

Early Fathering Predictors of Children's Late School-Age
Peer Acceptance, Emotion Regulation, and Behavior Problems

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Abstract

Parenting characteristics have profound effects on children's early development. Adverse parenting places young children at risk for poor self-regulation, as well as for mood and behavior problems (Duncombe, Havighurst, Holland, & Frankling, 2012). On the other hand, positive mothering has been associated with well-developed self-regulation (Yagmurlu & Altan, 2010). However, the role of father's parenting characteristics in these developmental models has been under-explored. In addition, girls and boys respond to parenting practices in distinct ways that influence their behavioral adjustment (Chang, Olson, Sameroff, & Sexton, 2011), but research is lacking regarding whether dimensions of father's parenting differentially relate to boys' and girls' later adjustment outcomes. In this thesis I examine relationships between early father-report behaviors and children's school-age adjustment outcomes, as moderated by gender. Fathers provided information about their parenting practices when their child was 3 years old. At age 10, mothers, fathers, and teachers answered questionnaires about the child's socioemotional adjustment. Structural equation modeling (SEM) was used to test the relationship between age 3 fathering behaviors and age 10 adjustment problems, both with the full sample and separately by gender. As hypothesized, both positive and negative fathering behaviors were associated with children's behavioral adjustment, emotion regulation, and peer adjustment at home and school, especially for boys. Implications for including fathers in research, treatment, and prevention are discussed.

Keywords: Early childhood, middle childhood, father discipline, emotion regulation, behavior problems, peer relationships

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Emotion regulation has been defined as “the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one’s goals” (Thompson, 1994, p. 27-28). Children begin to develop emotion regulation abilities during infancy and continue to do so throughout early childhood, using their primary caregivers to assist their growth as they become increasingly independent (Cole, Teti, & Zahn-Waxler, 2003). Children learn to regulate their emotions in social situations with peers and adults. It is important to understand how emotion regulation develops because individual differences are present early in life and form the foundation for concurrent and later socioemotional adjustment (Blandon, Calkins, & Keane, 2010). Hence, the main focus of this paper is the contribution of early fathering behaviors to children’s later behavioral adjustment and emotion regulation competence. The following sections highlight factors influencing the development of individual differences in socioemotional adjustment, including the prominent role of parenting practices and the presence of gender differences. It concludes with a broader evaluation of the state of the current research on socioemotional development in middle childhood, as well as with the specific research hypotheses for the present study regarding paternal influences on adjustment outcomes.

Individual Differences in Socioemotional Adjustment

Early childhood is a crucial period for socioemotional development (Cole et al., 2003). Although emotion regulation skills and related behaviors improve as children mature (Cole et al., 2011; Onchwari & Keengwe, 2011), there are strong individual variations in the development of early regulatory abilities (i.e., Halligan et al., 2013). Linking these differences to intrinsic and

extrinsic influences provides a foundation for understanding the development of children's social and emotional competence during the school-age years (i.e., Blandon et al., 2010).

Children's early externalizing behaviors have been shown to hinder the development of emotion regulation abilities and positive socioemotional adjustment. Blandon et al. (2010) found that higher levels of behavior problems in early childhood were associated with poorer adjustment in the early school-age years. Specifically, kindergarten teachers typically identified high-risk children as having worse behavior problems and social skills compared to lower-risk children. In addition, peers generally rated high-risk children as being less likeable than their lower-risk peers. Lastly, Helmsen, Koglin, & Petermann (2011) found that children with a tendency towards aggression and aggression-related social information processing biases were at a higher risk for poorer emotion regulation. These studies show that children's early behavior problems can have negative implications for a broad range of social and emotional adjustment outcomes.

Children's emotional and behavioral development has been shown to be negatively impacted by exposure to environmental risk factors, such as poverty. Halligan et al. (2013) found that experiencing high levels of environmental risk during early childhood (such as living with a single parent or having an unemployed parent) was negatively associated with the development of emotion regulation. In addition, Chang, Shelleby, Cheong, and Shaw's (2012) longitudinal study of preschool-age boys suggested that experiencing multiple risk factors (such as low family income, maternal depression, and household overcrowding) had negative influences on children's emotion regulation development, which was associated with poor social competence when they reached kindergarten. Thus, experiencing cumulative risks to development has been related to high levels of child externalizing problems throughout

elementary school (Deater-Deckard, Dodge, Bates, & Pettit, 1998). These studies suggest that the environment that a child is raised in may influence the development of their emotion regulation capabilities and behavioral adjustment. As discussed below, adverse parenting has been shown to be a particularly strong risk factor for poor socioemotional development.

Parenting Influences on Adjustment and Emotion Regulation

Parental discipline and quality of parent-child interactions have been shown to be powerful influences on child development. In this thesis I focus on three specific parenting behaviors: harsh discipline, induction, and warm responsiveness. Corporal or harsh punishment can include spanking, slapping, hitting, and other forms of painful disciplinary procedures. Harsh punishment has been associated with heightened levels of child aggression, antisocial behavior, and psychological distress, among many other negative outcomes (Gershoff, 2002). On the other hand, induction (inductive discipline) is characterized by reasoning and logical explanations of the consequences of the child's actions (Hart, DeWolf, Wozniak, & Burts, 1992). Early use of induction has been associated with infrequent concurrent and future use of corporal punishment, as well as with fewer externalizing problems at age 6 (Choe, Olson, & Sameroff, 2013). Finally, warm responsiveness involves high levels of affection and appropriate responding to children's needs. Warm, responsive parenting has been associated with positive child development throughout childhood and adolescence (Khaleque, 2013; von Suchodoletz, Trommsdorff, & Heikamp, 2011).

Adverse parenting has been linked to the development of a broad range of negative developmental outcomes. For example, Halligan et al.'s (2013) study revealed that low maternal sensitivity was related to poor emotion regulation from infancy through age 5. In addition, Dagne and Snyder (2011) discovered that repeated exposure to negative maternal mood was

associated with suboptimal emotion regulation in 5-year-old year old children. Duncombe, Havighurst, Holland, and Frankling (2012) found that inconsistent discipline and corporal punishment were associated with poor emotion regulation and behavior problems in 5- to 9-year-old children. In longitudinal studies, corporal punishment has also been shown to predict poor behavioral adjustment in the early elementary school years (Mulvaney & Mebert, 2007) and increased peer aggression across the transition from preschool to kindergarten (Olson, Lopez-Duran, Lunkenheimer, Chang, & Sameroff, 2011). Moreover, high levels of cumulative risk in early and middle childhood have been found to amplify the relationship between maternal harsh punishment and externalizing problems at age 9 (MacKenzie, Nicklas, Brooks-Gunn, & Waldfogel, 2014).

Parenting factors may interact with child-related factors to influence the course of children's socioemotional development. Yagmurlu and Altan's (2010) study of Turkish preschoolers revealed that parenting characteristics and child temperament interacted to determine the trajectory of a child's emotion regulation development. For example, children's willingness to approach new situations and mothers' level of responsiveness were jointly related to children's emotion regulation abilities. Similarly, toddlers with difficult temperaments and sensitive mothers exhibited a sharper decrease in externalizing behaviors by age 5 than children with easier temperaments (Mesman et al., 2009). In addition, Blandon et al.'s (2010) study suggested that maternal parenting behaviors (specifically greater maternal control) were negatively associated with children's emotion regulation development during the transition to kindergarten, especially when they were already at risk.

Although most research on children's socioemotional development has focused on mother-child relationships, interactions with fathers also play an important role. There has been

significantly less research on this topic, despite multiple appeals for more studies on father-child interactions (e.g., Phares, Fields, Kamboukos, & Lopez, 2005). It is important to include fathers in research because they can provide valuable and unique information about children's development. For example, Kerr, Lunkenheimer, and Olson (2007) found that fathers' externalizing ratings of their preschool-age children were more strongly associated with "multi-informant problem factors" than those of teachers and third-party examiners. This suggests that fathers' evaluations should be included, if possible, in psychological assessments of preschool-aged children. In addition, interactions between children and their fathers may affect early development. Flanders et al.'s (2010) longitudinal study showed that the quality of the father-child relationship during rough-and-tumble play (RTP) during early childhood related to individual differences in child emotion regulation and behavioral adjustment in middle childhood. Specifically, frequent RTP was associated with lower emotion regulation and increased aggression for dyads characterized by increased father dominance.

The limited research on paternal influences on socioemotional development suggests that fathers do play an important role in this process. In a low-income sample, paternal use of commands, as opposed to modeling, as a control strategy at age 2 predicted later emotion regulation during preschool years (Malin, Cabrera, Karberg, Aldoney, & Rowe, 2014). On the other hand, Herbert, Harvey, Candelas, and Breaux (2013) found that lower levels of father laxness and less use of commands at age 3 were positively associated with fewer child externalizing behaviors at age 6. Although these studies contradict each other, they each imply that the way fathers interact with and manage their children during early childhood may influence later regulation and adjustment. The opposing findings suggest that more research is

needed on paternal discipline in relation to individual differences in children's socioemotional adjustment.

It is critical to examine father-child relationships because they may play unique roles in child development. For example, MacKenzie, Nicklas, Waldfogel, and Brooks-Gunn (2013) found that maternal spanking at ages 3 and 5 predicted externalizing problems at age 9, whereas paternal spanking did not have significant associations with later externalizing problems. In addition, Lunkenheimer, Olson, Hollenstein, Sameroff, and Winter (2011) found that mother-child and father-child relationships with preschool-age children differed in terms of flexibility during a challenging task and were associated with different outcomes. Specifically, high flexibility in mother-child pairs was associated with more externalizing problems at age 5, whereas high flexibility with fathers was associated with fewer externalizing problems. These findings suggest that similar parenting behaviors may play different roles in children's socioemotional development, depending on the gender of the parent.

Attachment to fathers may also have different implications for children's later socioemotional adjustment than attachment to mothers. For example, Volling (2001) found that the quality of infant attachment to fathers was not associated with children's emotion regulation at age 4 when watching a younger sibling in a distressing situation. However, quality of mother-infant attachment was significantly associated with children's later regulatory strategies. Volling and Belsky (1992) also found that insecure mother-infant attachment was related to sibling conflict at age 6, whereas positive father-child relationships at age 3 were related to positive sibling relationships in early childhood. In addition, McElwain and Volling (2004) found that secure mother-infant attachment was associated with positive friendship quality at age 4, but only when father-child attachment was also secure during infancy. Thus, to truly understand

children's socioemotional development, the quality of children's attachment to both parents, not just mothers, must be examined. In summary, although scarce, emerging research has shown that fathers make unique contributions to individual differences in children's emotion regulation and adjustment outcomes.

The Role of Child Gender

The gender of the child also contributes to the development of individual differences in emotion regulation and behavioral adjustment. For example, young girls typically exhibit more sophisticated emotion regulation than young boys (Onchwari & Keengwe, 2011). Boys also have been shown to exhibit higher levels of externalizing problems than girls (e.g., Miner & Clarke-Stewart, 2008). McCoy and Raver's (2011) study of caregivers' emotion expression, child emotion regulation, and problem behaviors revealed that gender moderated the relationship between externalizing behaviors at age 4 and parent emotion expression. Specifically, only girls showed relatively low levels of externalizing behaviors, regardless of the frequency of caregivers' emotion expression. Similarly, Dagne and Snyder (2011) found that 5-year-old girls and boys responded differently to maternal hostile mood. Specifically, girls were faster to downregulate their negative emotions when their mothers exhibited a hostile mood. This relationship did not hold true for boys. Chang et al. (2011) examined developmental pathways between early preschool-age risk factors and children's behavioral adjustment in kindergarten. Maternal warm responsiveness negatively predicted, while corporal punishment positively predicted, early school-age externalizing behaviors for boys but for not girls. These findings suggest that parenting behaviors and child gender may interact to in ways that influence the development of later adjustment problems.

Moreover, there may be complex interactions between parent gender, child gender, and parenting behavior. For example, Roger, Rinaldi, and Howe (2012) found that, although mothers and fathers discussed emotions and internal states (internal state language; ISL) equally with their sons and daughters, boys as young as 2 years old used more ISL with their mothers than with their fathers. These findings suggest that the emotional components of parent-child relationships may vary depending on both the child and parent gender. Gender differences in father-child relationships have scarcely been studied, but available research suggests that child gender may interact with fathering behaviors to influence emotion regulation and broader patterns of socioemotional development.

The Present Study

In summary, the preschool period is a time of dramatic growth in children's socioemotional development. Generally, younger children exhibit worse emotion regulation than older children (Onchwari & Keengwe, 2011), exemplifying that this is a time of dynamic change and growth in developmental skills that underlie behavioral adjustment. Individual differences in socioemotional development stem from level of exposure to risk factors, with children in high-risk groups generally exhibiting worse development over time (Chang et al., 2012; Halligan et al., 2013; Deater-Deckard, Dodge, Bates, & Pettit, 1998). Parenting especially influences adjustment in early childhood. For example, harsh punishment has been associated with poor behavior outcomes (Mulvaney & Mebert, 2007). In addition, the way that mothers respond to their children's emotion expressions has been associated with variations in children's socioemotional development (Duncombe et al., 2012; Halligan et al., 2013; Yagmurlu & Altan, 2010). Lastly, child gender has been related to the quality of adjustment in this time period. Girls have shown better emotion regulation skills and fewer externalizing problems than boys

(Onchwari & Keengwe, 2011; Miner & Clarke-Stewart, 2008). Also, boys and girls may respond to parenting practices in distinct ways that influence their emotion regulation and behavioral development (Chang et al., 2011; Dagne & Snyder, 2011; McCoy & Raver, 2011).

One major component of this research that is lacking is the influence of fathers' parenting behaviors on their children's emotion regulation and behavioral adjustment. Although Flanders and colleagues (2010) discussed how rough-and-tumble play with fathers may influence their children's socioemotional development, this is only one small facet of the many interactions that children may have with their fathers. Many investigators have discussed how mothers may influence their children's socioemotional development (such as Dagne & Snyder, 2011; Halligan et al., 2013; Mesman et al., 2009; and Waters et al., 2010), which suggests that fathers too may play an influential role in childhood adjustment, assuming the child has consistent contact with his or her father. In addition, research is lacking on how child gender may moderate the effects of fathering on children's socioemotional development.

To address these two issues, my thesis focuses on early fathering precursors of children's socioemotional adjustment in middle childhood, as well as how child gender interacts with these processes. The hypotheses are as follows:

1. Fathers' reports of adverse parenting behaviors at age 3, represented by harsh punishment, will be associated with increased adjustment problems at age 10. Conversely, positive fathering, characterized by warm responsiveness and inductive discipline, will be associated with fewer adjustment problems.
2. Child gender will be treated as an exploratory moderator variable of the longitudinal associations between father behaviors and child adjustment, due to lack of previous research on this topic.

Methods

Participants

Participants ($N = 163$) were drawn from a sample 3-year-old children (85 boys; age range = 34–50 months, mean [M] = 41.33 months, standard deviation [SD] = 2.22 months) who were enrolled in an ongoing longitudinal study of 245 young children at risk for school-age conduct problems (Olson, Sameroff, Kerr, Lopez, & Wellman, 2005). Samples for analyses ranged from 58 to 163, due to missing data. Children represented the full range of externalizing symptom severity on the Child Behavior Checklist/2–3 (Achenbach, 1992), with an oversampling of toddlers in the medium-high to high range of the Externalizing Problems Scale ($T > 60$; 44%). The remaining sample was split relatively evenly between children whose externalizing problems T scores exceeded 50 but were below 60, and those whose T scores were below 50. Most families for the full sample (95%) were recruited from newspaper announcements and fliers sent to day care centers and preschools; others were referred by preschool teachers and pediatricians. In order to recruit children with a range of behavioral adjustment levels, two different ads were periodically placed in local and regional newspapers and child care centers, one focusing on hard to manage toddlers, and the other on normally developing toddlers. The child's attendance in a formal preschool program was not an absolute requirement for family enrollment. Once a parent indicated interest, a screening questionnaire and brief follow-up telephone interview were used to determine the family's appropriateness for participation and willingness to engage in a longitudinal study. Children with serious chronic health problems, intellectual disability, and/or pervasive developmental disorders were not included the current study. Families were paid for their participation.

Most children (95.7%) were of European American heritage. Others were of African American (1.8%), Hispanic American (1.8%), and Asian American (1.8%) racial or ethnic backgrounds. These numbers add up to over 100% because some of the children in the sample were multi-racial. The majority (96.9%) resided in two-parent families; of the remaining households, 2.5% of parents identified themselves as living with a partner, and .6% as separated or divorced. Nearly all of the fathers (98.8%) worked outside the home. Forty-two percent of mothers and 50% of fathers had completed graduate or professional training, 49% of mothers and 34% of fathers had completed 4 years of college, and 10% of mothers and 14% of fathers had graduated from high school. The median annual family income fell between \$70,000 and \$80,000 (range = \$20,000 to >\$100,000).

Procedures

Age 3 procedures. Mothers, fathers, and children were administered questionnaires and assessments in their homes by a female social worker. In the first two hours of the home assessment, parents responded to a set of semi-structured interview questions adapted from that used by Dodge and colleagues in the Child Development Project (Dodge, Pettit, & Bates, 1994). Following the interview, the parent-child dyad participated in a series of different videotaped assessments. This parent-child session took about one hour, and included one session of free play in the middle of the hour. Mothers and fathers were interviewed and performed parent-child interaction tasks separately and on different days. Following the home assessment, parents were provided a packet of questionnaires about their parenting styles to fill out in their own time and to return by mail or experimenter pick-up. Families were given \$100 for participating in this intensive wave of data collection.

Age 10 procedures. Mothers, fathers, and teachers were asked to provide follow-up measures of child adjustment. Teachers were given \$10 gift certificates and families were provided with \$25 gift certificates for their participation.

Measures

Father discipline. Fathering behaviors that constituted the latent factors of warm responsiveness, inductive discipline, and harsh punishment were assessed via fathers' responses to a questionnaire and interview. Fathers completed the Parenting Dimensions Inventory (PDI; Power, 1993). They rated their personal views or behaviors regarding parenting practices on a 6-point scale (1 = not at all descriptive of me; 6 = highly descriptive of me) for items on the subscales that comprised the warm responsiveness factor: Nurturance (e.g., "My child and I have warm intimate moments together"; $\alpha = 0.74$) and Responsiveness (e.g., "I encourage my child to express his/her opinion"; $\alpha = 0.69$). The Reasoning ($\alpha = 0.59$) and Reminding ($\alpha = 0.58$) subscales, which were used to measure a latent construct of inductive discipline, were derived from fathers' responses to five hypothetical situations that frequently occur in childhood (e.g., "After arguing over toys, your child strikes a playmate"). Fathers rated how likely they would be to remind (e.g., "remind your child of the rule or repeat the direction") and reason (e.g., "talk to the child (e.g., discuss alternatives)") in each situation on a 4-point scale (0 = very unlikely to do; 3 = very likely to do).

Dodge, Pettit, and Bates' (1994) Harshness of Discipline Scale was administered during individual interviews with mothers and fathers to assess the frequency with which the responding parent and their partner had physically disciplined their child (e.g., spank, grab, shake) during the last 3 months. In this thesis, I include fathers' reports of their own harsh discipline practices, as well as their perceptions of their partners' harsh discipline. Possible responses were "never"

(value = 0), “once/month” (1), “once/week” (2), “daily” (3), and “several times daily” (4); when parents circled two adjacent responses, the value was averaged (e.g., 1.5 = between once/month and once/week). Parents’ reports of their own use of physical discipline were relatively low in frequency. Yet, research suggests that the amount of physical punishment that children experience from both parents combined is considerably greater than from either parent alone (Nobes & Smith, 1997). For these reasons, the measure was adapted by creating a rank-order scale to measure the frequency with which each parent reported that their child received physical punishment from either parent. Thus, the lowest rank (rank = 0) was assigned to children who received no physical punishment from either their mother or father (scores = 0 and 0). According to fathers, 24% of the sample was in this group. Children assigned the next lowest rank (rank = 1) had received physical punishment from one parent between “once per month” and “never,” and none of this type of discipline from their other parent (scores = 0.5 and 0). The rank of 2 was assigned to children who received scores of .5 and .5. On the basis of the responses in this sample, 36 rankings were made. Children who reportedly experienced physical punishment several times daily from both parents received the highest rank.

Children’s externalizing behavior problems. The Child Behavior Checklist (CBCL/6-18; Achenbach & Rescorla, 2001) and the Teacher Report Form (TRF/6-18; Achenbach & Rescorla, 2001), measures of behavioral and emotional problems in childhood, were used to assess parents’ and teachers’ ratings of children’s externalizing behaviors at age 10. Ratings by multiple informants enabled the assessment of children’s problems in multiple settings, following a growing consensus that discrepant reports of children’s adjustment by informants reflect true differences across diverse contexts rather than measurement errors (Achenbach &

Rescorla, 2001; Grietens et al., 2004; Hinshaw & Nigg, 1999; Kerr, Lunkenheimer, & Olson, 2007).

Parent report measures of externalizing behavior. Mothers and fathers independently completed the CBCL/6-18. Respondents rate the child on approximately 100 items that describe the child's behavior currently or within the past 6 months. Each item is rated on a 3-point scale (2 = very true or often true of the child; 1 = somewhat or sometimes true; 0 = not true of the child). There are two broadband, factor-analytically derived dimensions of child problem behavior, Internalizing and Externalizing. The Externalizing Problems Scale, used in this study, was defined by the Aggressive Behavior (e.g., "Argues a lot") and Rule-Breaking Behavior (e.g., "Lying or cheating") subscales in the CBCL/6-18. The correlation between Externalizing and its subscales was high for fathers ($\alpha = .87$) and mothers ($\alpha = .86$). Achenbach and Rescorla (2001) have reported that the Externalizing Problems scale of the CBCL/6-18 had high test-retest reliability (.92 at 7 day interval for CBCL/6-18).

Mothers and fathers also contributed ratings of their child's temperamental anger and impulsivity. An abbreviated version of the Child Behavior Questionnaire (CBQ; Ahadi, Rothbart, & Ye, 1993) was administered to measure both parents' perceptions of child temperament. Parents rated items that describe children's responses in given situations within the past 6 months on a 7-point scale (1 = extremely untrue; 7 = extremely true). Anger/Frustration ($\alpha = .76$, as reported by Ahadi et al., 1993) and Impulsivity ($\alpha = .78$, as reported by Ahadi et al., 1993) were used in the analysis. Anger/Frustration items described the child's negative reactions to frustrating situations (e.g., "Has temper tantrums when s/he doesn't get what s/he wants"). Items on the Impulsivity scale described the extent to which children

acted without thinking, typically in situationally inappropriate ways (e.g., “Usually rushes into an activity without thinking about it”).

Teacher report measures of externalizing behavior. At age 10 years teachers completed the Teacher Report Form/6-18 (Achenbach & Rescorla, 2001), which has the same response format and shares most of the same items with the CBCL/6-18. In the TRF/6-18, Externalizing and Internalizing subscales are identical to those in the CBCL/6-18. As with the parent ratings, the broadband Externalizing Problems scale was highly correlated with relevant narrow-band subscales ($\alpha = .85$). The average test-retest reliability was .90 at 16-day interval for the TRF/6-18 (Achenbach & Rescorla, 2001). In Achenbach’s normative sample, level of agreement between teachers and parents was moderate (.36) for Externalizing Problems.

Peer aggression at school. At age 10 years, teachers completed the Inventory of Peer Relations (Dodge & Coie, 1987). This 12-item scale provides measures of reactive (“when teased, strikes back”) and proactive (“bullies others”) peer aggression. It also includes a measure of peer liking. The scale has high internal consistency and moderate construct validity (Dodge & Coie, 1987). In addition, teachers completed the 7-item relational aggression subset of Crick’s (1996) Children’s Social Behavior Scale – Teacher Form (CSBS-T). The CSBS-T has high internal consistency ($\alpha = .93$) and moderately high concurrent validity (Dodge & Coie, 1987).

Emotion regulation difficulties at school. Teachers also completed the 24-item Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1997). Scores from the Emotion Regulation (e.g., “Can say when s/he is feeling sad, angry or mad, fearful or afraid”) and Lability (e.g., “Is prone to angry outbursts”) subscales were used in this study. These subscales have high internal consistency ($\alpha = .83$ for Emotion Regulation, $\alpha = .96$ for Lability) and are moderately intercorrelated ($r = -.50, p < .001$).

Analysis Plan

Descriptive statistics, *t*-tests, and bivariate correlations of study variables were calculated using SPSS (22). Structural equation modeling (SEM; Kline, 2005) was used to test the relationship between early fathering behaviors and later child behavior problems. Since outcomes were assessed in two distinct environments – the child’s home and school – separate home and school models were tested. There were multiple reasons for using SEM over a more traditional evaluation using linear regression. SEM allows for the use of latent variables created from multiple measures which leads to greater model specificity, such as parceling measurement error from overall model error. In addition, many of the current SEM programs employ estimation techniques that take missing data into account, such as full-information maximum likelihood estimation (FIML; Arbuckle, 1996; Enders & Bandalos, 2001). For all models in this analysis, Mplus (6.1) with FIML estimation was used (Muthén & Muthén, 1998-2011).

The proposed model for home adjustment is presented in Figure 1, and the proposed model for school adjustment is presented in Figure 2. Child externalizing problems, peer aggression and rejection, and self-regulation difficulties were used as adjustment outcomes at age 10. In addition to family income, preschool-age predictors included paternal self-report measures of warm responsiveness, induction, and frequency of harsh punishment. The age 10 outcome variables were split into two categories: behaviors at home (mother- and father- rated anger, externalizing problems, and impulsivity) and at school (teacher-rated emotional lability, externalizing problems, peer dislike, poor emotion regulation, proactive aggression, reactive aggression, and relational aggression). Latent factors were created for the home variables by combining mothers’ and fathers’ scores for the three problem behaviors: Anger, Externalizing Problems, and Impulsivity. Using teacher reports of children’s adjustment in the school setting,

a latent factor of Peer Aggression was created by combining the three aggression measures, and a Poor Emotion Regulation (Poor ER) latent factor was created by combining Lability and reverse-coded Emotion Regulation. Initially, the home and school models were tested using the full sample. To determine whether longitudinal relations between fathering and adjustment problems were differentially patterned for boys and girls, multiple group analysis was performed. Specifically, I split the sample by gender and applied the model to each group separately.

For all models, multiple fit indices were used to determine how well the specified models approximated the observed covariance structure through comparison with a model in which all constructs were assumed to be unrelated (Bollen, 1989). Good-fitting models are traditionally indicated by non-significant chi-squares; however, with larger samples, it is possible to get significant chi-squares even for models that fit the data well. The chi-square ratio (χ^2 / df) provides a better assessment of the chi-square by correcting for sample size with its values between 1 and 3 suggesting acceptable fit. The comparative fit index (CFI; $> .90$ for good fit) and the root mean square error of approximation (RMSEA; $< .05$ for good fit) are also commonly used (McDonald & Ho, 2002).

Results

Descriptive Statistics and Bivariate Correlations

Descriptive statistics for the study variables, computed using the full sample and separately by child gender, are shown in Table 1. There were no significant gender differences for the study variables at age 3. Independent samples *t*-tests for the parent report variables (equal variances assumed) revealed that boys were significantly more impulsive than girls at age 10, as rated by both mothers ($t(135) = 2.81, p = .006$) and fathers ($t(74) = 2.36, p = .021$). In addition, boys had significantly higher father-reported anger ($t(61) = 2.94, p = .005$, equal variances not

assumed) than girls. *T*-tests (equal variances not assumed) for teacher-rated school variables revealed that boys showed significantly higher levels of proactive aggression ($t(85) = 2.73, p = .008$), emotional lability ($t(107) = 2.28, p = .024$), and externalizing behaviors ($t(108) = 2.49, p = .014$) than girls.

Bivariate correlations between study variables for the full sample are shown in Table 2 (age 3), Table 3 (age 3 with age 10 at home), Table 4 (age 3 with age 10 at school), and Table 5 (age 10 at home with age 10 at school). Family income at age 3 was modestly correlated with paternal use of induction during the preschool years and with father-rated anger at age 10, and therefore was included in the model as a covariate. On the other hand, paternal education was only modestly correlated with induction and income, and therefore was not included in the models in order to avoid redundancy between the two potential covariates. As shown in Table 2, low levels of harsh punishment were modestly correlated with frequent use of inductive discipline, whereas induction and warm responsiveness were positively intercorrelated. Many of the age 10 home variables were robustly intercorrelated, with the exception of opposite parent ratings of anger and impulsivity. Specifically, mothers' ratings of anger and fathers' ratings of impulsivity were not significantly intercorrelated, whereas mothers' ratings of impulsivity and fathers' ratings of anger were modestly intercorrelated. Similarly, as shown in Table 4, all of the age 10 school variables were significantly intercorrelated. For example, teacher reports of peer aggression, externalizing problems, lability, and peer dislike were robustly intercorrelated. Poor emotion regulation was modestly intercorrelated with measures of peer aggression and externalizing problems. Lastly, peer dislike and poor emotion regulation were robustly intercorrelated.

As shown in Table 5, many of the home and school variables were significantly intercorrelated. Mothers' and fathers' ratings of child externalizing problems were moderately intercorrelated with teachers' ratings of proactive and reactive aggression, as well as modestly intercorrelated with teachers' reports of relational aggression. Mothers' and fathers' ratings of externalizing problems were moderately intercorrelated with teachers' ratings of child lability and peer dislike, and robustly intercorrelated with teachers' ratings of externalizing problems and poor emotion regulation. Mothers' ratings of child anger were modestly intercorrelated with teachers' reports of children's reactive aggression and emotional lability at school. Children who received high maternal ratings of anger also were perceived by teachers as high in peer rejection and externalizing behavior at school. To a modest degree, children who were perceived as high in anger by fathers tended to show poor emotion regulation at school. Children who were perceived by both parents as high in impulsivity tended to be rated highly by teachers on proactive peer aggression. Both parents' reports of child impulsivity were modestly intercorrelated with externalizing problems and peer rejection at school. In addition, fathers' reports of child impulsivity were modestly intercorrelated with teacher's perceptions of child relational aggression.

As hypothesized, preschool-age children who received frequent harsh punishment tended to be rated highly by mothers on externalizing problems and impulsivity at age 10 years (see Table 3). Early harsh punishment was also modestly correlated with later peer aggression, peer dislike, and externalizing problems at school. In addition, as consistent with the hypotheses, positive parenting at age 3 was negatively correlated with poor adjustment outcomes at age 10, but only for father-rated behaviors at home. Specifically, induction was moderately correlated with lower father-rated anger and modestly correlated with lower father-rated impulsivity.

Full Sample Analyses using Parent Report Outcomes

In the first model, age 3 fathering was used to predict age 10 child adjustment problems at home (significant beta coefficients reported in Figure 3). This model had a good fit: $\chi^2(16) = 17.20$, $\chi^2/df = 1.08$, CFI = .995, RMSEA = .02. The factor loadings were all significant onto their respective latent factors. Results showed that fathers' reports of harsh punishment significantly predicted the latent factors Externalizing Problems and Impulsivity. In addition, low levels of inductive discipline significantly predicted later child Anger. Warm responsiveness did not significantly predict any outcomes in this model. These relationships occurred when income, which significantly predicted fewer Externalizing Problems and less Anger, was included in the model.

Full Sample Analyses of Teacher Report Outcomes

In the second model, the same fathering behaviors were used to predict children's later adjustment problems at school (significant beta coefficients reported in Figure 4). This model had a fairly good fit, with the majority of the fit statistics in an acceptable range: $\chi^2(19) = 48.90$, $\chi^2/df = 2.57$, CFI = .938, RMSEA = .10. The factor loadings for Peer Aggression and Poor Emotion Regulation were all highly significant. Fathers' reports of harsh punishment significantly predicted the four problem behavior constructs: peer aggression, poor emotion regulation, externalizing behaviors, and peer dislike. Income was included in the model, but did not significantly predict any behavioral outcomes.

Gender Moderation: Pathways to Home Adjustment

Multiple group analyses were used to determine whether pathways from age 3 fathering to age 10 child adjustment problems at home were moderated by gender (significant beta coefficients reported in Figure 5). This model had an excellent fit: $\chi^2(38) = 36.37$, $\chi^2/df = .96$,

CFI=1.000, RMSEA=.00. Results showed that fathers' reports of harsh punishment significantly predicted Externalizing Problems and Impulsivity at home for boys. Warm responsiveness did not significantly predict any outcome for boys or for girls. As in the full sample, these relationships were found while controlling for the effects of family income. Income negatively predicted Externalizing Problems for girls as well as Anger for boys.

For both genders, fathers' reports of harsh punishment were negatively intercorrelated with induction, whereas warm responsiveness was positively intercorrelated with induction. Harsh punishment was significantly intercorrelated with lower warm responsiveness scores for boys but not girls. At age 10, Externalizing Problems were significantly intercorrelated with Anger and Impulsivity for both genders. However, Anger and Impulsivity were only significantly intercorrelated for boys. Mothers' ratings of child externalizing and anger were significantly intercorrelated for boys and girls. The factor loadings for the 3 latent factors were all highly significant for both genders.

Gender Moderation: Pathways to School Adjustment

Similarly, gender moderation of associations between early fathering characteristics and later school outcomes was explored using multiple group analyses (significant beta coefficients reported in Figure 6). This model had an acceptable fit: $\chi^2(44) = 109.58$, $\chi^2/df = 2.49$, CFI = .880, RMSEA = .14. Paternal report of harsh punishment significantly predicted later Peer Aggression for both boys and girls. In addition, harsh punishment significantly predicted peer dislike for girls. Warm responsiveness negatively predicted externalizing behaviors and peer dislike for boys. Unexpectedly, induction significantly predicted Poor Emotion Regulation for girls. Similar to the full sample model, income was included but did not have any significant concurrent or longitudinal relationships.

At age 3, induction was negatively intercorrelated with fathers' reports of harsh punishment and positively intercorrelated with warm responsiveness, for both genders. Harsh punishment was significantly intercorrelated with lower levels of warm responsiveness for boys but not girls. At age 10, Poor Emotion Regulation was significantly intercorrelated with externalizing problems and peer dislike for boys and girls. In addition, Peer Aggression was significantly intercorrelated with externalizing problems and peer dislike for both genders. However, Peer Aggression was significantly intercorrelated with Poor Emotion Regulation for boys, but not girls. Moreover, relational and proactive aggression were significantly intercorrelated for boys, but not for girls. Lastly, the factor loadings for Peer Aggression and Poor Emotion Regulation were significant for both genders.

Discussion

The main goal of my study was to determine whether fathering behaviors in early childhood were associated with children's emotion regulation capabilities and broader patterns of socioemotional adjustment at age 10. A secondary goal was to determine whether these pathways were moderated by child gender. As expected, paternal reports of adverse parenting behaviors predicted poor adjustment at home and at school, while positive fathering behaviors predicted low levels of adjustment problems in these settings. In addition, the strength of these longitudinal relationships in both settings was generally moderated by child gender.

One primary hypothesis was that adverse early fathering behaviors would predict the quality of children's socioemotional adjustment in middle childhood. Adverse fathering behaviors, represented in this study by fathers' reports of maternal and paternal harsh punishment, significantly predicted a diverse range of later child problem behaviors at home and at school. These included poor emotion regulation and relatively high levels of externalizing

problems, impulsivity, and peer aggression. My findings are consistent with a large body of previous work on the negative associations between corporal punishment and children's emotion regulation development and subsequent behavior problems (e.g., Duncombe et al., 2012; Mulvaney & Mebert, 2007; Olson et al., 2011). In addition, these findings expand upon previous research on negative mothering behaviors and their influence on socioemotional development (such as Blandon et al., 2010, and Dagne & Snyder, 2011) by suggesting that negative fathering practices also play a role in the development of children's long-term adjustment outcomes.

The mechanisms underlying these longitudinal associations are likely more complex than a unidirectional relationship between harsh fathering and children's adjustment. This association may exist because harsh punishment increases the risk for adjustment problems, or because children's early behavior problems often elicit high levels of corporal punishment from parents. For example, Gershoff and colleagues found that children who exhibited externalizing problems in kindergarten received more maternal harsh punishment in third grade. Conversely, children who received more harsh punishment in kindergarten also exhibited more severe externalizing behaviors in third grade (Gershoff, Lansford, Sexton, Davis-Kean, & Sameroff, 2012). We oversampled children with above average levels of externalizing behaviors at age 3, suggesting that the presence of their behavior problems may have elicited harsh punishment at an early age. In addition, it has been demonstrated that externalizing problems are moderately stable in early and middle childhood (e.g., Bilancia & Rescorla, 2010; Heller, Baker, Henker, & Hinshaw, 1996; Verhulst & Van der Ende, 1992). Therefore, it is also possible that adjustment problems in middle childhood resulted from the stability of behaviors that were present and elicited harsh punishment in early childhood. Future studies should assess the relationship between concurrent early child and parent behaviors with future child adjustment.

As hypothesized, positive early fathering was associated with some measures of children's positive socioemotional development at age 10. Specifically, children who received high levels of inductive discipline tended to be perceived as less angry than others in the home setting. However, contrary to expectation, paternal use of induction predicted poor emotion regulation and externalizing problems in the full sample at a level that approached significance. In addition there was a significant relationship between frequent use of inductive discipline and poor emotion regulation for girls. Although this finding contradicts my hypotheses, it is not unreasonable. Similar to how children with behavior problems tend to elicit harsh punishment from their parents, they may also elicit more discipline in general (including positive discipline). For example, Grusec and Kuczynski (1980) found that different types of child misbehavior elicited different types of maternal discipline – both positive and negative. Therefore, when combined with the moderate stability of behavior problems in childhood, it is possible that the children in this sample who exhibited behavior problems elicited both positive and negative discipline in early childhood. Therefore, increased levels of child behavior problems could partly explain relationships between induction and children's later socioemotional adjustment. Child adjustment problems at age 3 were not included in this study, and therefore this explanation awaits further study.

Due to a lack of previous research, child gender was treated as an exploratory moderator variable. Results strongly indicated that there were differences between boys and girls both in types and number of associations between early fathering behaviors and later adjustment outcomes. For example, early adverse father-reported parental behavior significantly predicted adjustment difficulties at home for boys but not nearly as well for girls. In the school model, all findings were either significant or marginally significant for only one gender, generally male,

with the exception being the relationship between harsh punishment and peer aggression, which was significant for both boys and girls. These findings reflect and expand upon those of previous studies, such as McCoy and Raver's (2011) finding that girls and boys responded to caregiver expressiveness in different ways. In addition, these findings affirm Dagne and Snyder's (2011) conclusion that maternal hostile mood affects emotion regulation development differently in boys versus girls. Although paternal expressiveness and hostile mood were not examined in this study, my findings are generally consistent with their conclusions and expand them into the realm of early fathering behaviors. In addition, these findings are consistent with those of Lunkenheimer et al. (2011), who showed that preschool-age boys were more likely to have higher externalizing scores than girls in relation to associations with high levels of father-child dyadic flexibility. Lastly, and perhaps most significantly, this study expands upon Chang et al.'s (2011) findings that mothering behaviors at age 3 predicted externalizing problems in boys, but not girls, at age 6. It is important to note that Chang et al.'s (2011) study focused on effortful control as a mediating variable, whereas the present study does not contain that emphasis.

A possible reason why father behaviors were generally better predictors of boys' adjustment than girls' may be because the boys in this sample exhibited significantly more severe adjustment problems than girls at age 10. Although measures of early socioemotional adjustment were not included in this study, a large corpus of previous research has shown that that boys manifest higher levels of externalizing behaviors than girls (e.g., Miner & Clarke-Stewart, 2008). Moreover, there was more of an opportunity to predict boys' later outcomes than girls', due to higher levels of variability in the boys' adjustment outcomes. Future research

should control for early child adjustment in order to assess if father behaviors influence development over and above baseline adjustment for both boys and girls.

In summary, these findings have shown that fathering behaviors at age 3 had important implications for the quality of children's socioemotional adjustment seven years later. In general, adverse father-report behaviors (i.e., harsh punishment) were associated with increased risk of later adjustment problems. Conversely, positive fathering behaviors (measured by inductive discipline and warm responsiveness) were associated with decreased risk of later behavior problems. These longitudinal relations encompassed adjustment outcomes assessed in home and school contexts, suggesting that the long-term sequelae of early father-child relationships may be pervasive in a child's daily life. In addition, the number and strength of these relationships differed by child gender, suggesting that boys and girls may respond differently to their father's behaviors during the preschool and school-age years.

Strengths and Limitations

The main strength of this study was its longitudinal design over a 7-year period. This created the opportunity to assess development across the span of early through middle childhood, rather than look at correlational data at one point in time. Another strength was the use of multi-informant reporting in two settings at age 10. Input from mothers, fathers, and teachers may help balance out the effects of a reporter exaggerating their responses to either extreme. It also provides a more thorough understanding of the child's general socioemotional adjustment by assessing how the child acts in diverse situations with different people and unique expectations.

Despite these strengths, this study had some limitations. One limitation was the focus on behavioral adjustment and emotion regulation difficulties, while ignoring positive development. Absence of socioemotional adjustment issues may not necessarily reflect healthy development.

Future research should include both positive and negative adjustment outcomes. In addition, the variables assessed were quite broad. For example, the Externalizing Problems Scale of the CBCL/6-18 combined both aggressive and rule-breaking behaviors. It is possible that early fathering behaviors may predict only one of these behaviors. Similarly, the harsh punishment measure represented paternal perceptions of mothers' and fathers' harsh punishment, rather than father-only harsh punishment. This makes it difficult to determine if the negative outcomes related to harsh punishment were specific to paternal or maternal practices, or both.

Furthermore, the parenting behaviors and adjustment outcomes were based on questionnaires, which can introduce bias by a parent or teacher either over- or under-reporting their own or the child's behaviors. Lastly, although the study had over 200 participants, many did not have father data at age 3, thus limiting the sample size for this thesis. Moreover, the sample contained mostly two-parent families of European American heritage, with fairly high socioeconomic backgrounds. This makes it difficult to generalize the findings to minority status and economically disadvantaged children. On the other hand, this is also a strength because the similarity between the participants in terms of socioeconomic status and ethnicity decreases the possibility that non-parental risk factors were skewing the results.

Future Directions

The findings from this study have important implications for future research and interventions. There is a need for increased research on all aspects of fathering that may be associated with children's adjustment outcomes, particularly those that may predict positive aspects of children's later social and emotional adjustment. Future research efforts should also include observational measures of fathering behaviors that are less susceptible to respondent bias. Studies should aim to find more specific fathering predictors of adjustment, especially for

girls. Research should also focus on parenting constructs that have been shown to differentially affect boys' and girls' socioemotional development when mothers are involved, such as hostile mood. In addition, some studies (e.g., Roger, Rinaldi, & Howe, 2012) have suggested that parents may treat boys and girls in different ways. For example, fathers have been shown to differentially reinforce their son's versus daughter's negative emotional expressions in early childhood (Chaplin, Cole, & Zahn-Waxler, 2005). In future research, parental and child gender differences in parenting characteristics and child outcomes should be examined. In addition, studies should assess the potential underlying mechanisms of child gender differences in adjustment. Finally, future studies should aim to recruit more diverse samples so that the findings can be more generalizable.

In terms of interventions, this study revealed that fathering during early childhood was associated with children's socioemotional adjustment at both home and school, especially for boys. This information can be used to modify and structure interventions aimed at improving fathers' behaviors in early childhood, such as by discouraging the use of corporal punishment and emphasizing the use of positive fathering practices such as inductive discipline.

Conclusions

Fathering behaviors, although infrequently studied, have important implications for child development. These findings have shown that fathers' adverse parenting behaviors in early childhood were associated with a diverse range of children's adjustment problems in the late school-age period. On the other hand, there was some evidence that positive fathering behaviors were associated with fewer adjustment problems, indicating more links with children's positive socioemotional development. In many cases, these associations were moderated by child gender. Finally, this study has important implications for future research and interventions, specifically

by indicating the importance of including fathers whenever relevant and possible in research, prevention, and treatment.

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Table 1

Means and Standard Deviations of Study Variables

Age 3 Variables	<i>Mean</i>			<i>St. Deviation</i>			Gender Differences
	All	Boys	Girls	All	Boys	Girls	
Income Level	9.95	9.89	10.02	2.52	2.49	2.56	
Father Education	6.28	6.20	6.36	.91	1.00	.79	
Harsh Punishment	6.83	7.78	5.81	7.14	7.72	6.37	
Induction	.01	.01	.01	1.77	1.44	2.07	
Warm Responsiveness	.04	.04	.04	1.68	1.61	1.75	
Age 10 Home Variables	<i>Mean</i>			<i>St. Deviation</i>			Gender Differences
	All	Boys	Girls	All	Boys	Girls	
Externalizing – Mother	4.96	5.78	4.02	5.79	6.51	4.68	B>G [†]
Externalizing – Father	5.64	6.16	4.97	5.78	6.46	4.81	
Anger – Mother	30.04	31.25	28.71	9.54	9.48	9.49	
Anger – Father	31.66	34.21	28.50	8.65	7.26	9.27	B>G**
Impulsivity – Mother	27.99	29.68	26.12	7.59	7.63	7.15	B>G**
Impulsivity – Father	30.65	32.49	28.38	7.76	7.56	7.49	B>G*
Age 10 School Variables	<i>Mean</i>			<i>St. Deviation</i>			Gender Differences
	All	Boys	Girls	All	Boys	Girls	
Relational Aggression	9.84	9.88	9.79	4.16	4.04	4.31	
Proactive Aggression	3.37	3.60	3.14	1.02	1.32	.49	B>G**
Reactive Aggression	4.56	4.90	4.21	2.41	2.62	2.14	B>G [†]
Lability	20.17	21.24	19.08	5.57	6.67	3.93	B>G*
Poor Emotion Regulation	-26.34	-26.19	-26.48	4.50	4.53	4.49	
Externalizing – Teacher	2.39	3.29	1.45	4.39	5.25	3.04	B>G*
Peer Dislike	-25.60	-25.90	-25.29	3.93	3.92	3.96	

Note: [†] = $p < .10$, * = $p < .05$, ** = $p < .01$

Note: Equal variances assumed for the t -tests for mother- and father-rated impulsivity.

Table 2

Bivariate Correlations of Study Variables at Age 3

Variables	1	2	3	4	5
1. Income	1.00	.37**	.05	.17*	.08
2. Father Education		1.00	.05	.26**	.12
3. Harsh Punishment			1.00	-.28**	-.13
4. Induction				1.00	.28***
5. Warm Responsiveness					1.00

Note: † = $p < .10$, * = $p < .05$, ** = $p < .01$, *** = $p < .001$

Table 3

Bivariate Correlations of Study Variables at Age 3 with Age 10 at Home

Variables	6	7	8	9	10	11
1. Income	-.16 [†]	-.09	-.08	.06	-.28*	.00
2. Father Education	.09	-.03	-.02	-.03	-.20	-.14
3. Harsh Punishment	.24*	.25 [†]	.15	.39***	.08	.17
4. Induction	-.09	-.22 [†]	-.14	-.04	-.31**	-.23*
5. Warm Responsiveness	-.06	-.26*	.00	-.04	-.17	-.14
6. Externalizing – Mother	1.00	.76***	.59***	.46***	.47***	.31**
7. Externalizing – Father		1.00	.43***	.51***	.53***	.43***
8. Anger – Mother			1.00	.32***	.44***	.19
9. Impulsivity – Mother				1.00	.26*	.45***
10. Anger – Father					1.00	.46***
11. Impulsivity – Father						1.00

Note: [†] = $p < .10$, * = $p < .05$, ** = $p < .01$, *** = $p < .001$

Table 4

Bivariate Correlations of Study Variables at Age 3 with Age 10 at School

Variables	6	7	8	9	10	11	12
1. Income	.12	.01	-.04	.13	.07	.00	.01
2. Father Education	-.01	-.08	.01	-.02	.09	.02	.07
3. Harsh Punishment	.19 [†]	.25*	.23*	.15	.03	.20*	.24*
4. Induction	-.10	-.02	-.06	.11	.10	.07	-.02
5. Warm Responsiveness	-.04	-.09	-.14	-.10	-.07	-.12	-.13
6. Relational Aggression	1.00	.61***	.59***	.35***	.18*	.50***	.36***
7. Proactive Aggression		1.00	.61***	.36***	.21*	.65***	.43***
8. Reactive Aggression			1.00	.52***	.17*	.74***	.53***
9. Lability				1.00	.37***	.73***	.51***
10. Poor Emotion Regulation					1.00	.27**	.54***
11. Externalizing – Teacher						1.00	.56***
12. Peer Dislike							1.00

Note: [†] = $p < .10$, * = $p < .05$, ** = $p < .01$, *** = $p < .001$

Table 5

Bivariate Correlations of Study Variables at Age 10 at Home with Age 10 at School

Variables	<i>School</i>	1	2	3	4	5	6	7
<i>Home</i>								
Externalizing – Mother		.25**	.34***	.49***	.44***	.27**	.62***	.41***
Externalizing – Father		.24*	.33**	.35**	.43***	.34**	.51***	.40***
Anger – Mother		.10	.13	.20*	.23*	.09	.32***	.24**
Impulsivity – Mother		.14	.27**	.24**	.38***	.12	.28**	.21*
Anger – Father		.08	.18	.11	.23 [†]	.30*	.21 [†]	.23 [†]
Impulsivity – Father		.26*	.36**	.32**	.45***	.21 [†]	.44***	.35**

Age 10 at School:

1. Relational Aggression
2. Proactive Aggression
3. Reactive Aggression
4. Lability
5. Poor Emotion Regulation
6. Externalizing - Teacher
7. Peer Dislike

Note: [†] = $p < .10$, * = $p < .05$, ** = $p < .01$, *** = $p < .001$

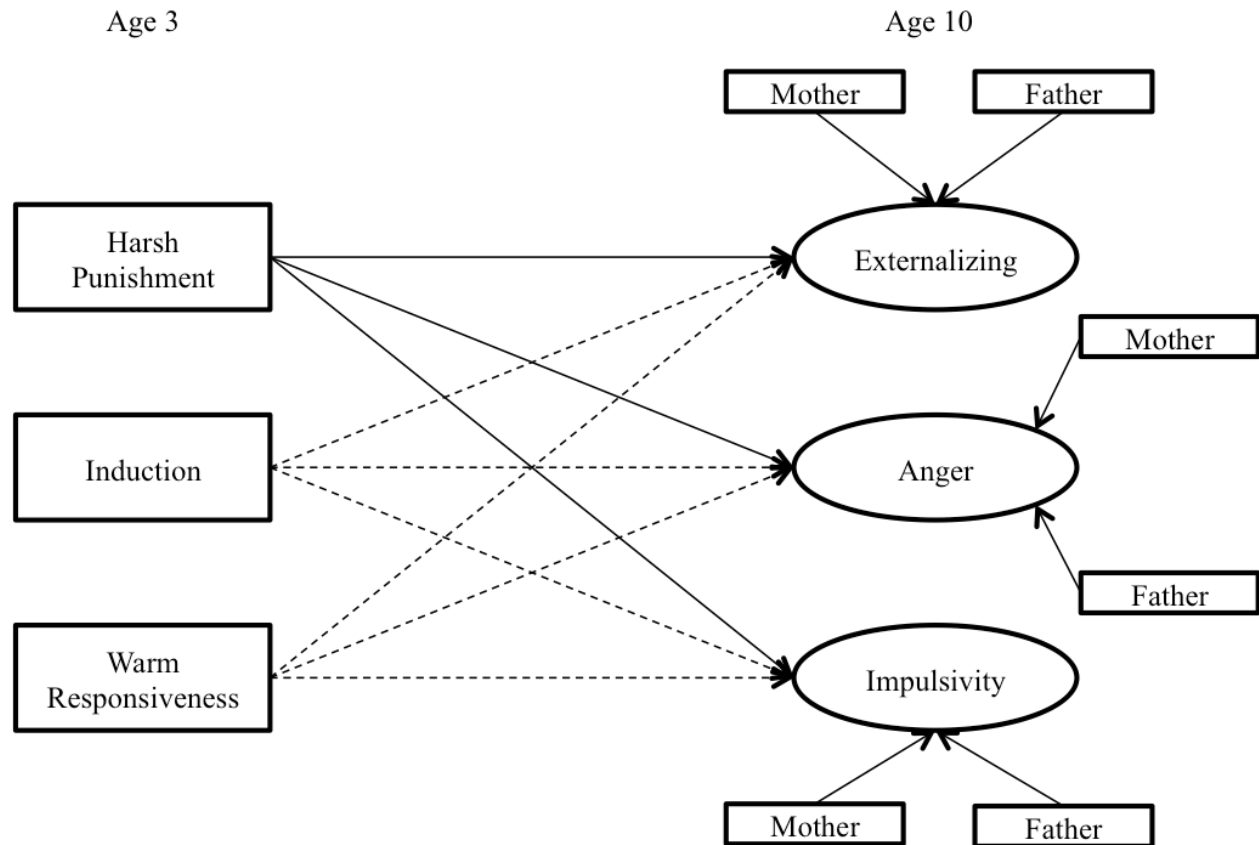


Figure 1. The measurement model for home adjustment. Hypothesized positive relations are represented by solid lines, while hypothesized negative relations are represented by dashed lines.

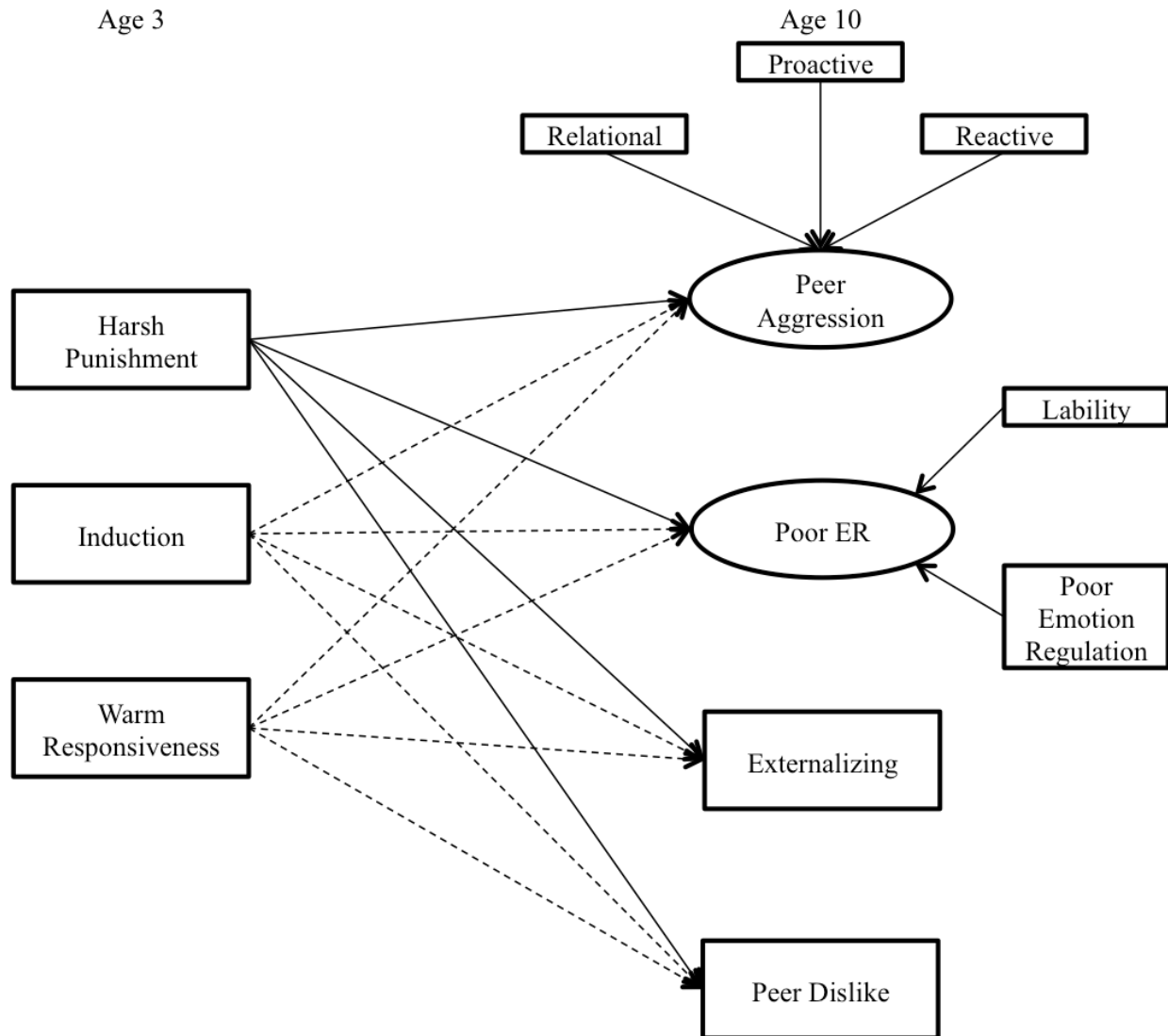


Figure 2. The measurement model for school adjustment. Hypothesized positive relations are represented by solid lines, while hypothesized negative relations are represented by dashed lines.

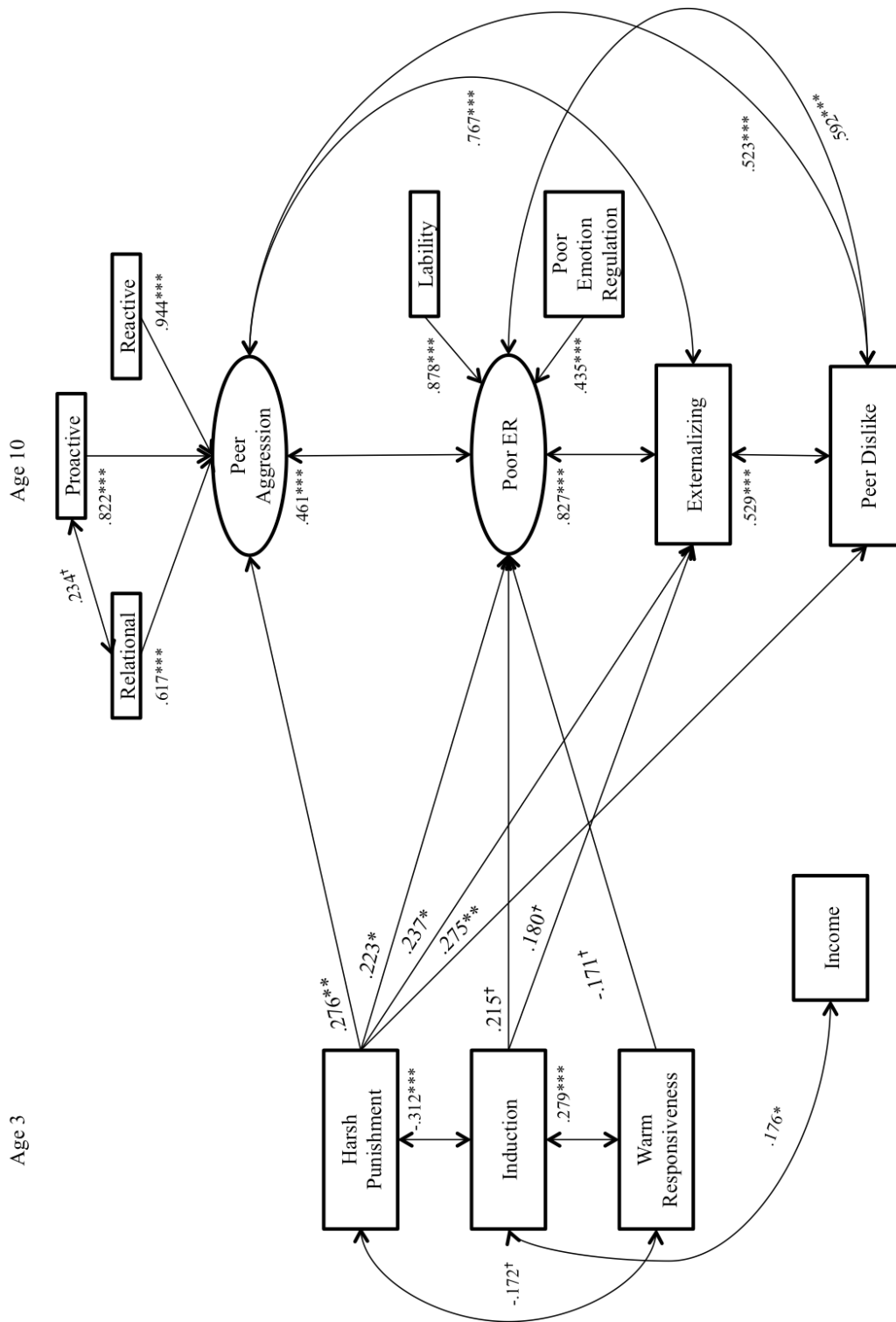


Figure 4. Concurrent and longitudinal relationships between age 3 fathering and income and age 10 adjustment problems at school, with the full sample.

Note: † = $p < .10$, * = $p < .05$, ** = $p < .01$, *** = $p < .001$

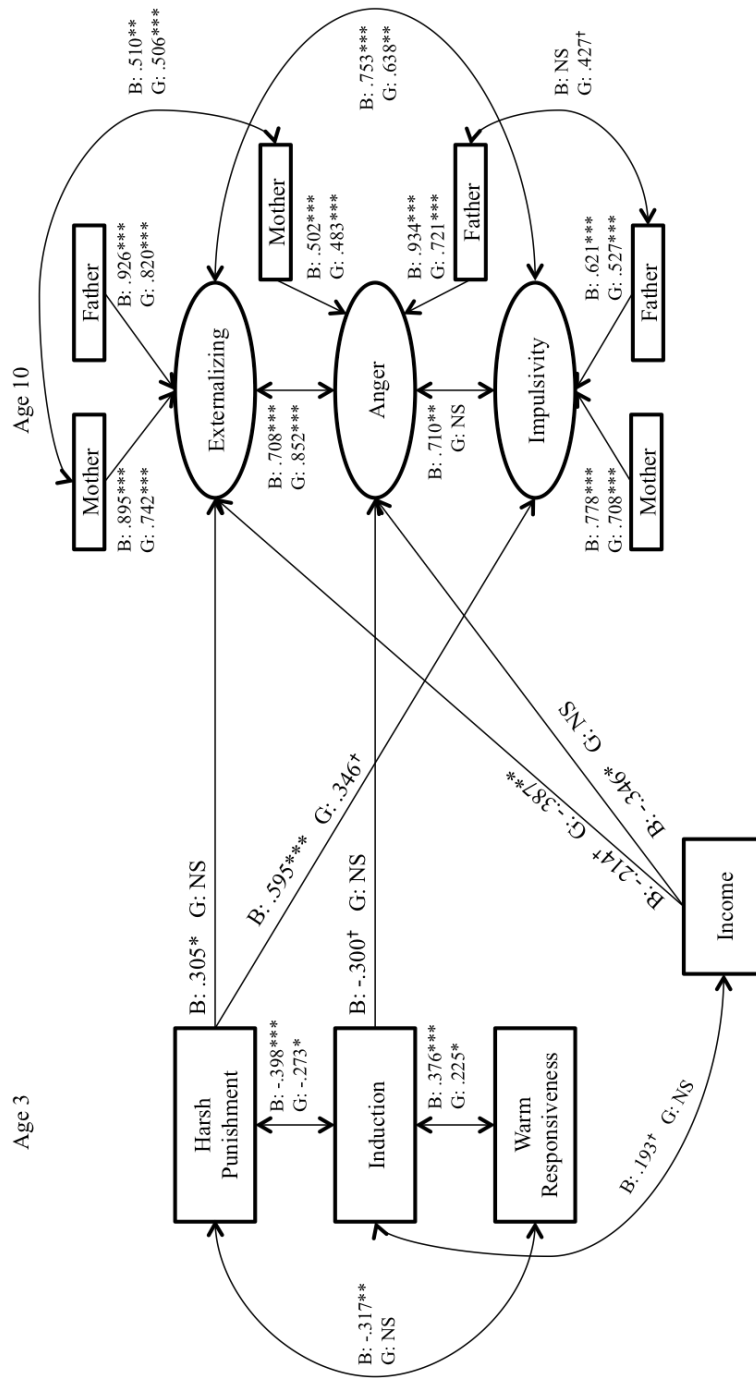


Figure 5. Concurrent and longitudinal relationships between age 3 fathering and income and age 10 adjustment problems at home, as moderated by gender. Boys are represented by “B,” while girls are represented by “G.”

Note: NS = not significant, † = $p < .10$, * = $p < .05$, ** = $p < .01$, *** = $p < .001$

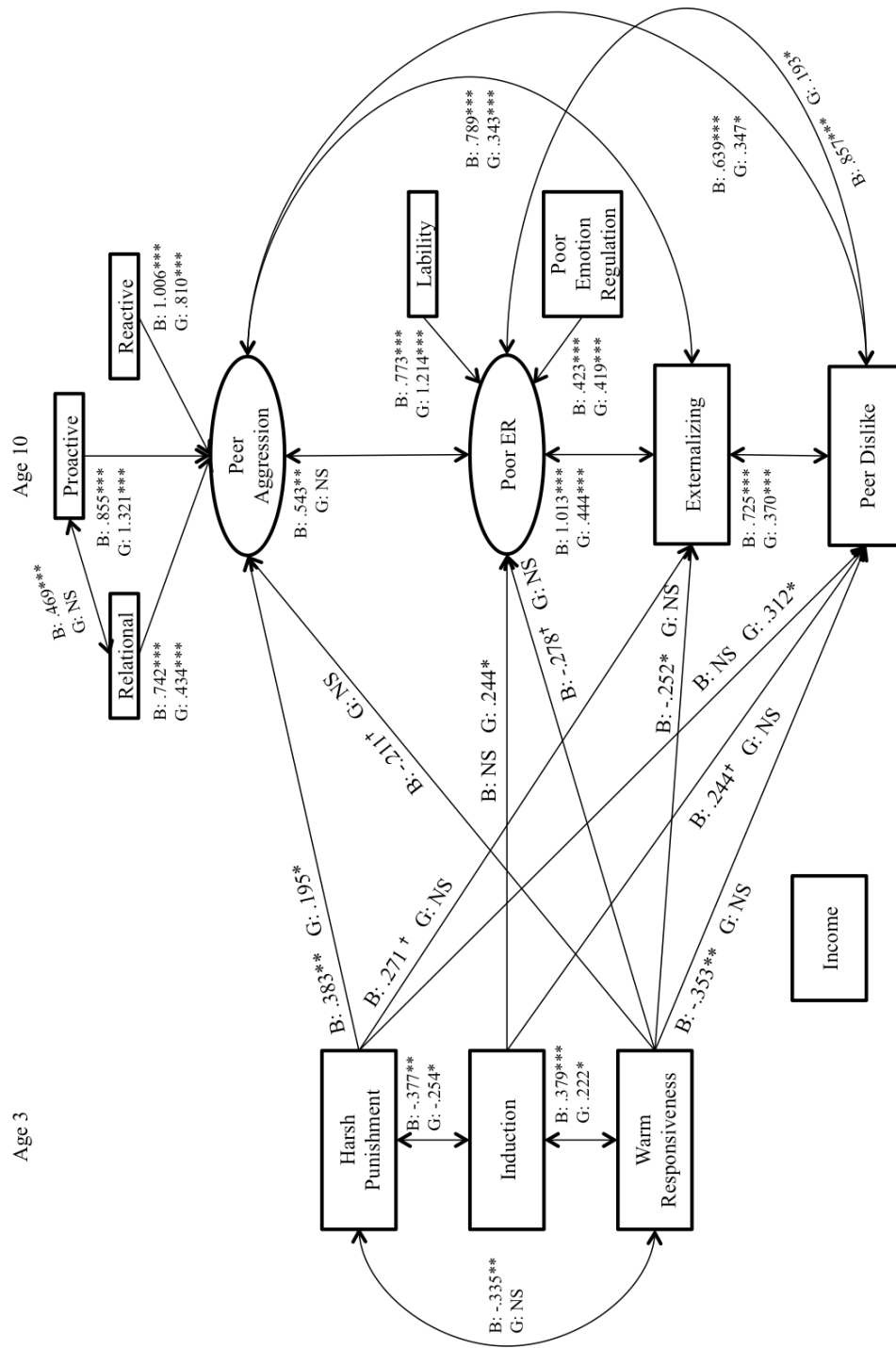


Figure 6. Concurrent and longitudinal relationships between age 3 fathering and income and age 10 adjustment problems at school, as moderated by gender. Boys are represented by “B,” while girls are represented by “G.”

Note: NS = not significant, † = $p < .10$, * = $p < .05$, ** = $p < .01$, *** = $p < .001$

Appendix 1: Harshness of Discipline Scale (Dodge, Pettit, & Bates, 1994)

Mother's punishment behavior: During the last three months, how often did you (child's mother) have to physically punish your child, e.g., spank, grab, shake.

Approximately:

Never	Once a month	Once a week	Every day	Several times a day
0	1	2	3	4

*(Ask if yes): How did you/child's mother usually spank? _____

*What was the most severe form of physical punishment you/she had to do during this period?

(Probe gently for how punishment was administered by each parent. Get just enough information to make ratings. Prompt with leading phrases from the scale.)

Father's punishment behavior: How often did you (child's father) have to physically punish _____..... such as spank, grab, shake?

Approximately:

Never	Once a month	Once a week	Every day	Several times a day
0	1	2	3	4

*(Ask if yes): How did you/child's mother usually spank? _____

*What was the most severe form of physical punishment you/she had to do during this period?

(Probe gently for how punishment was administered by each parent. Get just enough information to make ratings. Prompt with leading phrases from the scale.)

Approximately:

Never	Once a month	Once a week	Every day	Several times a day
0	1	2	3	4

*(Ask if yes): How did you/child's father usually spank? _____

*What was the most severe form of physical punishment you/he had to do during this period?

Appendix 2: Child Behavior Checklist (CBCL/6-18; Achenbach & Rescorla, 2001)



Please print **CHILD BEHAVIOR CHECKLIST FOR AGES 6-18**

For office use only
ID # _____

CHILD'S FULL NAME First _____ Middle _____ Last _____			PARENTS' USUAL TYPE OF WORK, even if not working now. (Please be specific — for example, auto mechanic, high school teacher, homemaker, laborer, lathe operator, shoe salesman, army sergeant.) FATHER'S TYPE OF WORK _____ MOTHER'S TYPE OF WORK _____	
CHILD'S GENDER <input type="checkbox"/> Boy <input type="checkbox"/> Girl	CHILD'S AGE _____	CHILD'S ETHNIC GROUP OR RACE _____	THIS FORM FILLED OUT BY: (print your full name) _____	
TODAY'S DATE Mo. _____ Date _____ Yr. _____		CHILD'S BIRTHDATE Mo. _____ Date _____ Yr. _____	Your gender: <input type="checkbox"/> Male <input type="checkbox"/> Female Your relation to the child: <input type="checkbox"/> Biological Parent <input type="checkbox"/> Step Parent <input type="checkbox"/> Grandparent <input type="checkbox"/> Adoptive Parent <input type="checkbox"/> Foster Parent <input type="checkbox"/> Other (specify) _____	
GRADE IN SCHOOL _____ NOT ATTENDING SCHOOL <input type="checkbox"/>	Please fill out this form to reflect <i>your</i> view of the child's behavior even if other people might not agree. Feel free to print additional comments beside each item and in the space provided on page 2. Be sure to answer all items.			

I. Please list the sports your child most likes to take part in. For example: swimming, baseball, skating, skate boarding, bike riding, fishing, etc.

None

	Compared to others of the same age, about how much time does he/she spend in each?				Compared to others of the same age, how well does he/she do each one?			
	Less Than Average	Average	More Than Average	Don't Know	Below Average	Average	Above Average	Don't Know
a. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

II. Please list your child's favorite hobbies, activities, and games, other than sports. For example: stamps, dolls, books, piano, crafts, cars, computers, singing, etc. (Do *not* include listening to radio or TV.)

None

	Compared to others of the same age, about how much time does he/she spend in each?				Compared to others of the same age, how well does he/she do each one?			
	Less Than Average	Average	More Than Average	Don't Know	Below Average	Average	Above Average	Don't Know
a. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

III. Please list any organizations, clubs, teams, or groups your child belongs to.

None

	Compared to others of the same age, how active is he/she in each?			
	Less Active	Average	More Active	Don't Know
a. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IV. Please list any jobs or chores your child has. For example: paper route, babysitting, making bed, working in store, etc. (Include both paid and unpaid jobs and chores.)

None

	Compared to others of the same age, how well does he/she carry them out?			
	Below Average	Average	Above Average	Don't Know
a. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Be sure you answered all items. Then see other side.

Please print. Be sure to answer all items.

V. 1. About how many close friends does your child have? (Do not include brothers & sisters)

- None 1 2 or 3 4 or more

2. About how many times a week does your child do things with any friends outside of regular school hours?

(Do not include brothers & sisters)

- Less than 1 1 or 2 3 or more

VI. Compared to others of his/her age, how well does your child:

	Worse	Average	Better	
a. Get along with his/her brothers & sisters?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Has no brothers or sisters
b. Get along with other kids?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Behave with his/her parents?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Play and work alone?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

VII. 1. Performance in academic subjects.

Does not attend school because _____

Check a box for each subject that child takes	Performance			
	Failing	Below Average	Average	Above Average
a. Reading, English, or Language Arts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. History or Social Studies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Arithmetic or Math	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Does your child receive special education or remedial services or attend a special class or special school?

- No Yes—kind of services, class, or school:

3. Has your child repeated any grades? No Yes—grades and reasons:

4. Has your child had any academic or other problems in school? No Yes—please describe:

When did these problems start? _____

Have these problems ended? No Yes—when?

Does your child have any illness or disability (either physical or mental)? No Yes—please describe:

What concerns you most about your child?

Please describe the best things about your child.

Please print. Be sure to answer all items.

Below is a list of items that describe children and youths. For each item that describes your child **now or within the past 6 months**, please circle the **2** if the item is **very true or often true** of your child. Circle the **1** if the item is **somewhat or sometimes true** of your child. If the item is **not true** of your child, circle the **0**. Please answer all items as well as you can, even if some do not seem to apply to your child.

0 = Not True (as far as you know)			1 = Somewhat or Sometimes True	2 = Very True or Often True			
0	1	2	1. Acts too young for his/her age	0	1	2	32. Feels he/she has to be perfect
0	1	2	2. Drinks alcohol without parents' approval (describe): _____	0	1	2	33. Feels or complains that no one loves him/her
0	1	2	3. Argues a lot	0	1	2	34. Feels others are out to get him/her
0	1	2	4. Fails to finish things he/she starts	0	1	2	35. Feels worthless or inferior
0	1	2	5. There is very little he/she enjoys	0	1	2	36. Gets hurt a lot, accident-prone
0	1	2	6. Bowel movements outside toilet	0	1	2	37. Gets in many fights
0	1	2	7. Bragging, boasting	0	1	2	38. Gets teased a lot
0	1	2	8. Can't concentrate, can't pay attention for long	0	1	2	39. Hangs around with others who get in trouble
0	1	2	9. Can't get his/her mind off certain thoughts; obsessions (describe): _____	0	1	2	40. Hears sounds or voices that aren't there (describe): _____
0	1	2	10. Can't sit still, restless, or hyperactive	0	1	2	41. Impulsive or acts without thinking
0	1	2	11. Clings to adults or too dependent	0	1	2	42. Would rather be alone than with others
0	1	2	12. Complains of loneliness	0	1	2	43. Lying or cheating
0	1	2	13. Confused or seems to be in a fog	0	1	2	44. Bites fingernails
0	1	2	14. Cries a lot	0	1	2	45. Nervous, highstrung, or tense
0	1	2	15. Cruel to animals	0	1	2	46. Nervous movements or twitching (describe): _____
0	1	2	16. Cruelty, bullying, or meanness to others	0	1	2	47. Nightmares
0	1	2	17. Daydreams or gets lost in his/her thoughts	0	1	2	48. Not liked by other kids
0	1	2	18. Deliberately harms self or attempts suicide	0	1	2	49. Constipated, doesn't move bowels
0	1	2	19. Demands a lot of attention	0	1	2	50. Too fearful or anxious
0	1	2	20. Destroys his/her own things	0	1	2	51. Feels dizzy or lightheaded
0	1	2	21. Destroys things belonging to his/her family or others	0	1	2	52. Feels too guilty
0	1	2	22. Disobedient at home	0	1	2	53. Overeating
0	1	2	23. Disobedient at school	0	1	2	54. Overtired without good reason
0	1	2	24. Doesn't eat well	0	1	2	55. Overweight
0	1	2	25. Doesn't get along with other kids				56. Physical problems without known medical cause:
0	1	2	26. Doesn't seem to feel guilty after misbehaving	0	1	2	a. Aches or pains (not stomach or headaches)
0	1	2	27. Easily jealous	0	1	2	b. Headaches
0	1	2	28. Breaks rules at home, school, or elsewhere	0	1	2	c. Nausea, feels sick
0	1	2	29. Fears certain animals, situations, or places, other than school (describe): _____	0	1	2	d. Problems with eyes (not if corrected by glasses) (describe): _____
0	1	2	30. Fears going to school	0	1	2	e. Rashes or other skin problems
0	1	2	31. Fears he/she might think or do something bad	0	1	2	f. Stomachaches
				0	1	2	g. Vomiting, throwing up
				0	1	2	h. Other (describe): _____

Please print. Be sure to answer all items.

0 = Not True (as far as you know)			1 = Somewhat or Sometimes True	2 = Very True or Often True			
0	1	2	57. Physically attacks people	0	1	2	84. Strange behavior (describe): _____
0	1	2	58. Picks nose, skin, or other parts of body (describe): _____	0	1	2	85. Strange ideas (describe): _____
0	1	2	59. Plays with own sex parts in public	0	1	2	86. Stubborn, sullen, or irritable
0	1	2	60. Plays with own sex parts too much	0	1	2	87. Sudden changes in mood or feelings
0	1	2	61. Poor school work	0	1	2	88. Sulks a lot
0	1	2	62. Poorly coordinated or clumsy	0	1	2	89. Suspicious
0	1	2	63. Prefers being with older kids	0	1	2	90. Swearing or obscene language
0	1	2	64. Prefers being with younger kids	0	1	2	91. Talks about killing self
0	1	2	65. Refuses to talk	0	1	2	92. Talks or walks in sleep (describe): _____
0	1	2	66. Repeats certain acts over and over; compulsions (describe): _____	0	1	2	93. Talks too much
0	1	2	67. Runs away from home	0	1	2	94. Teases a lot
0	1	2	68. Screams a lot	0	1	2	95. Temper tantrums or hot temper
0	1	2	69. Secretive, keeps things to self	0	1	2	96. Thinks about sex too much
0	1	2	70. Sees things that aren't there (describe): _____	0	1	2	97. Threatens people
0	1	2	71. Self-conscious or easily embarrassed	0	1	2	98. Thumb-sucking
0	1	2	72. Sets fires	0	1	2	99. Smokes, chews, or sniffs tobacco
0	1	2	73. Sexual problems (describe): _____	0	1	2	100. Trouble sleeping (describe): _____
0	1	2	74. Showing off or clowning	0	1	2	101. Truancy, skips school
0	1	2	75. Too shy or timid	0	1	2	102. Underactive, slow moving, or lacks energy
0	1	2	76. Sleeps less than most kids	0	1	2	103. Unhappy, sad, or depressed
0	1	2	77. Sleeps more than most kids during day and/or night (describe): _____	0	1	2	104. Unusually loud
0	1	2	78. Inattentive or easily distracted	0	1	2	105. Uses drugs for nonmedical purposes (<i>don't</i> include alcohol or tobacco) (describe): _____
0	1	2	79. Speech problem (describe): _____	0	1	2	106. Vandalism
0	1	2	80. Stares blankly	0	1	2	107. Wets self during the day
0	1	2	81. Steals at home	0	1	2	108. Wets the bed
0	1	2	82. Steals outside the home	0	1	2	109. Whining
0	1	2	83. Stores up too many things he/she doesn't need (describe): _____	0	1	2	110. Wishes to be of opposite sex
				0	1	2	111. Withdrawn, doesn't get involved with others
				0	1	2	112. Worries
				0	1	2	113. Please write in any problems your child has that were not listed above:
				0	1	2	_____
				0	1	2	_____
				0	1	2	_____

Appendix 3: Teacher Report Form (TRF/6-18; Achenbach & Rescorla, 2001)



Principal Investigator/Program Director (Last, first, middle): Olson, Sheryl L.

TEACHER'S REPORT FORM FOR AGES 6-18

For office use only
ID # _____

Your answers will be used to compare the pupil with other pupils whose teachers have completed similar forms. The information from this form will also be used for comparison with other information about this pupil. Please answer as well as you can, even if you lack full information. Scores on individual items will be combined to identify general patterns of behavior. Feel free to print additional comments beside each item and in the spaces provided on page 2. **Please print, and answer all items.**

PUPIL'S FULL NAME First Middle Last			PARENTS' USUAL TYPE OF WORK, even if not working now (Please be specific — for example, auto mechanic, high school teacher, homemaker, laborer, lathe operator, shoe salesman, army sergeant.) FATHER'S TYPE OF WORK _____ MOTHER'S TYPE OF WORK _____
PUPIL'S GENDER <input type="checkbox"/> Boy <input type="checkbox"/> Girl	PUPIL'S AGE	PUPIL'S ETHNIC GROUP OR RACE	
TODAY'S DATE Mo. _____ Date _____ Yr. _____		PUPIL'S BIRTHDATE (if known) Mo. _____ Date _____ Yr. _____	THIS FORM FILLED OUT BY: (print your full name)
GRADE IN SCHOOL	NAME AND ADDRESS OF SCHOOL		Your gender: <input type="checkbox"/> Male <input type="checkbox"/> Female Your role at the school: <input type="checkbox"/> Classroom Teacher <input type="checkbox"/> Counselor <input type="checkbox"/> Special Educator <input type="checkbox"/> Administrator <input type="checkbox"/> Teacher's Aide <input type="checkbox"/> Other (specify):

- I. For how many months have you known this pupil? _____ months
- II. How well do you know him/her? 1. Not Well 2. Moderately Well 3. Very Well
- III. How much time does he/she spend in your class or service per week?
- IV. What kind of class or service is it? (Please be specific, e.g., regular 5th grade, 7th grade math, learning disability, counseling, etc.)
- V. Has he/she ever been referred for special class placement, services, or tutoring?
 Don't Know 0. No 1. Yes — what kind and when?

VI. Has he/she repeated any grades? Don't Know 0. No 1. Yes — grades and reasons:

VII. Current academic performance — list academic subjects and check box that indicates pupil's performance for each subject:

Academic subject	1. Far below grade	2. Somewhat below grade	3. At grade level	4. Somewhat above grade	5. Far above grade
1. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Be sure you answered all items. Then see other side.

Please print. Be sure to answer all items.

VIII. Compared to typical pupils of the same age:	1. Much less	2. Somewhat less	3. Slightly less	4. About average	5. Slightly more	6. Somewhat more	7. Much more
1. How hard is he/she working?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. How appropriately is he/she behaving?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. How much is he/she learning?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. How happy is he/she?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IX. Most recent achievement test scores (optional):

Name of test	Subject	Date	Percentile or grade level obtained

X. IQ, readiness, or aptitude tests (optional):

Name of test	Date	IQ or equivalent scores

Does this pupil have any illness or disability (either physical or mental)? No Yes— please describe:

What concerns you most about this pupil?

Please describe the best things about this pupil:

Please feel free to write any comments about this pupil's work, behavior, or potential, using extra pages if necessary.

Please print. Be sure to answer all items.

Below is a list of items that describe pupils. For each item that describes the pupil **now or within the past 2 months**, please circle the **2** if the item is **very true or often true** of the pupil. Circle the **1** if the item is **somewhat or sometimes true** of the pupil. If the item is **not true** of the pupil, circle the **0**. Please answer all items as well as you can, even if some do not seem to apply to this pupil.

0 = Not True (as far as you know)			1 = Somewhat or Sometimes True			2 = Very True or Often True		
0	1	2	1. Acts too young for his/her age	0	1	2	34. Feels others are out to get him/her	
0	1	2	2. Hums or makes other odd noises in class	0	1	2	35. Feels worthless or inferior	
0	1	2	3. Argues a lot	0	1	2	36. Gets hurt a lot, accident-prone	
0	1	2	4. Fails to finish things he/she starts	0	1	2	37. Gets in many fights	
0	1	2	5. There is very little that he/she enjoys	0	1	2	38. Gets teased a lot	
0	1	2	6. Defiant, talks back to staff	0	1	2	39. Hangs around with others who get in trouble	
0	1	2	7. Bragging, boasting	0	1	2	40. Hears sounds or voices that aren't there (describe): _____	
0	1	2	8. Can't concentrate, can't pay attention for long	0	1	2	41. Impulsive or acts without thinking	
0	1	2	9. Can't get his/her mind off certain thoughts; obsessions (describe): _____	0	1	2	42. Would rather be alone than with others	
0	1	2	10. Can't sit still, restless, or hyperactive	0	1	2	43. Lying or cheating	
0	1	2	11. Clings to adults or too dependent	0	1	2	44. Bites fingernails	
0	1	2	12. Complains of loneliness	0	1	2	45. Nervous, high-strung, or tense	
0	1	2	13. Confused or seems to be in a fog	0	1	2	46. Nervous movements or twitching (describe): _____	
0	1	2	14. Cries a lot	0	1	2	47. Overconforms to rules	
0	1	2	15. Fidgets	0	1	2	48. Not liked by other pupils	
0	1	2	16. Cruelty, bullying, or meanness to others	0	1	2	49. Has difficulty learning	
0	1	2	17. Daydreams or gets lost in his/her thoughts	0	1	2	50. Too fearful or anxious	
0	1	2	18. Deliberately harms self or attempts suicide	0	1	2	51. Feels dizzy or lightheaded	
0	1	2	19. Demands a lot of attention	0	1	2	52. Feels too guilty	
0	1	2	20. Destroys his/her own things	0	1	2	53. Talks out of turn	
0	1	2	21. Destroys property belonging to others	0	1	2	54. Overtired without good reason	
0	1	2	22. Difficulty following directions	0	1	2	55. Overweight	
0	1	2	23. Disobedient at school				56. Physical problems without known medical cause:	
0	1	2	24. Disturbs other pupils	0	1	2	a. Aches or pains (not stomach or headaches)	
0	1	2	25. Doesn't get along with other pupils	0	1	2	b. Headaches	
0	1	2	26. Doesn't seem to feel guilty after misbehaving	0	1	2	c. Nausea, feels sick	
0	1	2	27. Easily jealous	0	1	2	d. Eye problems (not if corrected by glasses) (describe): _____	
0	1	2	28. Breaks school rules	0	1	2	e. Rashes or other skin problems	
0	1	2	29. Fears certain animals, situations, or places other than school (describe): _____	0	1	2	f. Stomachaches	
0	1	2	30. Fears going to school	0	1	2	g. Vomiting, throwing up	
0	1	2	31. Fears he/she might think or do something bad	0	1	2	h. Other (describe): _____	
0	1	2	32. Feels he/she has to be perfect				_____	
0	1	2	33. Feels or complains that no one loves him/her				_____	

Please print. Be sure to answer all items.

0 = Not True (as far as you know) 1 = Somewhat or Sometimes True 2 = Very True or Often True

0 1 2	57. Physically attacks people	0 1 2	84. Strange behavior (describe): _____
0 1 2	58. Picks nose, skin, or other parts of body (describe): _____	0 1 2	85. Strange ideas (describe): _____
0 1 2	59. Sleeps in class	0 1 2	86. Stubborn, sullen, or irritable
0 1 2	60. Apathetic or unmotivated	0 1 2	87. Sudden changes in mood or feelings
0 1 2	61. Poor school work	0 1 2	88. Sulks a lot
0 1 2	62. Poorly coordinated or clumsy	0 1 2	89. Suspicious
0 1 2	63. Prefers being with older children or youths	0 1 2	90. Swearing or obscene language
0 1 2	64. Prefers being with younger children	0 1 2	91. Talks about killing self
0 1 2	65. Refuses to talk	0 1 2	92. Underachieving, not working up to potential
0 1 2	66. Repeats certain acts over and over; compulsions (describe): _____	0 1 2	93. Talks too much
0 1 2	67. Disrupts class discipline	0 1 2	94. Teases a lot
0 1 2	68. Screams a lot	0 1 2	95. Temper tantrums or hot temper
0 1 2	69. Secretive, keeps things to self	0 1 2	96. Seems preoccupied with sex
0 1 2	70. Sees things that aren't there (describe): _____	0 1 2	97. Threatens people
0 1 2	71. Self-conscious or easily embarrassed	0 1 2	98. Tardy to school or class
0 1 2	72. Messy work	0 1 2	99. Smokes, chews, or sniffs tobacco
0 1 2	73. Behaves irresponsibly (describe): _____	0 1 2	100. Fails to carry out assigned tasks
0 1 2	74. Showing off or clowning	0 1 2	101. Truancy or unexplained absence
0 1 2	75. Too shy or timid	0 1 2	102. Underactive, slow moving, or lacks energy
0 1 2	76. Explosive and unpredictable behavior	0 1 2	103. Unhappy, sad, or depressed
0 1 2	77. Demands must be met immediately, easily frustrated	0 1 2	104. Unusually loud
0 1 2	78. Inattentive or easily distracted	0 1 2	105. Uses alcohol or drugs for nonmedical purposes (<i>don't</i> include tobacco) (describe): _____
0 1 2	79. Speech problem (describe): _____	0 1 2	106. Overly anxious to please
0 1 2	80. Stares blankly	0 1 2	107. Dislikes school
0 1 2	81. Feels hurt when criticized	0 1 2	108. Is afraid of making mistakes
0 1 2	82. Steals	0 1 2	109. Whining
0 1 2	83. Stores up too many things he/she doesn't need (describe): _____	0 1 2	110. Unclean personal appearance
		0 1 2	111. Withdrawn, doesn't get involved with others
		0 1 2	112. Worries
		0 1 2	113. Please write in any problems the pupil has that were not listed above.
		0 1 2	_____
		0 1 2	_____
		0 1 2	_____

Appendix 4: Child Behavior Questionnaire (CBQ; Ahadi, Rothbart, & Ye, 1993) –
Adapted Version

On the next pages you will see a set of statements that describe children's reactions to a number of situations. We would like you to tell us what your child's reaction is likely to be in those situations. There are of course no "correct" ways of reacting; children differ widely in their reactions, and it is these differences we are trying to learn about. Please read each statement and decide whether it is a "true" or "untrue" description of your child's reaction within the past six months. Use the following scale to indicate how well a statement describes your child:

Circle #	If the statement is:
1	extremely untrue of your child
2	quite untrue of your child
3	slightly untrue of your child
4	neither true nor false of your child
5	slightly true of your child
6	quite true of your child
7	extremely true of your child

If you cannot answer one of the items because you have never seen the child in that situation, for example, if the statement is about the child's reaction to your singing and you have never sung to your child, then circle NA (not applicable).

Please be sure to circle a number or NA for every item.

My child:

1. Gets angry when told s/he has to go to bed.
1 2 3 4 5 6 7 N/A
2. Has trouble sitting still when s/he is told to (at movies, church, etc.).
1 2 3 4 5 6 7 N/A
3. Can lower his/her voice when asked to do so.
1 2 3 4 5 6 7 N/A
4. Rarely gets upset when told s/he has to go to bed.
1 2 3 4 5 6 7 N/A
5. Usually rushes into an activity without thinking about it.
1 2 3 4 5 6 7 N/A
6. When picking up toys or other jobs, usually keeps at the task until it's done.
1 2 3 4 5 6 7 N/A
7. Is good at games like "Simon Says", "Mother May I?" and "Red Light, Green Light."
1 2 3 4 5 6 7 N/A
8. Approaches slowly places where s/he might hurt her/himself.
1 2 3 4 5 6 7 N/A
9. Sometimes interrupts others when they are speaking.
1 2 3 4 5 6 7 N/A
10. Has temper tantrums when s/he doesn't get what they want.
1 2 3 4 5 6 7 N/A

11. Is not very careful and cautious in crossing streets.
1 2 3 4 5 6 7 N/A
12. Decides what s/he wants very quickly and goes after it.
1 2 3 4 5 6 7 N/A
13. Is easily distracted when listening to a story.
1 2 3 4 5 6 7 N/A
14. Often rushes into new situations.
1 2 3 4 5 6 7 N/A
15. Gets quite frustrated when prevented from doing something s/he wants to do.
1 2 3 4 5 6 7 N/A
16. Prepares for trips and outings by planning things s/he will need.
1 2 3 4 5 6 7 N/A
17. Gets made when even mildly criticized.
1 2 3 4 5 6 7 N/A
18. Has a hard time concentrating on an activity when they are distracting noises.
1 2 3 4 5 6 7 N/A
19. Can wait before entering into new activities if s/he is asked to.
1 2 3 4 5 6 7 N/A
20. Rarely gets irritated s/he makes a mistake.
1 2 3 4 5 6 7 N/A
21. Has a hard time following instructions.
1 2 3 4 5 6 7 N/A
22. When practicing an activity, has a hard time keeping her/his mind on it.

- | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | N/A |
|-----|---|---|---|---|---|---|---|-----|
| 23. | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | N/A |
| 24. | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | N/A |
| 25. | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | N/A |
| 26. | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | N/A |
| 27. | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | N/A |
| 28. | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | N/A |
| 29. | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | N/A |
| 30. | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | N/A |
| 31. | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | N/A |
| 32. | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | N/A |
| 33. | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | N/A |

34. Has trouble concentrating when listening to a story.
- 1 2 3 4 5 6 7 N/A
35. When watching TV, is easily distracted by other noises or movements.
- 1 2 3 4 5 6 7 N/A
36. Is distracted from her/his projects when you enter the room.
- 1 2 3 4 5 6 7 N/A
37. Can easily stop an activity he s/he is told “no”.
- 1 2 3 4 5 6 7 N/A
38. Easily gets irritated when s/he has trouble with some task (e.g., building, drawing, dressing).
- 1 2 3 4 5 6 7 N/A
39. Sometimes doesn't seem to hear me when I talk to him/her.
- 1 2 3 4 5 6 7 N/A
40. Is usually able to resist temptation when told s/he is not supposed to do something.
- 1 2 3 4 5 6 7 N/A
41. Sometimes becomes absorbed in a picture book and looks at it for a long time.
- 1 2 3 4 5 6 7 N/A
42. Will ignore others when playing with an interesting toy.
- 1 2 3 4 5 6 7 N/A
43. Gets mad when provoked by peers.
- 1 2 3 4 5 6 7 N/A
44. Has a hard time concentrating on an activity when there are distracting noises.
- 1 2 3 4 5 6 7 N/A

Appendix 5: Inventory of Peer Relations (Dodge & Coie, 1987) and Children's Social Behavior Scale – Teacher Form (CSBS-T; Crick, 1996)

For each of the following statements, please circle the number that best applies to this child, using the scale below as a guide.

	Never True 1	Rarely True 2	Sometimes True 3	Usually True 4	Sometimes Always True 5
1. This child gets along well with peers of the same sex.	1	2	3	4	5
2. This child gets along well with peers of the opposite sex.	1	2	3	4	5
3. This child isolates him/her self from the peer group.	1	2	3	4	5
4. This child is accepted by the peer group.	1	2	3	4	5
5. Other children like this child and seek him or her out for play.	1	2	3	4	5
6. Other children actively dislike this child and reject him or her from their play.	1	2	3	4	5
7. When this child has been teased or threatened he or she gets angry easily and strikes back.	1	2	3	4	5
8. This child always claims that other children are to blame in a fight and feels that they started the trouble.	1	2	3	4	5
9. When a peer accidentally hurts this child (such as by bumping into him or her), this child assumes that the peer meant to do it, and then overreacts with anger and fighting.	1	2	3	4	5
10. This child gets other kids to gang up on a peer that he or she does not like.	1	2	3	4	5
11. This child uses physical force (or threatens to use force) in order to dominate other kids.	1	2	3	4	5
12. This child threatens or bullies others in order to get his or her own way.	1	2	3	4	5
13. When the child is mad at a peer, she or he gets even by	1	2	3	4	5

excluding the child from his or her clique or peer group.

- | | | | | | | |
|-----|---|---|---|---|---|---|
| 14. | This child spreads rumors or gossips about some peers. | 1 | 2 | 3 | 4 | 5 |
| 15. | When angry at a peer, this child tries to get other children to stop playing with the peer or stop liking the peer. | 1 | 2 | 3 | 4 | 5 |
| 16. | This child tries to get others to dislike certain peers by telling lies about the peers to others. | 1 | 2 | 3 | 4 | 5 |
| 17. | When mad at a peer, this child ignores the peer or stop talking to the peer. | 1 | 2 | 3 | 4 | 5 |
| 18. | This child threatens to stop being a peer's friend in order to hurt the peer or to get he s/he wants from the peer. | 1 | 2 | 3 | 4 | 5 |
| 19. | This child tries to exclude certain peers from peer group activities. | 1 | 2 | 3 | 4 | 5 |

Appendix 6: Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1997)

For each of the following statements, please circle the number that best applies to this child, using the scale below as a guide.

	Rarely/Never 1	Sometimes 2	Often 3	Almost Always 4
1. Is a cheerful child.			1	2 3 4
2. Has wide mood swings (child's mood is hard to anticipate because s/he moves quickly from a positive to negative mood).			1	2 3 4
3. Shows positive feelings in response to friendly or helpful gestures by adults.			1	2 3 4
4. Transitions well from one activity to another: doesn't become angry, anxious, distressed or overly excited when moving from one activity to another.			1	2 3 4
5. Can bounce back and recover quickly when upset or frustrated (for example, doesn't pout or stay sullen, anxious or sad after emotionally distressing events).			1	2 3 4
6. Is easily frustrated.			1	2 3 4
7. Shows positive feelings (smiling, laughter) in response to neutral or friendly acts by peers.			1	2 3 4
8. Has angry outbursts/tantrums easily.			1	2 3 4
9. Is able to delay gratification.			1	2 3 4
10. Seems to enjoy it when others are upset (for example, laughs when another person gets hurt or punished; seems to enjoy teasing others).			1	2 3 4

11.	Can manage excitement (for example, doesn't get "carried away" in high energy play situations or overly excited in inappropriate contexts).	1	2	3	4
12.	Is whiny or clingy with adults.	1	2	3	4
13.	Has outbursts of energy and excitement that are disruptive or annoying.	1	2	3	4
14.	Responds angrily when adults say "no" or set limits on his/her behavior.	1	2	3	4
15.	Can say when s/he is feeling sad, angry or mad, fearful or afraid.	1	2	3	4
16.	Seems sad or listless.	1	2	3	4
17.	Appears overly exuberant or excited when trying to get other kids to play.	1	2	3	4
18.	Is emotionally flat (expression is vacant or inexpressive; child seems emotionally absent).	1	2	3	4
19.	Shows negative emotions in response to neutral or friendly gestures by other kids (for example, may speak in an angry tone of voice or show fear or anxiety).	1	2	3	4
20.	Is impulsive.	1	2	3	4
21.	Shows empathy; seems concerned when other people are upset or distressed.	1	2	3	4
22.	Displays exuberance and high excitement that others find annoying or disruptive.	1	2	3	4
23.	Shows the kinds of negative feelings you would expect (anger, fear, frustration, distress) when other kids are mean, aggressive or intrusive towards him/her.	1	2	3	4
24.	Displays negative emotions (anger, anxiety, etc.) when attempting to get other kids to play with him/her.	1	2	3	4