perception of that behavior may or may not be accurate. In other words, either the maltreated children only displayed problem behavior at home, or parent's perception may have been skewed. In addition, these parents are either the abuser or the spouse of the abuser. They may have their own baggage when it comes to perception of their children's adjustment.

In addition, the mothers' report of their children have been found to be biased, sometimes influenced by personal and interpersonal factors such as maternal depression, marital distress, and negative life stress (Webster-Stratton, 1988). The Social Information Processing model concerning parents proposed that abusive compared to nonabusive parents hold more inaccurate and biased pre-existing beliefs and values in the way they perceived, evaluate, integrate, and respond to information related to their children. For example, abusive parents may have different dispositional beliefs about their children's abilities and motivations, and about their own parenting skills, which may impact how they view their children (Milner & Crouch, 1999).

Teacher reports would seem to offer a more reliable unbiased assessment of children's social competence because they have the opportunity to observe and compare the interactions of a large number of children within the same age group. However, teachers are also susceptible to some of the same biases as parents. In addition, their assessment of their students could be influenced by factors such as race, sex, academic performance, child's reputation, or attitude toward the child's parents (Coie, 1990).

Although there are potential biases in parent and teacher reports of children's social adjustment, previous research has documented the predictive validity of teacher rating of social competence in school as well modest correlations between parent and teacher reports (Rubin &

Mill, 1990). The existence of possible biases, instability of a young child's behaviors across settings, different expectations in the raters' perceptions, and differences in the types of behaviors measured in each setting, suggest that reliable assessments of children's social competence must involve multiple informants from across different contexts and settings (Stratton-Webster, & Lindsay 1999).

Playground Observation

Also, no significant difference between groups was found on the playground observation measure. A more objective measure of children's social competence is direct observation of their social interaction with peers by an independent trained observer. This real life assessment would seem to have validity and reliability beyond both the teacher and parent report of social competence. However, observations were conducted in a one 30 minute period of the child's life. If the child was having a bad day, assessments of that child's behavior may not be accurate.

Predicting Resilience Scores

The overall model indicates that the K-BIT and the CAQ are not contributing to the variability of predicting resilience score, because adding the variables K-BIT, and CAQ to the regression equation did not add to the predictive power of the model. Only the CPSM demonstrated significance ($p < .05$) predicting social competence of maltreated children. For example, intelligence should be highly correlated with acquisition of cognitive skills. Crick and Dodge's (1994), social information processing model indicates that one of the most likely cognitive skills to increase with age is the child's database of social knowledge, often referred to as domain-specific knowledge. Therefore, cognitive skills, age, and social knowledge should demonstrate a high correlation with one another. Highly intelligent children are more likely to rapidly acquire new ways of responding to social situations, increase strategy repertoires, and

exhibit qualitative changes in strategy acquisition more rapidly than their less intelligent counterpart.

These intelligent children are relatively more skillful and have more adaptive ways to negotiate conflicts with peers, as opposed to more aggressive tactics that are often used by maltreated children. Crick and Dodge (1994) also mentioned that “intent of others” may improve with age, again this author contents that not only with age, but with intelligence.

Child Problem Solving Measure (CPSM)

Results in the present study indicates that social information processing in the context of problem solving skills account for the differences in competent functioning of the maltreated group. This would suggest that problem solving skills are important qualities in adapting to an adverse event, such as maltreatment. When faced with a problem, children encode and interpret the social cues, which may or may not be influenced by emotions, mood, or level of arousal. Their goals are clarified and defined to produce a particular outcome. In the next step, children assess the possible responses to the situation, and evaluate these responses in terms of likely outcome. After formulating and clarifying a goal, resilient children had well-developed problem solving skills and could respond to various solutions. A well developed repertoire of responses has also been considered a protective factor in at-risk children by other researchers. Also, children that generate many responses to a social stimulus have more choices in the selection of an appropriate response meaning they have better social competence than their maltreated counterpart with lower problem solving skills. The results of this study demonstrate the importance of helping abused children develop these skills.

Limitations

Although the definition of resilience has been refined over the years by researchers in the

field, there is no universal, operational definition. Resilience has been described as, at-risk individuals showing better than expected outcomes, and positive adaptation is maintained despite the occurrence of stressful experiences (Masten, 1994). Cicchetti and Garmezy (1993) described resilience as a child's success in meeting societal expectations or developmental tasks. Others consider resilience to be the absence of psychopathology in a child. The present study defines resilience as social competence on three measures, with arbitrary cut-off scores. Some studies may be duplicated, but without a theoretical concept, growth in the field may be sluggish. In addition, when variations of resilience and competent functioning differ across studies, it is difficult to compare methods and results.

Abused participants in the present study may not represent the general population of abused children. There were no severely abused participants, therefore, there may have been no measurable adverse outcomes of maltreated. The playground observation was one 30 minute period which may be a limitation on quantifying a child's negative behavior. Another limitation of the findings is that problem solving was presented as a hypothetical situation. It is not know, if the children were placed in a real situation, that they could generate as many solutions as with the hypothetical situations. Furthermore, use of a measure that would involve placing children in real life situations may not be ethical, or practical. A child may have the skills to solve problems, but not the motivation to carry out that behavior. The study also had a relatively small sample, which may have reduced the predictive power of the analyses.

Direction of Future Research

Future research should attempt to develop a theoretical base to operationalize resilience. A well-developed theory on resilience will help direct future research. Either a theory or well defined definitions of competent functioning should also be constructed, allowing research on

resilience to easily duplicated studies with clarity and consistency.

Concerning the present study, larger samples size including high risk, severely maltreated children should be perused. Observations of the child's behaviors should take place on several occasions in several contexts, given a more accurate description of the child's aggressive or non-aggressive behaviors. If practical and ethical, children should be placed in real life social situations to accurately assess their problem solving skills. Finally, age, sex, social economic status, and race should be assessed to determine if these variables could serve as protective variables in maltreated children.

In conclusion, the present study adds to the body of knowledge on resilience to maltreatment. Supporting the theories on information processing. More studies are needed to understand resilience and the corresponding protective factors. This is important research, in determining which variables are good protective factors, so that interventions could be tailored to help develop those skills in at risk children.

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Appendix A

Family Interaction Project

The purpose of the family interaction project, supervised by Mary Haskett, Ph.D. of the Psychology Department at NCSU, is to learn more about how families interact and about how children develop social skills.

This assessment will involve the following:

1. A brief history and assessment of general level of ability will be completed.
2. Self-report measures of attitudes about parenting and children, knowledge of problem solving, and general happiness will be completed. Assessment will also include an evaluation of your child's problem solving and social skills. Reading skills are not required to complete the assessment. One measure of your child's ability to solve problems involves a situation in which your child will be asked to use some markers that another child has been trained not to give up. This will only last a maximum of 10 minutes, and then the children will share markers and play together for several minutes. If your child becomes upset or very angry, we will stop the assessment immediately.
3. We will make a 30-minute videotape of you and your child interacting while you play games and work on a puzzle together. After the videotape, we will all have a snack and a short break.
4. With your signed permission, a school visit will be made in about 6 months to observe your child on the playground and to ask your child's teacher to complete a behavioral checklist.

In exchange for participation, you will receive:

1. A cash payment of \$75.00 for each eligible parent. If you decide to discontinue the assessment at any point, you will certainly be free to leave. Your payment will be prorated at \$25.00/hour.
2. If you choose, you may return to the University for feedback regarding the family assessment. The test results will be discussed, you will have a chance to watch your videotape, and a summary of the school visit will be provided. Transportation and babysitting will be provided.
3. A written summary and telephone number for agencies providing support for families in Wake County.
4. An assessment of eligibility for participation in the Parent-Child Problem-Solving treatment group. It is not, however, necessary to complete the assessment in order to be considered for enrollment in the treatment group.

Additional Information:

The assessment will take approximately 3 and 1/2 hours of your time.

In order to protect your confidentiality, all paperwork will be coded with a special number rather than your name. Records will be maintained in a locked room. A Certificate of Confidentiality has been issued from the U.S. Department of Health and Human Services. This certificate protects you from involuntary disclosure of your participation in the project.

Although most families report that this assessment is not stressful, you and/or your child(ren) might find some aspects of the assessment make you uncomfortable. Please inform the researcher if you experience any negative feelings as a result of your participation.

We must let you know that if we have suspicions that your child has sustained unreported abuse or neglect, we will abide by our legal responsibility to report the suspicions to DSS.

Participation is voluntary, and you can withdraw from the program at any time, even after you begin the assessment. In addition, you are free to refuse to respond to any portion of the assessment. Do you have any questions?

I have read this statement, understand its contents, and agree to participate of my own free will and choice.

Parent's Name

Date

Signature

EYBERG CHILD BEHAVIOR INVENTORY

Rater's name: _____ Child's name: _____
 Relationship to child: _____ Child's age: _____
 Date of rating: _____ Birthdate: _____

Directions: Below is a series of phrases that describe children's behavior. Please (1) circle the number describing how often the behavior currently occurs with your child, and (2) circle either "yes" or "no" to indicate whether the behavior is currently a problem.

	How often does this occur with your child?							Is this a problem for you?	
	Never	Seldom	Sometimes	Often	Always	Yes	No		
1. Dawdles in getting dressed	1	2	3	4	5	6	7	Yes	No
2. Dawdles or lingers at mealtime	1	2	3	4	5	6	7	Yes	No
3. Has poor table manners	1	2	3	4	5	6	7	Yes	No
4. Refuses to eat food presented	1	2	3	4	5	6	7	Yes	No
5. Refuses to do chores when asked	1	2	3	4	5	6	7	Yes	No
6. Slow in getting ready for bed	1	2	3	4	5	6	7	Yes	No
7. Refuses to go to bed on time	1	2	3	4	5	6	7	Yes	No
8. Does not obey house rules on his own	1	2	3	4	5	6	7	Yes	No
9. Refuses to obey until threatened with punishment	1	2	3	4	5	6	7	Yes	No
10. Acts defiant when told to do something	1	2	3	4	5	6	7	Yes	No
11. Argues with parents about rules	1	2	3	4	5	6	7	Yes	No
12. Gets angry when doesn't get his own way	1	2	3	4	5	6	7	Yes	No
13. Has temper tantrums	1	2	3	4	5	6	7	Yes	No
14. Sasses adults	1	2	3	4	5	6	7	Yes	No
15. Whines	1	2	3	4	5	6	7	Yes	No
16. Cries easily	1	2	3	4	5	6	7	Yes	No
17. Yells or screams	1	2	3	4	5	6	7	Yes	No
18. Hits parents	1	2	3	4	5	6	7	Yes	No
19. Destroys toys and other objects	1	2	3	4	5	6	7	Yes	No
20. Is careless with toys and other objects	1	2	3	4	5	6	7	Yes	No

	How often does this occur with your child?							Is this a problem for you?	
	Never	Seldom	Sometimes	Often	Always	Yes	No	Yes	No
21. Steals	1	2	3	4	5	6	7	Yes	No
22. Lies	1	2	3	4	5	6	7	Yes	No
23. Teases or provokes other children	1	2	3	4	5	6	7	Yes	No
24. Verbally fights with friends his own age	1	2	3	4	5	6	7	Yes	No
25. Verbally fights with sisters and brothers	1	2	3	4	5	6	7	Yes	No
26. Physically fights with friends	1	2	3	4	5	6	7	Yes	No
27. Physically fights with sisters and brothers	1	2	3	4	5	6	7	Yes	No
28. Constantly seeks attention	1	2	3	4	5	6	7	Yes	No
29. Interrupts	1	2	3	4	5	6	7	Yes	No
30. Is easily distracted	1	2	3	4	5	6	7	Yes	No
31. Has short attention span	1	2	3	4	5	6	7	Yes	No
32. Fails to finish tasks or projects	1	2	3	4	5	6	7	Yes	No
33. Has difficulty entertaining himself alone	1	2	3	4	5	6	7	Yes	No
34. Has difficulty concentrating on one thing	1	2	3	4	5	6	7	Yes	No
35. Is overactive or restless	1	2	3	4	5	6	7	Yes	No
36. Wets the bed	1	2	3	4	5	6	7	Yes	No

Appendix C

Social Behavior Scale

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

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

1 = Never true 2=Rarely true 3=Sometimes true 4=Often true 5=Almost always true

- | | | | | | |
|--|---|---|---|---|---|
| 1. This child is good at sharing and taking turns. | 1 | 2 | 3 | 4 | 5 |
| 2. This child tells a peer that s/he won't play with that peer or be that peer's friend unless s/he does what this child asks. | 1 | 2 | 3 | 4 | 5 |
| 3. This child is a solitary child. | 1 | 2 | 3 | 4 | 5 |
| 4. This child hurts other children by pinching them. | 1 | 2 | 3 | 4 | 5 |
| 5. This child tries to get others to dislike certain peers by telling lies about the peers to others. | 1 | 2 | 3 | 4 | 5 |
| 6. This child likes to play alone. | 1 | 2 | 3 | 4 | 5 |
| 7. This child is ignored by peers. | 1 | 2 | 3 | 4 | 5 |
| 8. This child verbally threatens to hit or beat up other children. | 1 | 2 | 3 | 4 | 5 |
| 9. This child ruins other peer's things when s/he is upset. | 1 | 2 | 3 | 4 | 5 |
| 10. Peers say mean things to this child at school. | 1 | 2 | 3 | 4 | 5 |
| 11. This child pushes or shoves other children. | 1 | 2 | 3 | 4 | 5 |
| 12. This child prefers to play alone. | 1 | 2 | 3 | 4 | 5 |
| 13. This child verbally threatens to physically harm a peer in order to get what they want. | 1 | 2 | 3 | 4 | 5 |
| 14. This child tells others not to play with or be a peer's friend. | 1 | 2 | 3 | 4 | 5 |
| 15. This child is helpful to peers. | 1 | 2 | 3 | 4 | 5 |
| 16. This child is not chosen as a playmate. | 1 | 2 | 3 | 4 | 5 |
| 17. When mad at a peer, this child keeps that peer from being in the play group. | 1 | 2 | 3 | 4 | 5 |
| 18. Peers avoid this child. | 1 | 2 | 3 | 4 | 5 |

Cont. on back

19. This child tries to cheer up peers when they are sad or upset about something.	1	2	3	4	5
20. This child tries to dominate or bully peers.	1	2	3	4	5
21. This child doesn't have much fun.	1	2	3	4	5
22. This child is ridiculed or picked on by peers.	1	2	3	4	5
23. This child doesn't smile much.	1	2	3	4	5
24. Peers refuse to let this child play.	1	2	3	4	5
25. This child keeps peers at a distance.	1	2	3	4	5
26. This child kicks or hits others.	1	2	3	4	5
27. This child avoids peers.	1	2	3	4	5
28. This child is kind to peers.	1	2	3	4	5
29. This child tries to get others to dislike a peer.	1	2	3	4	5
30. This child is not liked much.	1	2	3	4	5
31. This child is excluded from peers' activities.	1	2	3	4	5
32. Peers say bad things about this child to other kids at school.	1	2	3	4	5
33. This child withdraws from peer activities.	1	2	3	4	5
34. This child tells a peer that they won't be invited to their birthday party unless s/he does what the child wants.	1	2	3	4	5
35. This child gets hit or bullied at school.	1	2	3	4	5
36. This child looks sad.	1	2	3	4	5
37. This child verbally threatens to keep a peer out of the play group if the peer doesn't do what the child asks.	1	2	3	4	5
38. This child says or does nice things for other kids.	1	2	3	4	5
39. Please rate this child's overall academic performance this year.	A	B	C	D	F

						SUM	MEAN
PRO	1: ____	15: ____	19: ____	28: ____	38: ____	____/5	____
RA	2: ____	5: ____	14: ____	17: ____	29: ____	____/7	____
OVT	4: ____	8: ____	9: ____	11: ____	13: ____	____/7	____
ASC	3: ____	6: ____	12: ____	25: ____	27: ____	____/6	____
EXL	7: ____	16: ____	18: ____	22: ____	24: ____	____/7	____
DP	21: ____	23: ____	36: ____			____/3	____
VIT	10: ____	32: ____	35: ____			____/3	____

PLAYGROUND OBSERVATIONS OF SOCIAL INTERACTIONS

This observational approach involves interval coding. One coder will be the primary coder and a second coder will conduct observations for 25% of observation sessions to collect reliability data.

This observation system is called a focal child system. One child, called the “target”, is observed continuously during two observation sessions. The first observation session will be 30 minutes and the second will be 20 minutes in length. Each session will be separated by at least one week but not more than two weeks.

INTERVAL CODING SYSTEM

Within each 15-second interval the Coder will record whether the behavior occurred at any time (not each time) during the interval. Thus, in each 15-second interval there will be a maximum of one notation per behavior. The attached data form shows 4 columns, one for each of the four behaviors to be recorded. The Coder will observe the target and peers for 10 seconds and will then have 5 seconds in which to record the behaviors that occurred in the interval. Occurrence will be indicated by a check () in the box corresponding to the behavior(s) observed. In any given interval, it is possible that the target will engage in all four behaviors, only a few, or none of the behaviors.

To the left of the columns are numbers for each set of four rows. Large numbers represent one minute of data and each individual row represents one 15-second interval. An audiotaped recording of the interval numbers will cue the observer to change intervals. The Coder will observe the child’s behavior immediately after the tape says “One point one: Observe” and will record behavior for that interval as soon as the tape says “One point one: Record”. Then the Coder will observe the child for the next 10 seconds when the tape says “One point two: Observe” and will record behavior for that interval when the tape says “One point two: Record” etc.... Each data sheet contains enough intervals for 30 minutes worth of data recording.

When the tape says “Record”, the Coder should look down to the data sheet, record the behaviors that occurred, and continue to look down until the tape says “Observe”. If no behaviors occurred in the interval, the Coder should lightly cross out the number of the interval in order to keep the place on the data sheet.

To allow the children to “warm up”, recording will begin after approximately two minutes of playtime have passed. Recording should continue for 30 (or 20) consecutive minutes. If the child leaves the observation area, stop the audiotape and begin again

Behavior to be coded includes the following four social behaviors:

1. Engagement (ENG)

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

- offer to help or request for help, sharing, providing information or recognition
- a general comment or compliment
- invitation to play or response to invitation
- playing chase or racing with another child or group of children
- swinging or playing on monkey bars, with conversation or eye contact
- digging a hole in the dirt with others (but only if they are working on the same hole, not if target is digging a hole beside others but not joining in via eye contact or conversation)
- being involved in a game of duck-duck-goose
- laughing with another child
- jumping rope or cheerleading or dancing with others
- smiling at others or making eye contact with others

2. Negative (NEG)

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

- teasing ("your underwear is showing", "ha ha you dropped it")
- name calling
- reprimands ("you shouldn't do that")
- commands ("come here now")
- tattling (even if legitimate complaint)
- threatening ("I'm gonna hit you")
- profanity (@*!)
- saying mean things ("his pants are so ugly")
- instances of relational aggression ("you can't play with us")
- sticking tongue out, displaying a threatening gesture
- taunting or challenging gestures, growling
- attempts to hit or pretending to hit, but missing the child

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

Examples of RP include:

- pulling a child's clothes
- rough tumbling down a hill together
- holding a peer tightly
- tapping firmly on another child to get attention
- elbowing or shouldering
- physical contact while playing touch football or other game

2. Aggression (AGGR)

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

Examples include:

- Hit, slap, scratch, pull hair, bite, kick, pinch, butt with head, head lock, twist arm/leg, push, pull, throw object at another person (looking at and/or orienting toward the child), pulling to the ground.
- Destroying property
- Taking (or attempting to take) a toy that someone else is clearly playing with. Taking a toy is recorded when the object is in the hands of another child or if it is a piece of a game being actively played with (e.g., a ball).
- Taking articles of clothing such as shoes.

PROCEDURES FOR OBSERVING

Prior to School Visit:

1. Get information folder for observing from room 612. Your data collection information sheet will include:
 - (a) the name and phone number of the school, principal and teacher
 - (b) name and subject # of child to observe
 - (c) names of staff who should be present
2. Call school to confirm child's attendance.
3. Gather materials - Check tote bag to be sure it contains:
 - (a) Sufficient data sheets.
 - (b) Clipboard and pencils.
 - (c) Two tape players, two interval tapes - Always have two in case one fails to operate properly. Back up batteries.
 - (d) Your name tag.

Appendix E

ID# _____ Date: _____ Interviewer: _____
Scorer: _____

CHILD ATTRIBUTIONS QUESTIONNAIRE (CAQ)

A. Pretend that you are standing on the playground playing catch with a kid named Todd/Jessi. You throw the ball to Todd/Jessica and he/she catches it. You turn around, and the next thing you realize Todd/Jessica has thrown the ball and hit you in the middle of your back. The ball hits you hard, and it hurts a lot.

1. Why do you think Todd/Jessica hit you in the back?

1 Nonhostile 2 Hostile 3 Don't know

2. What would you do about Todd/Jessica after he/she hit you?

B. Pretend you see some kids playing on the playground. You would really like to play with them, so you go over and ask one of them, a kid named Alan/Leah, if you can play. Alan/Leah says no.

3. Why do you think Alan/Leah said no?

1 Nonhostile 2 Hostile 3 Don't know

4. What would you do about Alan/Leah after he/she said no?

C. Pretend you are walking to school and you're wearing brand new sneakers. You really like your new sneakers and this is the first day you have worn them. Suddenly, you are bumped from behind by a kid named John/Lisa. You stumble into a mud puddle and your sneakers get muddy.

5. Why do you think John/Lisa bumped you?

1 Nonhostile 2 Hostile 3 Don't know

6. What would you do about John/Lisa after he/she bumped you?

D. Pretend you are a new kid in school and you would really like to make friends. At lunch time, you see some kids you would like to sit with and you go over to their table. You ask if you can sit with them and a kid named Carl/Carolyn says no.

7. Why do you think Carl/Carolyn said no?

1 Nonhostile

2 Hostile

3 Don't know

8. What would you do about Carl/Carolyn after he/she said no?

E. Pretend you go to the first meeting of a club you want to join. You would like to make friends with the other kids in the club. You walk up to some of the other kids and say "Hi!", but they don't say anything back.

9. Why do you think the other kids didn't answer you?

1 Nonhostile

2 Hostile

3 Don't know

10. What would you do about the other kids after they didn't answer you?

F. Pretend you are walking down the hallway in school. You're carrying your books in your arm and talking to a friend. Suddenly, a kid named Brett/Devon bumps you from behind. You stumble and fall and your books go flying across the floor. The other kids in the hall start laughing.

11. Why do you think Brett/Devon bumped into you?

1 Nonhostile

2 Hostile

3 Don't know

Interviewer _____ ID _____

12. What would you do about Brett/Devon after he/she bumped into you?

G. Pretend it is your first day at school. You don't know a lot of the other kids and you would like to make friends with them. You see some kids playing a rope game so you walk up and say "Hi!" but no one answers you.

13. Why do you think the other kids didn't answer you?

1 Nonhostile

2 Hostile

3 Don't know

14. What would you do about the other kids after they didn't answer you?

H. Pretend you and your class went on a field trip to the zoo. You stop to buy a coke. Suddenly, a kid named Al/Robin bumps your arm and spills your coke all over your shirt. The coke is cold, and your shirt is all wet.

15. Why do you think Al/Robinn bumped into you?

1 Nonhostile

2 Hostile

3 Don't know

16. What would you do about Al/Robin after he/she bumped into you?

CHILD PROBLEM SOLVING MEASURE - ADMINISTRATION

Materials: Set of bound pictures, Fresh copy of protocol
Audiotape player, Audiotape

Startup: Record the child's ID number, date, and your name on the audiotape;
check to make sure the tape player is operating correctly.

“O.K. you're doing a great job! Now I'm going to tell you some stories. I want you to tell me ALL the different things you could do or say if you were in the stories.”

Administration:

1. Read the first story (point to the pictures of the children as you read it).
2. Ask the question **“What could you say or do so that you could play on the swing?”**

If the child doesn't respond, says “I don't know”, or begins to “chat”:

- 1) repeat the question, if they still do not respond:
- 2) describe the picture again and explain that you want him or her to tell you all the different things he or she could say or do to get a turn on the swing.

3. Record the answer on the protocol. Record either the category or the response verbatim.

4. After each of the child's responses, use a prompt from the options listed below:

- a. **What else could you do or say to**
- b. **What else could you do?**
- c. **What else could you say?**
- d. **You could(list their responses) What is something different you could do or say?**
- e. **If child repeats the same category “..... and are really the same kind of thing, what is something different you could do or say?”**
- f. **Can you think of anything else you could do or say?**

When to move on to the next story:

1. The child has generated 6 different responses.
2. The child cannot state any new solutions after 3 consecutive prompts.

For Repeats:

- If the child repeats verbatim or similar response (grab it; take it) he or she gave earlier from the same story, do not write it down. Record a “R” to the left beside the original response each time it is repeated. Prompt the child as described above.

Vague Responses:

- You will also need to query responses that are vague, such as “I’d be nice,” or “I’d be mad.” Ask the child “**What would you do or say if you were being nice/mad?**”

Irrelevant Responses:

- Do not record or code irrelevant responses. Re-orient child to the task by repeating the scenario. If child continues to provide irrelevant responses, seek the Team Leader.

ID#: _____ Date: _____ Interviewer: _____
Reliability: _____

CHILD PROBLEM SOLVING MEASURE

1. Pretend this is YOU and this is ANITA/JAMES. ANITA/JAMES is the same age as you, _____ years old. ANITA/JAMES has been on the swing for a long, long time and doesn't want to share the swing with you. YOU would really like to play on the swing. What could you say or do so that YOU could play on the swing?

- _____ 1. _____
- _____ 2. _____
- _____ 3. _____
- _____ 4. _____
- _____ 5. _____
- _____ 6. _____

2. Pretend this is YOU and this is VIOLET/JEROME. Lets' also pretend that this is Your FIRST day at school. YOU and VIOLET/JEROME are in the same class and YOU would like to be friends with VIOLET/JEROME, but VIOLET/JEROME doesn't say anything to you. What could YOU say or do so that YOU could get to be friends with VIOLET/JEROME?

- _____ 1. _____
- _____ 2. _____
- _____ 3. _____
- _____ 4. _____
- _____ 5. _____
- _____ 6. _____

3. Pretend that this is YOU and this is ERIKA/SEAN. You just got a good spot near the front of the line to go outside and ERIKA/SEAN pushes you out of line and takes your place. What could YOU say or do so that YOU could get your place in line back?

- _____ 1. _____
- _____ 2. _____
- _____ 3. _____
- _____ 4. _____
- _____ 5. _____
- _____ 6. _____

4. Pretend that this is YOU and this is FAITH/DARRYL. FAITH/DARRYL and some other kids are playing on the jungle gym at school. YOU would like to play with FAITH/DARRYL and other kids, but they haven't asked you. What could YOU say or do to get to play with FAITH/DARRYL and the other kids?

_____	1.	_____	---	---	---
_____	2.	_____	---	---	---
_____	3.	_____	---	---	---
_____	4.	_____	---	---	---
_____	5.	_____	---	---	---
_____	6.	_____	---	---	---

5. Pretend that this is YOU and this is SASHA/TREVOR. You and SASHA/TREVOR are playing a game and you realize that SASHA/TREVOR has taken your turn. What could YOU say or do so that YOU could get your turn?

_____	1.	_____	---	---	---
_____	2.	_____	---	---	---
_____	3.	_____	---	---	---
_____	4.	_____	---	---	---
_____	5.	_____	---	---	---
_____	6.	_____	---	---	---

6. Pretend that this is you and that this is GLORIA/DWAYNE. GLORIA/DWAYNE and some other kids are playing tag. YOU would really like to play with GLORIA/DWAYNE and the other kids, but they haven't asked you. What could YOU say or do to get to play with GLORIA/DWAYNE and the other kids?

_____	1.	_____	---	---	---
_____	2.	_____	---	---	---
_____	3.	_____	---	---	---
_____	4.	_____	---	---	---
_____	5.	_____	---	---	---
_____	6.	_____	---	---	---

7. Pretend that this is YOU and this is DANIELLE/DARIUS. YOU and DANIELLE/DARIUS are both on the playground and DANIELLE/DARIUS starts calling you names and making fun of you. What could YOU say or do to get DANIELLE/DARIUS to stop teasing you?

_____	1.	_____	---	---	---
_____	2.	_____	---	---	---
_____	3.	_____	---	---	---
_____	4.	_____	---	---	---
_____	5.	_____	---	---	---
_____	6.	_____	---	---	---

8. Pretend that this is you and this is BELINDA/KEITH. BELINDA/KEITH and some other kids are choosing up sides for kickball. YOU would really like to play with BELINDA/KEITH and the other kids, but they haven't asked you. What could YOU say or do to get to play kickball?

- _____ 1. _____
- _____ 2. _____
- _____ 3. _____
- _____ 4. _____
- _____ 5. _____
- _____ 6. _____