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ABSTRACT

This study examined the relationship between the stress factors affecting low-income African-American mothers' child rearing practices and their children's prosocial behavior and peer status. Thirty at-risk preschool children and their single mothers participated in the study. The Home Observation for the Measurement of the Environment for Families of Preschool Children (HOME) measure was used to examine child rearing practices, while the Parental Stress Index was used to assess the mothers' stress toward their children. Children's prosocial behavior in the classroom was observed using a scan sampling technique, and their peer status was evaluated using a picture sociometric nomination scale rating. The results indicated that there was a significant relationship between child rearing practices, such as warmth and acceptance, and children's prosocial behavior and peer status. Mothers' stressors, specifically economic and single-parent factors, were found to have a negative effect on children's prosocial behavior and peer status. (Nine appendices include copies of the HOME evaluation sheet and scores, PSI evaluation form and scores, peer behavior data, and picture sociometric nomination raw scores. Contains 40 references.) (MDM)

SINGLE, AFRICAN-AMERICAN, LOW INCOME MOTHERS' CHILD-REARING PRACTICES AND STRESSORS AND THEIR RELATIONSHIP TO CHILDREN'S PROSOCIAL BEHAVIOR AND PEER STATUS

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ABSTRACT

The purpose of this investigation was to study the relationship between single, African-American, low income mothers' child-rearing practices, mothers' stressors, and the children's prosocial behavior and peer status. The sample consisted of 30 low socioeconomic, African-American preschool children and their mothers. The Home Observation for the Measurement of the Environment for Families of Preschool Children (Caldwell and Bradley, 1984) was used to examine child-rearing practices. The Parental Stress Index /Short Form (Abidin, 1990) was used to assess parent stress toward their child. Children's prosocial behavior in the classroom was observed by using a scan sampling method (Bhavnagri, 1987). Children's peer status was assessed using a picture sociometric nomination rating scale (Asher, Tinsley, Singleton and Hymel, 1979). This investigation established that there is a significant relationship between child-rearing practices, such as warmth and acceptance, and children's prosocial behavior ($p<.01$) and peer status ($p<01$). Mothers' stressors were also found to be significantly correlated with the children's prosocial behavior ($p<.01$) and peer status $p<.01$). It was of particular interest that the HOME (Home Observation for the Measurement of the Environment for Families of Preschool Children), which was primarily designed to assess the quality of stimulation in the home, was the strongest predictor of children's prosocial behavior and peer status in preschool.

REVIEW OF LITERATURE

Introduction

The preschool years represent a critical period in social development when children begin to expand their social world outside the home to include peers. Poor peer relationships in childhood are predictive of serious adjustment problems later in life such as being at risk for dropping out of school, criminality, and developing adult psychopathology (Parker & Asher, 1987; Asher, Renshaw & Hymel, 1992).

Parents play a major role in contributing to the social development of their children. Research has shown that there is a significant relationship between parent's child-rearing practices and the prosocial behavior and peer status of their children (Bhavnagri & Parke, 1985; Maccoby & Martin, 1983; Maccoby, 1980; Putallaz, 1987; Parke, R.D., Carson, J.L., Burks, V.M. & Bhavnagri, N., 1989). Increasing our knowledge of how parents impact the prosocial behavior and peer status of their children can be instrumental in helping with early identification of potential problems and developing appropriate interventions especially of "at risk" families. There is an accumulating body of research on the parent-child rearing practices and peer relations of white middle-class families (Putallaz, 1987; DeKovic & Janssens, 1992; Hart, DeWolf, Wozniak & Burts, 1992; Hart, DeWolf, & Burts, 1992).

However, there is no data that focuses specifically on the relationship between the child-rearing practices of low socioeconomic, female-headed, African-American families and the peer relations of their preschool children (Baumrind, 1972; Hart, DeWolf, & Burts, 1992).

Of the children growing up in the United States today, about one out of five live in a home that is below the Federally defined poverty line. Of black children in female-headed households, about half live in poverty (Patterson, Griesler, Vaden & Kupersmidt, 1992). Changes in family structure over the past generation are strongly correlated to the rising rate of poverty among children (Ber nett, 1993). For all children under the age of six who live only with their mother, 66% live in poverty and experience long term dependence on government welfare assistance. According to the U.S. Bureau of the Census (1991), 55% of children in Detroit live in single parent homes without a father. The economic consequences of the fathers' absence are often accompanied by psychological consequences as well. According to Olson and Banyard (1993), irrespective of income levels, single mothers experience higher levels of stress than mothers with partners. Additionally, impoverished mothers of young children face multiple stresses in their daily lives and possess fewer resources for support to cope effectively with their situations.

The purpose of this study will be to investigate the differences among African-American families under economic stress, and the connection between their child-rearing practices and their children's prosocial behavior and peer status. A review of literature will next

examine the linkages between parent-child rearing practices, children's prosocial behavior and children's peer status. The review of literature will be divided into two sections. The first section will discuss parent-child rearing practices as they influence children's prosocial behavior and children's peer status. The second section will discuss the impact of low socioeconomic status and single parenthood as stressors which influence parent child-rearing practices, children's prosocial behavior, and children's peer status.

Parent Child-Rearing Practices

Parent child-rearing practices represent an important aspect of the home environment which indirectly influence children's competence and success in peer relations at an early age. "Indirect" influences are defined as those pathways which include family processes that impinge on the child, but have little or no bearing on the child's access, interactions, or relationships with peers (Parke, MacDonald, Beitel, & Bhavnagri, 1988; Bhavnagri & Parke, 1990; Ladd, Profilet, & Hart; 1992). The primary goal of the parent is to build or develop their own relationship with their child which indirectly effects the child's relationship with their peers. Baumrind (1967, 1971, 1973, 1977) reported that authoritarian child-rearing practices (i.e., rigid enforcement of rules without explanation, harsh punitive discipline, low in warmth and acceptance) resulted in children who were conflicted, unhappy, aggressive, low in self esteem, and often rejected by peers. In contrast, authoritative child-

rearing practices (i.e., firm enforcement of rules with explanation, joint decision making, high in warmth and acceptance) led to positive social, emotional, and cognitive development that is associated with children who are high in self esteem, social competence, and popularity with peers. Children of permissive parents (i.e., rules explained but not enforced, little control or discipline, few demands) were found to be impulsive, aggressive, and unpopular with peers. Baumrind's findings (1977) showed that too much or too little control may interfere with the child's pattern of social interaction, suggesting that of the three parenting styles, authoritative parents are most successful in producing children who are socially competent and responsible.

Maccoby & Martin (1983) identified neglectful as a fourth parenting style. These parents, who are often psychologically depressed due to social change or stressful life events, are emotionally uninvolved and indifferent to their children, low on warmth and acceptance, and focused on their own needs instead of their child's. Children of neglectful parents were found to be impulsive, moody, aggressive, and low achievers.

Maccoby & Martin (1983) extended the studies of Baumrind by classifying warmth and control as two important dimensions in parent child-rearing styles which are related to children's prosocial behavior and peer status. According to Maccoby and Martin (1983), the degree of warmth and control demonstrated in each parenting style significantly impacts the prosocial behavior of the child with peers. Parents who are low on warmth and high on control (authoritarian) are likely to have

children who are aggressive, withdrawn, low in self-esteem, and unpopular with peers. Parents who are high in both warmth and control (authoritative) have children who are generally cooperative, high in self-esteem, self controlled, and popular with peers. Parents who are high on warmth but low on control (permissive) have children who are impulsive, aggressive, dependent, and socially immature toward peers. Finally, those parents who are low on both warmth and control (neglectful) have children who are aggressive, low in self-esteem, lacking in self control, and unpopular with peers. Maccoby and Martin's (1983) findings showed that higher warmth and more consistent control combined with any of the four parenting styles resulted in children who exhibited more prosocial behavior and were more popular with peers.

Putallaz (1987) found that mothers who were less accepting and used more power assertive discipline had children who were unpopular with peers, $r=.33$, $p<.05$. A study by DeKovic & Janssens (1992) showed that authoritative parenting practices as observed in structured tasks, were predictive of positive social behavior, as assessed by teachers and peers, and popularity with peers, as assessed by sociometric nomination. In contrast, authoritarian parenting practices were predictive of negative social behavior and rejection by peers. The findings of Putallaz (1987) and DeKovic & Janssens (1992) were significant in that they indicated that parent child-rearing styles are independently related to prosocial behavior and sociometric status. Hart, Ladd, & Burleson (1990) confirmed the findings of previous studies which showed that elementary

school children of power assertive mothers, who were interviewed about their child-rearing styles, proved to be less popular with peers. Additionally, this study showed that the children of power assertive mothers expected successful outcomes when using aggressive methods for resolving conflicts with peers. Maternal disciplinary styles proved to make separate and independent contributions to children's outcome expectations and peer status. The results of a study by Hart, DeWolf, Wozniak, & Burts (1992) indicated that parents who used more inductive disciplinary practices, as stated in their self reports, had children who were observed having less disruptive behavior with their preschool peers. They were more preferred by their peers in picture sociometric nomination than were the children of more assertive mothers. An extension of this study by Hart, DeWolf, & Burts (1992) found that children who expected to get their way through unfriendly, aggressive means were more likely to have power assertive mothers. These findings are limited by the samples which consisted of white middle to upper class, intact families. Taken together, these studies show that there is a significant relationship between parent child-rearing practices, the child's prosocial behavior and the child's peer relations for both preschool and elementary aged children. Additional research is necessary to further investigate these relationships with disadvantaged preschool children whose parents are stressed by economic hardship and single parenthood.

Social class and child rearing

Researchers have also studied the dimensions of warmth and control in child-rearing practices and it's relation to social class (Baumrind, 1972; Hoffman,1960,1975; Portes, Dunham, & Williams, 1986; Kelly, Sanchez-Hucles, & Walker, 1993). Hoffman (1960,1975) studied the social class differences in the child-rearing practices of working and middle class parents of preschool children. Working class families were found to use more power assertive discipline than middle class families and exhibited less warmth and concern for their child's needs suggesting that parenting styles are related to socio-economic class. Hoffman reported that the power assertive disciplinary techniques used by the working class families were positively related to their children's hostile and aggressive behavior toward peers at school, $r=.60$, $p<.01$. Power assertive parents produced models of aggression which led to anti-social peer behavior in their children. In a follow up of a longitudinal early intervention study of low and middle SES black and white mothers and their preschool children, Portes, Dunham, & Williams (1986), explored the influences of socio-economic class and race on the mother's disciplinary styles. The child-rearing dimensions of warmth, acceptance, control, and physical punishment were examined during interviews with the mothers in the home. The findings of this study indicated that, regardless of socio-economic status, the white mothers were consistently less strict in disciplining their children than the black mothers, $r=.29$, $p<.01$. In contrast, the black mothers emphasized obedience and were more likely

to use physical punishment to control their children. Additionally, the findings showed that low socio-economic status was associated with a diminished expression of warmth and affection toward the child. In a black-white comparison study of patterns of parent 's child- rearing styles and their effects on the social competence and behavior of their preschool children, Baumrind (1972) found that the child-rearing practices of the lower SES black families, who had high expectations for conformity to rules were authoritarian. These parents were more concerned with the immediate consequences of their child's behavior rather than the motives underlying that behavior. Additionally, the black families were found to be less warm and somewhat rejecting toward their children. The children of the black families were found to be more aggressive and domineering with peers at school than the children of the white families whose parents practiced authoritative child-rearing styles. In a more recent study, Kelly, Sanchez-Hucles, & Walker (1993) interviewed working to middle-class African-American mothers to determine how their child-rearing styles differed from that of lower class African-American mothers previously studied by Kamii & Radin(1967) who were found to have authoritarian child-rearing styles. The results of this study showed that the middle-class African-American mothers employed more authoritative child-rearing techniques, promoting obedience through internal controls. These mothers were more responsive to and interactive with their children. Higher levels of formal education, more exposure to a variety of child-rearing philosophies, lower levels of stress, and older maternal age were

among the determining factors which attributed to the differences in child-rearing styles. These studies have established a relationship between social class and child-rearing practices. These findings are extended in this investigation by linking the child-rearing practices of a specific social class (i.e. lower socio-economic status) to children's prosocial behavior and peer status..

Home environment and child rearing

Favorable development has been associated with a home environment which furnishes the child with a predictable and organized routine, safe physical surroundings, appropriate toys to play with, and adults who provide warmth, acceptance, and stimulation (Parke, 1978; Caldwell & Bradley, 1984; Hetherington & Parke, 1993). Existing research has documented the relationship between cognitive development and the home environment. In a study using an interview-based home environment inventory, Wohlwill & Heft (1977) measured the effects of noise and activity level in the home on the child's cognitive functioning. The findings of their study showed that children who lived in noisy, disorganized homes with high levels of background stimulation were slower to learn and perform cognitive tasks. Bradley and Caldwell (1981) examined the relationship between the home environments of 60 low income black preschool children, as measured by HOME, and their academic achievement, as measured by Stanford-Binet Intelligence Scale. The results of this study showed a significant relationship between

the home environment and academic performance. The pattern of correlation between the HOME subscales and achievement indicated that the HOME subscales Warmth and Affection, r=.39, p<.01, and Toys, Games, and Materials, r=.44, p<.01, had the strongest independent relation to academic performance among black children. In an extensive longitudinal study involving 238 lower to middle class families and their preschool children, Caldwell and Bradley (1984) studied the relationship between the home environments, as measured by HOME, and the children's cognitive development, as measured by IQ scores. Caldwell and Bradley reported that cognitive development was significantly correlated to specific HOME subscales to include 1)Variety of Stimulation, r=>51, p<.01, 2)Toys, Games, and Materials, r=.65, p<.01, 3)Physical Environment, r=.44, p<.01, 4)Warmth and Affection, r=.43, p<.01, 5)Physical Punishment, r=.55, p<.01, and 6)Language Stimulation, r=.48, p<.01. Low income mothers exhibited less advanced language usage then the middle class mothers and were also found to show less warmth when teaching cognitive tasks to their child. The relationship between socioeconomic factors and HOME were also correlated showing a significant relationship between the above HOME subscales and maternal age, education, and low income.

While these studies have established a relationship between the home environment and cognitive development, there has been no research conducted, to date, to explore the relationship between the home environment and children's prosocial behavior and peer status in

preschool using the HOME, scan sampling, and sociometric nomination (Robert Bradley, Personal Communication, November 10, 1993).

Parental Stress

The focus of this section will be to examine how parental stress resulting from economic hardship and single parenthood, impact parent-child interactions, children's prosocial behavior, and children's peer status.

In a longitudinal study of 933 elementary school children, aged 8 to 10 years, living at or below the poverty line, Patterson, Griesler, Vaden, & Kupersmidt (1992) examined the relationship between economic hardship and children's difficulties with peers using teacher interviews to gather family background information and sociometric nomination to assess peer status. The results of this study found that children who were described by their teachers as coming from a home environment characterized by continuing family adversity (i.e., economic hardship, single parenthood, and lack of educational stimulation in the home) and stressful life events (i.e., death and/or illness of a family member, divorce, transfer to different school) were rejected by peers more often and exhibited diminished social skills in the classroom. Among the stressors examined in this study, the conditions of economic hardship and single parenthood were found to be the most consistent predictors for risk of poor peer relationships at school. Thus, this study links chronic stress associated with low family income and single parenthood to the social behavior and peer status of

economically disadvantaged children at school suggesting further research to explore the effects of economic hardship and single parenthood on the peer relations of preschool aged children.

The impact of economic hardship is most profound on black female-headed families who experience a disproportionate share of the burden of poverty (McLoyd, 1989,1990). These mothers experience even higher levels of stress as a result of having to cope with serious financial strain, limited freedom, social isolation, inadequate housing, compromised health and safety, and raising children alone without a support system. The responsibilities associated with single parenting can produce feelings of unhappiness, helplessness, frustration, overload, and an inability to cope. The stress of single parenting is intensified when the mother is poor, making her more vulnerable to alcoholism, drug abuse, often resulting in a chronic state of depression which compromises her ability to experience pleasure from her child and to cope with the demands of parenting (McLoyd, 1990). Increased levels of stress and anxiety experienced by economically deprived mothers results in more punitive and inconsistent behavior toward their children. Research has documented evidence that low-income parents are more likely to employ power assertive disciplinary techniques and are generally less warm and supportive of their children (Portes, Dunham, & Williams, 1986; Kamii & Radin, 1967; Baumrind, 1972).

In a longitudinal study, Zahn-Waxler, Denham, Iannotti, & Cummings (1992) observed the behavior of preschool children of depressed mothers

during peer interaction and its' relationship to the observed child-rearing practices of their mothers during parent-child interaction. Their findings indicated that the child-rearing practices of the depressed mothers were related to more aggressive, impulsive, and problematic behavior in their children toward peers. They reported that preschool children were particularly vulnerable to chronic exposure to depressed mothers who may create a chronic climate of distress in the home environment. The patterns of behavior of the depressed mother during the parent-child interactions involved coercive, inconsistent discipline and control practices as well as a lack of responsiveness and diminished positive affect and warmth toward the child. The mothers were more likely to use power assertive discipline without explanation. They were also found to be less nurturing, lacking the in patience required to negotiate with their child, and used inappropriate methods of monitoring and supervising their children's peer interactions to encourage prosocial behavior.

In summary, parental stressors may be heightened or diminished by the social support systems available to the parent, the parent's sense of attachment to the role of parent, and the parent's sense of competence in the role of parent. Parental stress during the first five years of the child's life is especially critical in relation the child's social-emotional development and to the parent-child relationship (Abidin, 1990). Taken together, findings from these studies showed that the consequences of parental stress compounded by economic hardship, single parenthood, and resulting depression, diminish the parents' capacity for supportive,

warm, consistent, and involved parenting which clearly impacts the parent-child relationship, children's social behavior, and children's peer status. This study will extend these findings by linking parental stressors of low-income African-American single mothers to their children's prosocial behavior and peer status in preschool.

Research Question

There are two questions that will be investigated in this study:

1. How do the child-rearing practices of low socioeconomic African-American single mothers influence their preschool children's prosocial behavior and their children's peer status in the classroom?
2. How do parent stressors of low socioeconomic African-American single mothers influence their preschool children's prosocial behavior and their children's peer status in the classroom?

Hypothesis

Among low socioeconomic, African-American single mothers, there is a significant relationship between:

1A. Mothers' child-rearing practices as measured by HOME and prosocial behavior of their preschool children in the classroom as measured by Bhavnagri's scan sampling scheme.

1B. Mothers' child-rearing practices as measured by HOME and the peer status of their preschool children in the classroom as measured by sociometric nomination.

2A. Mothers' stressors as measured by Parenting Stress Index (PSI) and prosocial behavior of their children in the classroom as measured by Bhavnagri's scan sampling scheme.

2B. Mothers' stressors as measured by Parenting Stress Index (PSI) and the peer status of their preschool children in the classroom as measured by sociometric nomination.

METHODS

Design

This study examined the relationship between the parent's child-rearing practices, their stress, and the sociometric status and social competency of their children in the preschool classroom. The overall design included four measures. There were two measures which involved parental interviews: (1) Home Observation for Measurement of the Environment for Families of Preschoolers and (2) Parenting Stress Index/Short Form. There were two measures administered to the children: (1) sociometric assessment and (2) observational coding scheme for recording the children's social competency in the classroom. The results of the data were then analyzed to determine the correlations between the parent and child variables.

Subjects

The subjects of the study were 30 African-American children (11 boys and 19 girls; 4.3 to 5.1 years of age, m-4.6) living in single parent homes with their mothers. The children attended A.L. Holmes Elementary School in Detroit and all were identified to be "at risk" for school failure according to the state guidelines for state funded preschool. All of the families whose children attended the school were identified to be at or below the poverty level as determined by demographic data collected by the school system. The average maternal age was 22.3 years. Fifty percent (15) of the mothers had completed a high school education. An

additional 3% (1) had completed some vocational training. The remaining 47% (14) had completed the 10th grade or below. Thirteen percent (4) of the mothers were employed outside the home in service related occupations. Twenty percent (6) were currently attending school after high school graduation to complete vocational training programs. Seven percent (2) of the mothers were completing GED High School Equivalence programs. Sixty percent (18) remained at home with their children. Thirty percent (9) of the families had extended family members (grandparent, aunt, or cousin) living in the household. All of the families had 2 or more children under the age of 6 living in the household including the student involved in this study.

The subjects were students in the classroom of the researcher. Informed written consent was obtained from the Detroit Public Schools and the parents of the children who participated in the study (see Appendix A).

Measures

Two measures were administered to the parents during a home visit. The first measure was the Home Observation for the Measurement of the Environment for Families of Preschoolers (HOME) (See Appendix B). HOME was developed by Bettye M. Caldwell & Robert H. Bradley (1984) to assess the early developmental environment from the perspective of the child. HOME is a 55 item inventory which measures: (1) learning stimulation, (2) language stimulation, (3) physical environment, (4)

warmth and affection, (5) academic stimulation, (6) modeling, (7) variety of experience and (8) discipline. The inventory is based on observational data, however, some parental self report is required to obtain information related to the interaction between the parent and child outside the visit. The interview is conducted in the home while the child is awake and can be observed in the normal routine of the day. The procedure takes approximately 1 hour. All item receive a binary yes or no score for observational behavior. HOME was chosen by this researcher because it provides a wealth of information on parent-child rearing practices in one succinct administration. Studies by Caldwell and Bradley have shown that high levels of inter-observer reliability can be achieved with limited experience in administering HOME.

The second measure administered during the home visit was the Parenting Stress Index/Short Form (PSI/SF) (See Appendix C). PSI/SF is an instrument developed by Richard R. Abidin (1990) which assesses parental stress toward the child in the family that the parent is most concerned about. For the purposes of this study, PSI/SF addressed parental stress toward the child who participated in the study. PSI/SF focuses on 3 variables which affect levels of parental stress: (1) depression, (2) parent's sense of competence in the parenting role, and (3) parental attachment and attitude toward fulfilling the role of parent. Parent's responses are rated on a 5-point scale from 1=strongly agrees, to 5=strongly disagrees. The parent is asked to choose the answer which best describes their feeling by circling the number which best matches the

degree to which they disagree or agree with each statement. If they are unsure of the answer, they are instructed to choose 3=not sure. For scoring purposes, PSI/SF is divided into three subsections. The subscale score is obtained by adding the value of each of the numbers circled by the parent for the twelve items on each subscale. The total stress score is obtained by adding the three subscale scores together.

PSI/SF was chosen for this study because administration can be easily accomplished by providing the parent with the questionnaire along with brief instructions. The procedure takes approximately 15 minutes.

Two measures were administered to the children in the classroom. The first measure was picture sociometric nomination. A play-rating scale developed by Asher, Singleton, Tinsley, & Hymel (1979) was used to assess the individual sociometric status of the children. This method involves showing the children photographs of their classmates and asking them to choose whom they best like to play with, and whom they least like to play with at school. The children are then instructed to assign one of 3 faces to their choices: (1) a happy face, (2) a neutral face, and (3) a sad face. Each child is interviewed individually. The procedure takes approximately 15 minutes. Scoring is accomplished by assigning each child a total of 3 scores: (1) happy face=3, (2) neutral face=2, and (3) sad face=1. The child's total sociometric score is the algebraic sum of the points given to him by the group with the high score indicating children who are well-liked. Research was shown this method to be a reliable

measure for assessing the social status of young children (Asher, Singleton, Tinsley, & Hymel, 1979).

The second measure administered to the children in the classroom was an observational coding scheme which was developed by Bhavnagri (1987) to record the children's prosocial and antisocial behaviors. This measure was used to assess the children's social interactions with peers in a natural setting. Children's social interaction, social play behavior and non-social play behavior were documented under two categories: (1) physical behavior and (2) verbal behavior. The affect which accompanied the behaviors was also documented. The target to whom the behavior was directed was also noted. Scan sampling and event sampling were used to record the specific behaviors (see Appendix F.)

Procedures

HOME and PSI/SF were administered to the parent in one prearranged home visit which is required by the school district. The family was advised that both procedures would be administered during the visit. Before administering the HOME, approximately 1/2 hour was spent visiting with the family for the purposes of becoming better acquainted and discussing school related business. During the course of the HOME interview, every effort was made to obtain scorable responses by rephrasing questions and clarifying responses. After completion of the HOME, the instructions for the PSI/SF were discussed with the parent. Before the parent began the task, verification of the parent's

understanding of the instructions and the questions was obtained to insure accurate and thoughtful responses to each item. The parent completed the PSI/SF while the final notes on the visit were documented.

Sociometric assessment of each child was accomplished during the daily class schedule. Photographs of the children were collected at the beginning of the school year for use in a variety of activities so that the children were familiar with seeing the photographs of their classmates. All of the children had been together in the classroom for at least 4 months. Each interview was begun by placing 3 containers in front of the child. Each container had a drawing of one of the 3 faces on it. The child was then asked to look at the photographs of classmates and to choose one of the 3 faces on the containers according to how much they liked to play with that child. The child was instructed to place the photograph into that container. The same procedure was repeated with each child. Prior to the actual sociometrics, a practice session was conducted with the children so that they could become familiar with the instructions. Three containers with pictures of a variety of foods were used to demonstrate the task to the children and were accompanied by actions with facial and vocal cues which were appropriate for each of the emotional states represented on the containers. The children were then asked to select those foods that they enjoyed eating the best and the least.

Observations of the children's classroom behaviors were conducted after the children had been together for at least 4 months. The subjects were observed 60 times in the same order for each rotation. The order of

the children within each rotation had been randomly predetermined. The decision to obtain 60 scans per child was based upon previous research conducted by Bhavnagri (1987) & Ladd (1981) who both used the same method to observe children's peer interactions and social behavior in the classroom. The children were observed during indoor free play time because it provided opportunities to observe spontaneous peer interactions. Observations were collected over a period of 4 weeks. Each child was observed for approximately 5 seconds for each scan. The behavior was then coded into the 4 mutually exclusive categories (i.e., physical, verbal, affect, and target person or object to whom the behavior was directed).

RESULTS AND DISCUSSION

Child Rearing Practices

Relationship of HOME inventory and children's prosocial behavior

Hypothesis 1A. states that among low socioeconomic, African-American, single mothers, there is a significant relationship between the mothers' child-rearing practices as measured by Home and the prosocial behavior of their preschool children in the classroom as measured by Bhavnagri's scan sampling scheme. The findings which support the above hypothesis are presented in Table 1. A negative relationship was found between the total HOME score, $r = -.42$, $p < .05$ and negative physical interaction indicating that, overall, mothers who provided a more positive home environment had children who showed less negative physical behavior toward their peers. A significant negative relationship was also found between subscale Acceptance, $r = -.52$, $p < .01$ on the HOME scale and negative physical interaction (i.e., hitting , pushing, shoving) when observed using Bhavnagri's scan sampling scheme during children's free play indicating that mothers who were more accepting of their children in the home had children who were engaged in less negative physical interaction with peers. A significant negative relationship was also found between subscale Acceptance, $r = -.46$, $p < .05$ on the HOME Scale and negative verbal statements (i.e., expresses aggressiveness, rejection, displeasure, whines) when observed during children's free play using Bhavnagri's scan sampling scheme indicating that mothers who were

more accepting of their children in the home had children who were engaged in less negative verbal interaction toward their peers. Subscale Language on the HOME scale, r= -.45, p<.05 was negatively related to negative physical interaction indicating that the more the mothers stimulated their children's language development in the home, the less their children engaged in negative physical interaction toward their peers. Subscale Warmth and Affection on the HOME scale, r=-.41, p<.05 was negatively related to negative affect displayed by the children indicating that the mothers who provided more warmth and affection in the home had children who showed less negative affect toward their peers. Given that HOME total and subscales were significantly correlated to the observations, the hypothesis 1A. was supported.

Relationship of HOME inventory and children's peer status

Hypothesis 1B. states that among low socioeconomic, African-American, single mothers, there is a significant relationship between the mothers' child-rearing practices as measured by HOME and the peer status of their preschool children in the classroom as measured by sociometric nomination. As shown in Table 1, a significant positive relationship was found between 3 out of 8 HOME subscales and sociometric status. The total HOME score was positively correlated with sociometric status, r=.50, p<.01 indicating that mother's who had overall more positive home environments had children who had a high status among their peers. The results also showed a significant positive

Table 1

Correlations of HOME with Observations and Peer Status in the Classroom

		HOME			
		Social		Cognitive	
	Total	Warmth & Affection	Acceptance	Language	Academ
Observed Behaviors					
Negative Physical Interaction	- .42*	———	- .52**	- .45*	———
Negative Verbal Interaction	———	———	- .46*	———	———
Negative Affect	———	- .41*	———	———	———
Sociometric Status	.50**	.61**	.57**	———	.42*

*p<.05, **p<.01, two-tailed test

relationship between the HOME subscales Warmth and Affection, r=.61, p<.01 and Acceptance, r=.57, p<.01 and sociometric status indicating that mothers who demonstrated more warmth, affection, and acceptance in the home had children who had high status among their peers. The Academic subscale , r=.42, p<.01, was also positively related to sociometric status,

suggesting that mother's who promoted academic learning in the home had children who had high status among their peers. All these correlations were in the direction that were expected. Given that the HOME total and the subscales on the HOME scale were significantly correlated to children's peer status, hypothesis 1B. was supported.

The above findings for both Hypothesis 1A and 1B showed significant correlations between parent child-rearing practices and children's prosocial behavior and peer status. The findings of this investigation are supported by other studies that have found significant relationships between parent child-rearing practices, prosocial behavior, and social status in white middle-to-upper class, intact families. The results of these previous studies indicated that high parental warmth and acceptance were predictive children who displayed positive social behavior. In contrast, low parental warmth and acceptance were associated with children who displayed maladaptive social behavior (Baumrind, 1967, 1971, 1973, 1977; Maccoby & Martin, 1983). The results of these studies also reported that parents who utilized authoritative disciplinary styles had children who were observed to engage in less negative physical and verbal behaviors toward their peers while parents who utilized authoritarian disciplinary styles had children who were observed to engage in more unfriendly aggressive behavior toward their peers. The children of the authoritative parents were found to be more popular with peers than the children of the authoritarian parents, as measured by sociometric nomination, thus linking the

authoritative child-rearing practices with high sociometric ratings with peers (DeKovic & Jannsens, 1992; Hart, Ladd, & Burleson, 1990; Hart, DeWolf, & Burts, 1992). In this investigation, HOME subscales Warmth and Affection and Acceptance were significantly and independently correlated with both prosocial behavior, as measured by scan sampling, and peer status, as measured by sociometric nomination, indicating that parents who used high warmth, affection, and acceptance had children who displayed less negative social behavior at school and had a higher status among their peers. Additionally, the findings of this study extend the paradigm to now include African-American, low-income, single mothers with limited education.

Mothers' Stress

Relationship of Parenting Stress Index and children's prosocial behavior

Hypothesis 2A. states that among low socioeconomic, African-American, single mothers, there is a significant relationship between the mother's stressors as measured by PSI and the prosocial behavior of their preschool children in the classroom as measured by Bhavnagri's scan sampling scheme. The findings for hypothesis 2A. are reported in Table 2. A significant positive relationship was found between subscale Difficult Child, $r = -.49$, $p < .01$ on PSI and children's negative affect indicating that mothers who experienced high stress as a result of their child's behavioral characteristics had children who displayed more negative affect with peers. There was also a negative relationship found between subscale

Table 2

Correlations of PSI with Observations and Peer Status in the Classroom

	Parenting Stress Index (PSI)			
	Total	PD	PC-DI	DC
Observed Behaviors				
Positive Verbal Statements	--------	--------	--------	- .37*
Negative Affect	---------	---------	---------	- 49**
Sociometric Status	- .53**	--------	- .38*	-.64**

*p<.05, **p<.01, two-tailed test

PSI Code:

PD=Parental Distress
PC-DI=Parent-Child Dysfunctional Interaction
DC=Difficult Child

Difficult Child, r= -.37, p<.01 and positive verbal statements indicating that mother's who experienced high stress regarding their child's behavioral characteristics had children who showed less positive verbal interaction toward their peers. Given that a significant relationship was found

between mothers' stressors as measured by PSI and children's prosocial behavior, Hypothesis 2A was supported.

Relationship of Parenting Stress Index and children's peer status

Hypothesis 2B. states that among low socioeconomic, African-American, single mothers, there is a significant relationship between the mother's stressors as measured by PSI and the peer status of their preschool children in the classroom as measured by sociometric nomination. As presented in Table 2, a significant negative relationship was found between the total PSI score, $r=-.53$, $p<.01$ and sociometric ratings indicating that as the mother's high stress increased, their children's ratings on peer nomination decreased with peers. Mother's with high stress had children who received lower sociometric ratings from their peers. A significant negative relationship was also found between subscale Difficult Child, $r= -.64$, $p<.01$ on PSI and sociometric status suggesting that mothers who experienced high stress regarding their child's behavioral characteristics had children who were rated significantly lower in sociometric nomination with peers. Subscale Parental-Child Dysfunctional Interaction, $r= -.38$, $p<.05$ on PSI was negatively correlated to sociometric status indicating that mothers who perceived that their children did not meet their parental expectations, as measured by PSI, had children who received significantly lower sociometric ratings from their peers.

The findings for Hypothesis 2A are supported by earlier studies on parental stress which have shown the impact of high parental stress stemming from economic hardship, single parenting, and depression on children's peer outcomes by producing children who exhibit diminished social skills such as impulsive and aggressive behavior (Zahn-Waxler, Denham, Iannotti, & Cummings, 1992; McLoyd, 1989,1990; Patterson, Griesler, Vaden, & Kupersmidt, 1992). The findings for Hypothesis 2B regarding parental stress, as measured by PSI, and sociometric literature has not been published in any journals. Thus, this study has extended the research by showing that parental stress experienced by low-income, African-American, single mothers with limited education is significantly related to children's peer status.

Limitations and Conclusions

While the findings of this study are statistically significant, indicating a strong relationship between mother's child-rearing practices, mother's stressors, children's prosocial behavior, and children's peer status, this research has the following limitations:

1. This study did not have a second coder to establish interobserver reliability.

2. The sample size of this study was small for a correlational study. A larger sample size provides greater confidence in the results.

3. The direction of influence between the parent and child relationship is unclear. It may be that the child's negative behavior

toward the parent results in the parent's having less than positive child-rearing practices toward the child. It is equally possible, however, that the parent's less than positive child-rearing practices may be influencing the child's behavior resulting in social incompetence with peers because the child is modeling the parent's negative behavior and transferring that behavior to interactions with peers.

To summarize, significant relationships were found between mothers' child-rearing practices, mothers' stressors, and their preschool children's prosocial behavior and peer status in preschool. The results of this study have implications for early childhood educators. The findings of this exploratory study suggests that stressed mothers who use inappropriate child-rearing practices (i.e. lack of warmth, affection, and acceptance and provided limited language and academic stimulation) have children who lack peer competency and have low peer status. The early childhood educator needs to identify these children who are at risk and then develop intervention strategies to help them improve their peer relations. Additionally, the early childhood educator can work with the mothers in the classroom and through parent education programs to promote positive child-rearing practices and provide social support to reduce parent stress.

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Appendix A

Informed Consent

I give permission for my child _____ to be included in a study of social skills in children to be conducted by Debra Howe, a graduate student at Wayne State University, as part of her work toward her Master Degree project.

I have been informed that any and all test results will remain confidental and be applied only to the study as stated above.

I have been advised that I am free to withdraw my consent and to discontinue my child's participation in the project or activity at any time.

I have read and I understand the above study participation statement. I agre to my child's participation in the study and I have received a copy of this description.

Signatures: _____ _____

Parent Date

_____ _____

Study Conductor Date

EARLY CHILDHOOD HOME INVENTORY

Bettye M. Caldwell and Robert H. Bradley

Family Name_____ Date_____ Visitor_____

Child's Name_____ Birthdate_____ Age_____ Sex___

Caregiver for visit_____ Relationship to child_____

Family composition_____
(Persons living in household, including sex and age of children)

Family Ethnicity_____ Language Spoken_____ Maternal Education_____ Paternal Education_____

Is Mother employed?_____ Type of work when employed_____ Is Father employed?_____ Type of work when employed_____

Address_____ Phone_____

Current child care arrangements_____

Summarize past year's arrangements_____

Caregiver for visit_____ Other persons present_____

SUMMARY

Subscale	Score	Lowest Fourth	Middle Half	Upper Fourth
I. LEARNING MATERIALS		0 - 2	3 - 9	10 -11
II LANGUAGE STIMULATION		0 - 4	5 - 6	7
III. PHYSICAL ENVIRONMENT		0 - 3	4 - 6	7
IV. RESPONSIVITY		0 - 3	4 - 5	6 - 7
V. ACADEMIC STIMULATION		0 - 2	3 - 4	5
VI. MODELING		0 - 1	2 - 3	4 - 5
VII. VARIETY		0 - 4	5 - 7	8 - 9
VIII. ACCEPTANCE		0 - 2	3	4
TOTAL SCORE		0 - 29	30 - 45	46 - 55

For rapid profiling of a family, place an X in the box that corresponds to the raw score.

Early Childhood HOME

Place a plus (+) or minus (-) in the box alongside each item if the behavior is observed during the visit or if the parent reports that the conditions or events are characteristic of the home environment. Enter the subtotals and the total on the front side of the Record Sheet.

I. LEARNING MATERIALS		23. House has 100 square feet of living space per person.	
1. Child has toys which teach colors, sizes, and shapes.		24. Rooms are not overcrowded with furniture.	
2. Child has three or more puzzles.		25. House is reasonably clean and minimally cluttered.	
3. Child has record player or tape recorder and at least 5 children's records or tapes.		**IV. RESPONSIVITY**	
4. Child has toys or games permitting free expression.		26. Parent holds child close 10-15 minutes per day.	
5. Child has toys or games requiring refined movements.		27. Parent converses with child at least twice during visit.	
6. Child has toys or games which help teach numbers.		28. Parent answers child's questions or requests verbally.	
7. Child has at least 10 children's books.		29. Parent usually responds verbally to child's speech.	
8. At least 10 books are visible in the apartment or home.		30. Parent praises child's qualities twice during visit.	
9. Family buys and reads a daily newspaper.		31. Parent caresses, kisses, or cuddles child during visit.	
10 Family subscribes to at least one magazine.		32. Parent helps child demonstrate some achievement during visit.	
11. Child is encouraged to learn shapes.		**V. ACADEMIC STIMULATION**	
II. LANGUAGE STIMULATION		33. Child is encouraged to learn colors.	
12. Child has toys that help teach the names of animals.		34. Child is encouraged to learn patterned speech.	
13 Child is encouraged to learn the alphabet.		35. Child is encouraged to learn spatial relationships.	
14. Parent teaches child simple verbal manners (please, thank you, I'm sorry).		36. Child is encouraged to learn numbers.	
15. Parent uses correct grammar and pronunciation.		37. Child is encouraged to learn to read a few words.	
16. Parent encourages child to talk and takes time to listen.		**VI. MODELING**	
17. Parent's voice conveys positive feelings about child.		38. Some delay of food gratification is expected.	
18 Child is permitted choice in breakfast or lunch menu.		39. TV is used judiciously.	
III. PHYSICAL ENVIRONMENT		40. Parent introduces Visitor to child.	
19 Building appears safe and free of hazards.		41. Child can express negative feelings without harsh reprisal.	
20 Outside play environment appears safe.		42. Child can hit parent without harsh reprisal.	
21 Interior of apartment is not dark or perceptually monotonous		**VII. VARIETY**	
22. Neighborhood is aesthetically pleasing.		43. Child has real or toy musical instrument	

44. Child is taken on outing by a family member at least every other week.									
45. Child has been on trip more than 50 miles during last year.									
46. Child has been taken to a museum during past year.									
47. Parent encourages child to put away toys without help.									
48. Parent uses complex sentence structure and vocabuiary.									
49. Child's art work is displayed some place in house.									
50. Child eats at least one meal per day with mother (or mother figure) and father.(or father figure).									
51. Parent lets child choose certain favorite food products or brands at grocery store.									
VIII. ACCEPTANCE									
52. Parent does not scold or yell at or derogate child more than once.									
53. Parent does not use physical restraint during visit.									
54. Parent neither slaps nor spanks child during visit.									
55. No more than one instance of physical punishment occurred during the past week.									
	I	II	III	IV	V	VI	VII	VIII	TOTAL
TOTALS									

COMMENTS:

Raw Scores on HOME Inventory Subscales

Subject	Total Score	1	2	3	4	5	6	7	8
1	31	3	5	4	5	5	2	6	1
2	46	9	7	6	5	5	4	7	4
3	34	4	6	3	6	3	4	5	4
4	25	3	4	3	3	2	4	4	2
5	23	3	3	3	3	2	2	5	1
6	38	5	7	4	6	2	4	6	2
7	49	9	7	7	6	5	4	8	4
8	43	4	7	5	6	4	5	8	4
9	46	9	6	5	7	5	3	7	4
10	33	5	6	3	6	5	4	6	4
11	38	4	7	5	5	5	4	4	4
12	24	3	3	5	3	2	2	4	2
13	42	7	7	4	6	5	4	6	4
14	36	4	7	5	6	5	3	3	4
15	31	4	5	3	4	4	2	5	4
16	48	9	7	5	6	5	4	8	4
17	28	4	6	1	3	3	3	5	3
18	42	6	6	6	5	3	5	7	4
19	28	4	6	1	3	3	3	5	3
20	21	3	2	2	3	3	2	4	2
21	43	7	7	5	5	4	4	7	4
22	35	5	7	4	4	5	2	7	1
23	47	9	7	6	6	5	4	6	4
24	37	7	6	3	5	5	2	7	2
25	42	8	7	3	7	5	3	6	3
26	46	7	7	6	7	5	4	6	4
27	34	3	6	2	6	4	3	6	4
28	39	4	7	6	5	5	4	5	3
29	33	5	7	1	6	5	2	5	2
30	43	9	7	6	5	5	4	5	2

HOME Inventory Subscale Codes:

1= Learning Stimulation
2= Language Stimulation
3= Physical Environment
4= Warmth and Affection
5= Academic Stimulation
6= Modeling
7= Variety of Experience
8= Acceptance

PARENTING STRESS INDEX

(Short Form)

Richard R. Abidin
University of Virginia

Directions:

In answering the following questions, please think about the child you are most concerned about.

The questions on the following pages ask you to mark an answer which best describes your feelings. While you may not find an answer which exactly states your feelings, please mark the answer which comes closest to describing how you feel.

YOUR FIRST REACTION TO EACH QUESTION SHOULD BE YOUR ANSWER.

Please mark the degree to which you agree or disagree with the following statements by circling the number which best matches how you feel. If you are not sure, please circle #3.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

Example:

I enjoy going to the movies. (If you sometimes enjoy going to the movies, you would circle #2.) 1 (2) 3 4 5

---

1 Strongly Agree	2 Agree	3 Not Sure	4 Disagree	5 Strongly Disagree

1. I often have the feeling that I cannot handle things very well.	1	2	3	4	5	
2. I find myself giving up more of my life to meet my children's needs than I ever expected.	1	2	3	4	5	
3. I feel trapped by my responsibilities as a parent.	1	2	3	4	5	
4. Since having this child I have been unable to do new and different things.	1	2	3	4	5	
5. Since having a child I feel that I am almost never able to do things that I like to do.	1	2	3	4	5	
6. I am unhappy with the last purchase of clothing I made for myself.	1	2	3	4	5	
7. There are quite a few things that bother me about my life.	1	2	3	4	5	
8. Having a child has caused more problems than I expected in my relationship with my spouse (male/female friend).	1	2	3	4	5	
9. I feel alone and without friends.	1	2	3	4	5	
10. When I go to a party I usually expect not to enjoy myself.	1	2	3	4	5	
11. I am not as interested in people as I used to be.	1	2	3	4	5	
12. I don't enjoy things as I used to.	1	2	3	4	5	
			PD			
13. My child rarely does things for me that make me feel good.	1	2	3	4	5	
14. Most times I feel that my child does not like me and does not want to be close to me.	1	2	3	4	5	
15. My child smiles at me much less than I expected.	1	2	3	4	5	
16. When I do things for my child I get the feeling that my efforts are not appreciated very much.	1	2	3	4	5	
17. When playing, my child doesn't often giggle or laugh.		2	3	4	5	
18. My child doesn't seem to learn as quickly as most children.	1	2	3	4	5	
19. My child doesn't seem to smile as much as most children.	1	2	3	4	5	
20. My child is not able to do as much as I expected.	1	2	3	4	5	
21. It takes a long time and it is very hard for my child to get used to new things.	1	2	3	4	5	

1 Strongly Agree 2 Agree 3 Not Sure 4 Disagree 5 Strongly Disagree

22. I feel that I am:
    1. not very good at being a parent,
    2. a person who has some trouble being a parent,
    3. an average parent,
    4. a better than average parent,
    5. a very good parent.

    1 2 3 4 5

23. I expected to have closer and warmer feelings for my child than I do and this bothers me. 1 2 3 4 5

24. Sometimes my child does things that bother me just to be mean. 1 2 3 4 5

P-C DI

25. My child seems to cry or fuss more often than most children. 1 2 3 4 5

26. My child generally wakes up in a bad mood. 1 2 3 4 5

27. I feel that my child is very moody and easily upset. 1 2 3 4 5

28. My child does a few things which bother me a great deal. 1 2 3 4 5

29. My child reacts very strongly when something happens that my child doesn't like. 1 2 3 4 5

30. My child gets upset easily over the smallest thing. 1 2 3 4 5

31. My child's sleeping or eating schedule was much harder to establish than I expected. 1 2 3 4 5

32. I have found that getting my child to do something or stop doing something is:
    1. much harder than I expected,
    2. somewhat harder than I expected,
    3. about as hard as I expected,
    4. somewhat easier than I expected,
    5. much easier than I expected.

    1 2 3 4 5

33. Think carefully and count the number of things which your child does that bother you. For example: dawdles, refuses to listen, overactive, cries, interrupts, fights, whines, etc. Please circle the number which includes the number of things you counted.

    1. 10+ 2. 8-9 3. 6-7 4. 4-5 5. 1-3 1 2 3 4 5

34. There are some things my child does that really bother me a lot. 1 2 3 4 5

35. My child turned out to be more of a problem than I had expected. 1 2 3 4 5

36. My child makes more demands on me than most children. 1 2 3 4 5

D.C.

Total Score

Parenting Stress Index (Short Form)

Profile Sheet and Norms

R. R. Abidin - University of Virginia

Parents Name _____ Parents Sex _____ Parents Date of Birth _____

Childs Name _____ Childs Sex _____ Childs Date of Birth _____ Date _____

Percentile Ranks

N=800

	Raw Score	1	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	99+	$\bar{x}$	SD
STRESS Σ of PD+P-CDI+DC		39	46	51	55	59	61	63	65	66	67	69	71	73	75	76	79	82	86	91	99	112	71.0	15.4
PARENTAL D.		12	14	17	19	20	21	22	23	24		25	26	27	28	29	30	31	33	36	39	49	26.4	7.2
PARENT - CHILD D.I.			12	13		14		15	16	17	18	19	20	21	22	23	24	25	26	27	30	35	18.7	4.8
D. CHILD		14	15	17	18	19	21	22	23	24		25	26	27	28	29	30	31	33	36	39	49	26.0	6.7
D. RESPONDING*		7	9	10	11		12				13			14		15		16	17	18	19	24	13.9	5.2
		1	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	99+		

*Score equals the sum of items: 1,2,3,7,8,9,11 - critical score less than 11.

Scoring: Reverse weights for all items

Appendix E

Raw Scores on PSI

Subject	Total Score	PD	PC-DI	DC
1	144	55	52	37
2	156	51	51	54
3	156	51	56	49
4	125	37	50	38
5	45	20	12	13
6	128	42	44	42
7	152	56	49	47
8	163	59	56	48
9	134	42	48	44
10	142	48	58	36
11	156	50	54	52
12	120	39	40	41
13	151	52	54	45
14	131	43	44	44
15	102	27	35	40
16	133	45	48	40
17	117	48	41	28
18	137	49	46	42
19	117	46	50	21
20	154	51	56	47
21	127	40	42	45
22	116	31	52	33
23	144	53	58	33
24	168	57	52	59
25	144	48	55	41
26	145	47	53	45
27	162	50	59	53
28	144	49	49	46
29	143	47	58	38
30	132	51	41	28

PSI Subscale Codes:

PD= Parental Distress
PC-DI= Parent-Child Dysfunctional Interaction
DC= Difficult Child

Appendix F

CODING KEY FOR CLASSROOM OBSERVATIONS USING THE SCAN SAMPLING METHOD

A. Behavior and Affect of Focal Subject

I. Physical Behavior	Code	Description
1. Isolated play	(I)	No verbal or physical interaction with any one, but child interacts physically with objects and self.
2. Passively observes	(O)	Watches child, teacher, or peer group without any other social behavior.
3. Parallel play	(W)	Plays side by side with child, teacher, or peer group with similar objects or actions. Engaged in similar activity.
4. Positive interactions	(+)	Shares, takes turns, simultaneously acts upon toys, initiates, cooperates, joint activity with child, teacher or peer group.
5. Negative interactions	(-)	Hitting, punching, shoving, grabbing, pulling hair of child, teacher or peer group.

II. Verbal Behavior (Only to be recorded when there is a verbal interaction):	Code	Description
1. Positive Verbal Statements	(+)	Verbal content is prosocial, i.e., talks about social skills, requests and praises, agrees on goals or activities, offers turns, leads and directs, encourages, suggests cooperation, participates in prosocial conversations.
2. Negative Verbal Statements	(-)	Verbal content is antisocial, i.e., expresses aggressiveness, rejection, displeasure, annoyance, disapproval, refusal to cooperate, whines, complains.

3. Neutral Verbal Statements	(N)	Verbal content is not related to social skills, i.e., talks about properties of objects, talks or reads to self, verbalizes cognitive aspects of academic activity.

III. Affect	Code	Description
1. Positive Affect	(+)	Smiles, laughs, giggles, claps, bounces, hugs, kisses.
2. Negative Affect	(-)	Cries, sulks, frowns, fusses, acts agitated, pouts.
3. Neutral Affect	(N)	No affect.

B. Target to Whom the Behavior is Directed	Code	Description
1. Adult	(A)	Teachers, parents, volunteers, observers
2. Boy	(B)	
3. Girl	(G)	
4. Peers	(P)	A group of children
5. Self	(S)	
6. Object	(O)	

Appendix G

Classroom Observations Using Scan Sampling Method

Date: _____ Coder: _____ Age Group: _____

Daycare: _____ In or out: _____

Time: from _____ to _____

No Name	Physical	Verbal	Affect	Target
	I O W + -	+ - N	+ - N	A B G P S O
	I O W + -	+ - N	+ - N	A B G P S O
	I O W + -	+ - N	+ - N	A B G P S O
	I O W + -	+ - N	+ - N	A B G P S O
	I O W + -	+ - N	+ - N	A B G P S O
	I O W + -	+ - N	+ - N	A B G P S O
	I O W + -	+ - N	+ - N	A B G P S O
	I O W + -	+ - N	+ - N	A B G P S O
	I O W + -	+ - N	+ - N	A B G P S O
	I O W + -	+ - N	+ - N	A B G P S O
	I O W + -	+ - N	+ - N	A B G P S O
	I O W + -	+ - N	+ - N	A B G P S O
	I O W + -	+ - N	+ - N	A B G P S O
	I O W + -	+ - N	+ - N	A B G P S O
	I O W + -	+ - N	+ - N	A B G P S O
	I O W + -	+ - N	+ - N	A B G P S O
	I O W + -	+ - N	+ - N	A B G P S O
	I O W + -	+ - N	+ - N	A B G P S O

Appendix H

Tallied Data on Observed Behaviors with Peers

Subject	Physical Behaviors					Verbal Behaviors			Affect		
	I	O	W	+	-	+	-	N	+	-	N
1	20	16	24	2	12	1	13	10	1	9	48
2	32	2	26	7	0	8	0	13	9	0	50
3	32	19	9	0	0	1	0	5	2	1	56
4	18	8	34	3	7	4	5	27	9	11	41
5	30	4	25	4	7	1	6	26	5	6	41
6	23	16	21	9	0	9	0	8	49	2	1
7	15	4	41	10	0	11	0	25	11	0	48
8	42	2	16	9	1	8	0	15	9	2	51
9	21	12	27	5	1	7	2	23	6	2	47
10	20	18	22	4	6	4	5	19	3	6	49
11	21	13	26	4	3	8	4	10	10	6	44
12	26	10	24	1	13	1	11	15	1	19	40
13	13	3	44	12	4	12	4	38	12	4	38
14	14	6	40	18	2	17	2	19	17	2	38
15	27	5	28	4	2	4	2	22	4	2	39
16	27	8	25	8	0	8	0	11	8	0	47
17	25	20	15	2	0	2	0	10	2	0	42
18	41	7	12	2	1	1	2	10	3	2	56
19	22	12	26	6	5	6	5	15	2	5	42
20	20	8	32	16	0	18	0	19	23	0	37
21	23	12	25	8	0	8	0	14	10	0	50
22	37	6	17	2	4	2	2	28	5	5	41
23	11	8	41	4	5	5	5	23	6	5	50
24	28	4	28	4	0	5	0	22	10	0	52
25	23	7	30	6	6	6	6	13	7	6	47
26	22	7	31	7	3	7	3	28	15	3	38
27	26	14	20	6	1	6	1	11	6	1	53
28	10	2	48	15	2	12	2	15	15	2	43
29	19	9	32	6	2	6	2	12	9	1	50
30	31	13	16	3	1	3	1	25	4	5	50

Physical Behavior Codes

I= Isolated Play
O= Passively Observes
W= Parallel Play
+= Positive Interactions
-= Negative Interactions

Verbal and Affect Behavior Codes

+= Positive Verbal and Affect
-= Negative Verbal and Affect
N= Neutral Verbal and Affect

Appendix I

Raw Scores on Picture Sociometric Nomination

Subject	Positive	Negative	Neutral	Total	Score
1	6	3	13	22	1.2
2	54	0	0	54	3.0
3	18	14	5	37	2.0
4	3	2	16	21	1.1
5	3	4	15	22	1.2
6	39	10	0	49	2.7
7	36	6	3	45	2.5
8	36	10	3	47	2.6
9	42	6	3	51	2.8
10	30	10	3	43	2.3
11	24	12	4	40	2.2
12	9	6	12	27	1.5
13	45	6	1	52	2.9
14	45	6	0	51	2.8
15	24	10	5	39	2.1
16	45	6	1	52	2.8
17	0	12	12	24	1.3
18	30	8	4	42	2.3
19	9	8	11	28	1.5
20	36	10	1	47	2.6
21	12	8	10	30	1.6
22	9	8	11	28	1.5
23	15	8	9	32	1.7
24	27	8	2	46	2.5
25	27	4	6	37	2.0
26	54	0	0	54	3.0
27	39	2	4	45	2.5
28	48	2	1	51	2.8
29	36	10	1	47	2.6
30	6	4	14	24	1.3

Code: + = 3x
- = 1x
N = 2x

Total Score = Total ÷ Number of Children