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Does Positive Parenting Influence the Development of Conduct Problems in Children of Adolescent Mothers?

by

Annette Mercer Estes

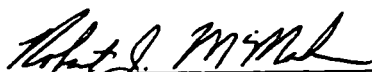
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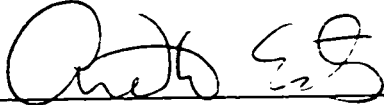
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Abstract

Does Positive Parenting Influence the Development of Conduct Problems in Children of
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by Annette Mercer Estes

Chairperson of the Supervisory Committee

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This study investigated positive parenting in adolescent mothers and its relationship to CP in early school-aged children. A new measure of positive parenting was constructed using a combination of conceptual, methodological, and empirical criteria. The conceptual basis of this work integrated research related both to normal development and socialization and to abnormal development and problems in socialization. The methodology used in this study measured positive parenting through a combination of microanalytic observation, global observer ratings, and parent self-report. The empirical approach employed preliminary internal consistency analyses for item selection, and confirmatory factor analysis in the model testing process. The confirmatory factor analysis tested whether a two-factor model of positive parenting, in which factors represented parenting practices and parenting styles separately, or a single-factor model, in which measures of parenting practices and parenting styles were combined, was a better fit to the data. Evidence for a single-factor model of positive parenting was obtained. Positive parenting was significantly related to CP in several domains (family interaction in the lab, child behavior at home, and child behavior in the

school) and at several time points (grades 1, 2, and 3). Gender differences in the strength of this association were found, with CP in boys being more strongly related to positive parenting than CP in girls. Analyses also indicated that positive parenting may be related to prosocial behavior in this age group.

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DEDICATION

This dissertation is dedicated to my parents, Nada and Duane Estes. If I could turn back time to measure and quantify their parenting practices and styles, I would know what positive parenting is all about.

I. Review of the Literature

I. Introduction

Parent-child interactions have been referred to as the basic training ground for conduct problems (CP) in children. CP comprises a broad range of “acting-out” behaviors, ranging from annoying but relatively minor behaviors such as yelling, whining, and temper tantrums to aggression, physical destructiveness, and stealing. Typically, these behaviors do not occur in isolation but as a complex or syndrome, and there is strong evidence to suggest that oppositional behaviors, particularly noncompliance and argumentativeness, are developmental precursors to more serious forms of antisocial behavior (McMahon & Estes, 1997). CP is increasingly recognized as an outcome that can be reached through a number of developmental pathways, each with many contributing influences. Male gender is the most consistently documented risk factor for CP (Robins, 1991). Investigators report contradictory findings regarding whether the developmental course of CP is the same for girls and boys (e.g., Caspi, Lynam, Moffitt, & Silva, 1993) or different (e.g., Tremblay et al., 1992). However, contributors to CP for both boys and girls include genetic and neuropsychological factors, early attachment, child temperament, parenting practices, family management, neighborhood risk factors, and socioeconomic deprivation.

A range of parenting behavior has been investigated to help explain the development of CP. Results generally show that negative parental behaviors significantly contribute to child noncompliance and CP. The literature on negative parenting is extensive and well elaborated. Behaviors such as harsh and punitive discipline, lax and inconsistent discipline, unclear verbal commands, lack of parental supervision, low parental involvement, and parental rejection have been shown to contribute to noncompliance and CP (see Kendziora & O’Leary, 1992; Loeber & Stouthamer-Loeber, 1986; and Patterson, Reid & Dishion, 1992; for reviews). Parents of children with CP engage in longer and more frequent coercive exchanges with their children in which negative affectivity and negative verbal behavior takes place (Patterson, 1982). But research also shows that even in families of children with CP, only 20% of interactions can be classified by negative processes. In non-CP families,

only 5% of all parent-child interactions are negative and conflictual (Gardner, 1987). What kind of impact do the other 80-95% of parent-child interactions have on the development of CP?

Positive parenting is one important contributor to nonconflictual interaction time. Positive parenting, in contrast to negative, unskilled parenting, is not well understood. The term “positive parenting” encompasses a variety of constructs¹. Positive parenting constructs have included warmth, praise, parental involvement, parental compliance with child requests, and parental acceptance. The variables used to measure these constructs differ in terms of method of measurement (e.g., questionnaire, microanalytic observation, global rating), informant (e.g., observer, parent), and the population studied (e.g., clinic referred, community, preschool age, adolescent). Variables also differ in whether the focus is on parent behavior or on the parent-child relationship itself. The result is that some positive parenting constructs share important characteristics but others do not. This lack of agreement and consistency regarding the definition of positive parenting makes it difficult to draw strong inferences regarding the influence of positive parenting on the development of CP. Not surprisingly, some studies have shown that lack of positive parenting is associated with CP behaviors and with the development of CP (Gardner, 1987, 1992; Pettit & Bates, 1989), while others have not found a relationship between positive parenting and CP (Forehand, 1987; Roberts, 1985). As a result, it is unclear whether the lack of positive parenting should be included among the list of important contributors to CP (compare Greenberg, Speltz, & DeKlyen, 1993, with Chamberlain & Patterson, 1995).

This study will focus on the influence of positive parenting on the development of CP. In order to understand the full spectrum of contributors to child CP, we must learn to identify and understand positive parenting processes and the influence of these processes on child development. It is also important to understand the particular ways in

¹ In this study, when I am referring to the general concept of positive parenting, the phrase will not be capitalized. When I am referring to the specific measure developed in this study, the phrase (Positive Parenting) will be capitalized.

which positive parenting operates in different populations. In high-risk environments, the absence of negative parenting may not be sufficient for optimal child development. For children and families situated in high-risk environments, skillful and committed use of positive parenting may be necessary to protect children from problems in development such as CP (Mason, Cauce, Gonzales, & Hiraga, 1994). In addition, the lack of positive parenting may constitute a risk factor for the development of CP. At this point, we know that parental discipline strategies and coercive interactions between parents and children contribute to the development of CP, but the status of positive parenting as a contributor remains unclear.

2. Evidence regarding positive parenting and CP

a. Theoretical frameworks: The most widely used theoretical framework for understanding the role of the family in the development and maintenance of CP is the coercion model, developed by Patterson and his colleagues (Patterson, 1982; Patterson et al., 1992; Snyder, 1995). The coercion model, which is based on social learning principles, describes a process of "basic training" in CP behavior in the home beginning prior to school entry. Ineffective parental management strategies, particularly around child compliance to parental directives during the preschool period, are thought to be central. Child noncompliance is coupled with other negative behavior that often results in parental withdrawal or failure to follow through with the command. This pattern of negative reinforcement then sets into play an escalating cycle of reciprocal coercion between parent and child, which over long periods results in increasing rates and intensity of these coercive behaviors (Patterson, 1982). The findings from several longitudinal studies are consistent with the coercion model (e.g., Bates, Bayles, Bennett, Ridge & Brown, 1991; Campbell, 1991, 1995). For example, the series of studies conducted by Campbell (1991) and her colleagues have shown that high levels of externalizing behavior problems during the preschool period, in conjunction with high

levels of negative maternal control in observed parent-child interactions and maternal personal and/or familial distress, predict subsequent externalizing problems several years later.

In behavioral and social learning studies, positive parenting is often associated with specific parental behaviors such as positive reinforcement, physical affection, praise, and rewards for appropriate behavior. Positive parenting is also sometimes conceptualized more broadly to include the parent-child relationship. It is theorized that a positive parent-child relationship may enhance the parent's effective use of social reinforcement and punishment. This idea is reflected in treatments for CP that include training in child-directed play in order to improve the positive parent-child relationship (Eyberg, Boggs, & Algina, 1995; Forehand & McMahon, 1981; Webster-Stratton, 1989, 1994). Empirical evidence however, does not tend to show that positive reinforcement or training in child-directed play impacts CP. (See below for a review of the empirical literature.) Nonetheless, many behavioral/social learning researchers remain convinced of the importance of the importance of positive processes in the parent-child relationship (e.g., Lutzker, Touchette, & Campbell, 1989).

A less prevalent theoretical model of CP put forth by Wahler (1994) is social continuity theory. Wahler hypothesizes that children need predictable environments and find predictability reinforcing. Since parents largely shape children's social environments, the function of some child social behavior is to increase the predictability of interactions with their parents. The coercive episodes characteristic of parent-child interactions in children with CP are seen as attempts to create segments of predictable interactions against a backdrop of relatively unstable, arbitrary interaction patterns. Parenting deficits in family management, discipline and follow-through for misbehavior may be related to CP because of the social discontinuities they create. Social continuity theory also provides a framework for understanding positive parenting. Parent-child cooperation and harmony result from the parent's ability to create a predictable, positive environment for their child. In a different context that nonetheless supports Wahler's

theory, Maccoby (1992) described positive parent-child interactions as:

streams of behavior (that) become interwoven, so that the smooth continuation of one person's behavior depends on the partners performing the reciprocal portion of the action. Partners develop coherent expectations concerning each others' behavior (and) joint goals. (p. 1014)

Exactly how parents generate this kind of interaction is still in question. Wahler (1994) observes that some studies have looked at "specific things that parents do (e.g., contingent use of approval) and some at more general parenting strategies or styles (e.g., warmth)" (p. 146).

Darling and Steinberg (1993) propose that the distinction between "specific things that parents do" (parenting practices) and "more general parenting strategies or styles" (parenting styles) may be important when trying to understand and integrate the disparate findings regarding parenting. They define parenting style as a larger pattern of behavior that creates the "emotional climate" in which parenting practices and behaviors occur. Parenting practices are the discreet behaviors that parents use to socialize their children. In this model, parenting style moderates the impact of parenting practices on child behavior. Furthermore, they argue that parenting goals and values are often confounded with specific parenting practices and with parenting style. In their model, parental goals and values shape parenting style and parenting practices, but are distinct from style and practices.

Baumrind's categorization of parenting styles provides another formulation of the behaviors involved in positive parenting (Baumrind, 1993). According to Baumrind, parenting involves two dimensions: demandingness and responsivity. She defines demandingness as "claims parents make on children to become integrated into the family by their maturity expectations, supervision, disciplinary efforts, and willingness to

confront a disputive child. Responsivity refers to the extent to which parents intentionally foster individuality and self-assertion by being attuned, supportive, and acquiescent to children's needs and demands" (Baumrind, 1993, p. 1308). Authoritative parents are high in both demandingness and responsivity. Children of authoritative parents tend to have better developmental outcomes (Maccoby & Martin, 1983). Authoritarian parents are high in demandingness and low in warmth whereas permissive parents are low in control and high in warmth. Neither of these styles is optimal for child development.

According to Darling and Steinberg (1993), Baumrind's model of parenting style is congruent with the notion that parenting style may impact the way in which children respond to their parents' specific behavior. Authoritative parents who make clear demands in the context of a nurturing relationship lead to the most competent children, whereas authoritarian parents who also make clear demands have less competent children. The difference between these is lower responsiveness in authoritarian parents. In addition, they hypothesize that parenting practices impact the development of specific skills whereas parenting style has a more diffuse impact on child development (e.g., as an indirect influence on how the child responds to the parenting practices employed). Thus if positive parenting is a style, rather than a discrete behavior, one would not expect to find main effects, but rather a moderating effect of positive parenting that interacts with other parenting behaviors on child behavior.

Shaw and Bell (1993), based in part on the work of Greenberg and Speltz (1988), translate Baumrind's two-dimensional structure of parenting into a developmental framework. They propose a three-stage developmental theory of how parent-child interactions impact the development of CP in low income boys, including a normative developmental pathway through which children may be protected from CP. From infancy to 24 months, maternal responsiveness (i.e., maternal ability to respond to cries and the infants' need for contact) is the most important feature of positive parenting. From 24 to 42 months, maternal responsiveness continues to play a role, but a new

dimension called "insistence" also becomes important. Insistence is defined as "parental effort to see that children perform developmentally appropriate tasks that require increasing social and cognitive competence" (Shaw & Bell, 1993, p. 512). In the final stage (from 42-60 months), parental responsiveness and insistence become solidified and a positive interactive style emerges that acts as a protection from the development of CP. Responsiveness and insistence bear clear resemblance to Baumrind's authoritative parenting model. In both models, parents who lack one or both of these qualities will have children at higher risk for developing CP. In these developmental theories, positive parenting is clearly linked to prosocial child development.

Shaw and Bell (1993) suggest a further example of how parenting style may interact with parenting behaviors. They posit that in optimally developing parent-child relationships, rewards are given freely and parents have a consistent style of responsiveness. However, rewards may have a different meaning for children on the CP pathway with whom few rewards are used, and then usually to control behavior. Thus, positive parenting may be best conceptualized as both a parenting practice and as a parenting style. As such, both main effects of practices and the moderating effect of styles must be investigated.

A dimension of positive parenting that is implicit in all the theoretical frameworks reviewed above is parental affect. Dix (1991) proposed a model of parenting affect that has important connections to positive parenting. He posited that "parents experience less negative and more positive emotion if they coordinate interactions with children such that mutually satisfactory behaviors and outcomes occur" (p. 6). In this model, positive parenting is a contributor to positive parent and child affect, and parent and child affect contributes to positive parenting. Negative emotionality in both the parent and child is possible when parental control strategies fail and negative affect may contribute to parenting difficulties. Over time, Dix hypothesizes that these behavioral/affective sequences become consolidated into "dispositions" of the child to accept or reject parental control and into dispositions of the parent to expect

child compliance or noncompliance. This model predicts that in coercive dyads, parents will not cooperate with children's wishes unless coerced. Another pathway to parenting difficulty is parental underreactivity and emotional disengagement, leading to failures in child socialization. On the other hand, Dix posits that competent parenting is based on empathetic affectivity in the parent, which leads to accurate parental predictions regarding how the child will react to their control and higher tolerance of low levels of negative affect from the child.

In this review of theoretical frameworks for understanding the positive parenting construct, several key issues emerge. First coercion theory, the predominant theoretical framework for understanding the development of CP, may not adequately identify and account for positive parenting factors. It may be necessary to include other theories that have not been extensively applied to CP in order to identify positive parenting variables and understand more fully how they may contribute to CP. Second, the distinction between positive parenting as a practice and as a parenting style may be central in understanding its relationship to CP. If positive parenting is a style, rather than a discrete behavior, one would expect not to find main effects, but rather a moderating effect of positive parenting on child behavior. If positive parenting includes both style and practices, one may find both main effects and moderating effects on CP. Lastly, parental affect appears to be an important component of positive parenting. Thus, it may be premature to accept the null hypothesis that positive parenting has no impact on CP because alternative, untested, operationalizations and hypotheses may exist.

b. Empirical evidence: In the social learning tradition, coercive processes and ineffective parental discipline tend to be the best predictors of CP. As an example, treatment outcome research on behavioral parent training shows that the parent-directed interaction component, teaching discipline and family management techniques, rather than the child-directed component, which focuses on enhancing the parent-child relationship, accounts for its effectiveness (Eisenstadt, Eyberg, McNeil, Newcomb, &

Funderburk, 1993). The variables relating directly to positive parenting such as praise and reinforcement do not tend to relate to CP. Observational studies of parental reinforcement show the rate of positive reinforcement does not differ between parents of children with and without CP. Rates of reinforcement for aggressive behavior do not differ either (see Forehand, 1987; Maccoby & Martin, 1983, pp. 42-43). Praise for child compliance has not been found to influence compliance rates, and has been referred to as merely a "socially acceptable... ritual" (Roberts, 1985, p. 627). Using time out as a punishment for noncompliance has shown greater effectiveness than praise (Roberts, Hatzenbuehler, & Bean, 1981). In a study of the interaction between highly nurturant mothers and discipline outcomes, Pffiffer and O'Leary (1989) found evidence that nurturance influences child CP, but in an unexpected way. They reported that maternal nurturance interacted with maternal command style. Nurturance was experimentally manipulated with mothers in the low nurturant condition filling out questionnaires while the child played and mothers in the high nurturant condition engaging in play with the child and providing encouragement, physical affection, and positive feedback. High nurturant mothers who gave clear, direct commands exacerbated negative child affect whereas children of low nurturant mothers who gave clear, direct commands and children of high nurturant mothers who gave unclear, indirect commands did not show increased negative affect. This study indicated that positive parenting may be an important moderator of parenting practices, but not in the predicted direction. In a different study, the best predictor of child compliance and noncompliance was clear maternal commands and previous child compliance, not positive maternal attention (Williams & Forehand, 1984). The consistent lack of support for positive parenting, combined with the power of coercive interactions to predict and explain the development of CP has caused some behaviorally oriented researchers to conclude that positive processes may not play an important role in the development of CP (Chamberlain & Patterson, 1995; Roberts, 1985).

Other studies do find evidence supporting the contention that positive parenting

impacts CP. A lack of parental involvement has been found to significantly predict CP (Loeber & Stouthamer-Loeber, 1986). Involvement has been variously operationalized as outings and activities with the child; concern for child's welfare; positive, friendly, or helpful interactions; time spent together; and amount of ignoring. Gardner (1992) studied the relationship between involvement and CP by adapting observational approaches to study parenting behaviors other than "praise" and "rewards." She observed joint mother-child play and coded mother initiations and responses to child suggestions as "involvement". Gardner showed that active, even dominant, parental involvement during joint play results in children being more responsive to parental control. She found that non-CP children spend three times as long in joint play and twice as long in conversation with their mothers as children with CP. Pettit and Bates (1989) found that observations of high maternal positive involvement (defined as affectively positive, educative exchanges) were correlated with low child CP. Furthermore, the lack of affection and teaching interactions predicted CP at age 4 while maternal negativity did not.

Initiation of interaction has been identified as an important relationship variable. Gardner (1994) and Pettit and Bates (1989) measured the proportion of interaction sequences that are mother initiated and the proportion that are child initiated. They found that lower ratios of maternal initiations to child initiations in a naturalistic free play setting were related to CP. Pettit and Bates' (1989) findings concur with Gardner's (1994) findings regarding the negative relationship of mother-initiated joint activity with child CP. In both studies, mother initiation of positive joint activity with preschool-aged children was significantly lower in mothers of children with CP than in mothers of children without CP. In addition, Pettit and Bates (1989) found child initiations of positive interactions were higher in children with CP and that mothers were more likely to ignore their initiations. In an unpublished paper, Pettit (1996) reported that mother-child dyads who are balanced in terms of initiation of interaction are higher in positive parenting as measured through interviewer ratings and questionnaires. Additionally,

family risk level interacted with initiation balance scores in predicting child behavior problems. Unbalanced dyads with one or more risk factors had higher likelihood of CP. However, support for differences in initiations during play were not found in a clinic-based study by Campbell et al. (1986).

A number of researchers have studied a facet of positive parenting that has to do with maternal responsiveness to the child. Dowdney, Mrazek, Quinton, and Rutter (1984) examined maternal responsiveness that they defined as maternal play, activity, or talk in response to the child's bid for attention in a naturalistic observation. Gardner (1994) operationalized responsiveness more narrowly as the likelihood of complying with a suggestion and responding to a question in home observations. Gardner (1994) reported that child and mother compliance and mother responsiveness to questions significantly discriminated a group of children with and without CP. Kochanska (1997) operationalized responsiveness as shared mother-child cooperation and shared mother-child positive affect. Her observations showed that higher mother-child responsiveness was associated with less use of power in mothers and greater internalization of maternal values and rules in children. Synchrony, which may be considered as another aspect of responsiveness, is defined by breaking mother-toddler interaction into "turns" and analyzing the content of each turn to see if the topic was maintained from one turn to the next (Rocissano, Slade, & Lynch, 1987). When a turn maintained a topic, it was labeled "synchronous", regardless of the affective tone of the interaction. When it changed topic, the turn was labeled "asynchronous." In 16-20 month-old children, synchrony was positively related to child compliance with maternal instructions. Mothers who were asynchronous had toddlers who were less likely to follow instructions (Rocissano et al., 1987). Thus, there is evidence that supports a relationship between positive parenting and CP.

There is also evidence regarding the influence of parental affective style on CP. While studies have examined the role of negative affect in toddlerhood (e.g., Dowdney & Pickles, 1991), less attention has been paid to positive affect. One consistent finding is

that parental warmth is associated with positive child outcomes (e.g., Maccoby & Martin, 1983). In a sample of children aged 6-11, maternal warmth was significantly lower in a group of children with conduct disorder versus a group of children with emotional disorders, which in turn was lower than in a group of nonclinic control children (Vostanis, Nicholls, & Harrington, 1994). Interestingly, hostility did not distinguish between any of these groups, lending credence to the idea that positive affectivity is a different process from negative affectivity, not just the opposite pole of a single dimension. Achermann, Dinneen, and Stevenson-Hinde (1991) calculated the percentage of positive statements (e.g., warm and encouraging) out of all statements made by mothers playing with their children in a laboratory setting. They found that positive statements were significantly related to lower levels of CP. In a study by Kochanska and Aksan (1995), mutually positive affect, as observed during parent-child interaction in the laboratory, was shown to contribute to the development of internalized behavioral control in 2 and 3 year olds. Gardner (1994) measured maternal warmth as physical affection, laughter, and verbal approval. Both child and maternal warmth were found to significantly differ between CP and normal controls. It has also been found that "responsive play" between mother and child induces positive mood in, and is related to, positive outcomes such as compliance (see Dix, 1991, for a review; Kochanska & Kuczynski, 1991; Lay, Waters, & Park, 1989).

The evidence reviewed above suggests a link between positive parenting and CP, but it does not provide much information about whether there is a common theoretical basis for these findings. Several studies have addressed the question of what theory may provide the best basis for a link between positive parenting and CP. Parpal and Maccoby (1985) experimentally manipulated variables related to three theories of compliance: reinforcement theory, in which compliance is determined by punishment for noncompliance and positive reinforcement for compliance; social deprivation theory, in which compliance is increased by deprivation of parental attention through increasing the child's "affiliation motivation"; and reciprocity theory, in which compliance is based on

increasing the child's general willingness to comply because of positive interactions with the parent. They found that reciprocity theory accounted best for observed child compliance. Mothers trained to play responsively with their children complied with more directives from their children and were more positive. These children complied with significantly more commands during the compliance test than children in a free-play condition. Children in a noninteractive condition prior to the compliance test complied significantly more than children in the free-play condition, giving support to social deprivation theory as well. Interestingly, when the data were analyzed using microanalytic codes of maternal "positives" and maternal controlling behavior, positives did not significantly contribute to compliance. Building on this work, Lay et al. (1989) found that child-directed play induced positive mood, which led to increased compliance. Thus, social learning-based, microanalytic codes may not characterize positive behavior appropriately since these tend to focus on narrowly defined parental behavior rather than more broadly defined parent-child relationship variables.

Another relevant study by Speltz, DeKlyen, Greenberg, and Dryden (1995) suggests that both social learning and attachment processes may help account for the development of CP in preschool-aged children. Microsocial behavioral variables traditionally used to assess CP (e.g., parental directives, criticism, child deviance and noncompliance) were not as predictive of clinic status as attachment security. However, unexpected microsocial variables (child play talk and physical contact with the parent) were related to clinic status. More research is needed that approaches positive parenting from multiple theoretical perspectives simultaneously.

c. Integration: The literature on positive parenting is complicated by three important issues: theoretical orientation, method, and population studied. The first issue, theoretical orientation, results in qualitative differences between the constructs used in various studies. Social learning theory is associated with positive parenting variables such as "rewards," "praise," and "praise for compliance," which are believed to reinforce

child behavior. These variables focus specifically on parental behaviors, independent of child behaviors or the parent-child relationship itself. Other perspectives, such as social continuity, developmental approaches to social competence, and Baumrind's parenting typology, are associated with positive parenting variables such as "synchrony," "involvement," and "responsivity." These variables tend to focus on qualities of the parent-child relationship itself. The resultant qualitative differences between positive parenting constructs may be related to the lack of consistent findings across studies.

Method is the second issue that must be considered in relation to positive parenting. Some methods yield microanalytic, narrowly-defined parenting behaviors whereas others represent global qualities of parents. Thus, each method is associated with a particular level of specificity. Greenberg et al. (1993) posit that positive processes are less well understood as contributors to CP because they are more difficult to code using microanalytic systems. Positive processes may last longer and be more complex than relatively short, easily identified and defined discipline and coercive interactions that have been consistently related to CP. Additionally, multiple facets of positive parenting practices may need to be investigated together and in conjunction with discipline and control strategies to gain an appreciation for the influence of positive parenting on CP.

The third important issue related to positive parenting is the population studied. Community samples, risk samples, and clinic-referred samples have all been used to explore the relation between positive parenting and CP. Population may be important to consider in that many, but not all, clinical samples do not find an association between positive parenting and CP, whereas community samples do tend to find associations. This dimension may be confounded with theoretical orientation because developmental studies tend to use community samples whereas social learning studies tend to use clinic-referred samples.

Another important aspect of the population is the child's age and/or developmental level. In order to gain an appreciation for the full range of parenting

influences on CP, one must keep in mind that at different points in the developmental process of CP, different aspects of parental behaviors may be more or less salient. For example, Chamberlain and Patterson (1995) argue against the importance of parental warmth for the development of CP, but much of the evidence they cite regarding the preeminent importance of parental discipline is with older children and adolescents. Adopting their case example of an adolescent who had been arrested eight times and was court ordered to be in foster care, most would agree that parental warmth is probably insufficient to effect behavior change. However, the parenting skills needed to deal with the behavior of a teenager who has had CP since preschool, and whose CP has developed to the point at which a diagnosis of CD is appropriate, are likely quite different from the skills needed to induce younger children to engage in compliant behavior and harmonious interactions.

Studies reporting outcomes for early school-aged children are uncommon. Most of the evidence regarding positive parenting is based on parents of infants (e.g., Pffiffer & O'Leary, 1989; Rheingold, Cook, & Kolowitz, 1987; Rocissano et al., 1987) or preschool-aged children (e.g., Gardner, 1994; Pappal & Maccoby, 1985; Speltz et al., 1995). Although the results from younger children are encouraging, they can only suggest the particular ways in which positive parenting may operate in children of early school age. Furthermore, studies of older children (ages 11-17) tend to show that parental discipline and monitoring become increasingly important (e.g., Patterson et al., 1992). As older children move into larger spheres of influence and CP becomes increasingly differentiated, the specific influence of positive parenting may be more difficult to pinpoint. Early school age (6-10 years) is a time in which CP is becoming a stabilized pattern of behavior at home and school, but in which it has typically not progressed to more serious violations of social norms and rules. The early school period is a time of change during which parental influence is still primary, but other social influences are beginning to influence the child as well. So, not only is this age-group understudied with regard to positive parenting, it may be a particularly important time to

study the influence of positive parenting on children at risk for CP.

Clear understanding of positive parenting is also complicated and confounded by the issue of whether positive parenting is best conceptualized as a parenting style, an assortment of parenting practices, or both style and practice. As Darling and Steinberg (1993) point out, the majority of the parenting research literature has been unclear about the distinction between style and practice. They posit that parenting styles act as moderators of parenting practices. Thus, when the distinction between style and practice is lost, conclusions about contextual variability and the processes that influence child development become difficult to interpret. This may be a particularly important point in the relatively unexplored area of positive parenting. Since it is unclear where positive parenting fits in Darling and Steinberg's scheme, it is possible that the disparate findings in this literature would be easier to integrate if we knew whether positive parenting was a style, a practice, or both.

d. Conclusions: With a multiply-determined outcome such as CP, it often does not make sense to pit one cause or one theory against another. A more reasonable focus is on the importance of a particular process or set of influences at particular points in the development of the child and in the development of the disorder. With regard to the development of CP, multiple combinations of causes and different developmental pathways may lead to the same syndrome of behaviors (Greenberg et al., 1993; Loeber & Stouthamer-Loeber, 1986). Depending upon the theoretical and methodological lens one chooses, the multiple factors that contribute to CP may appear more or less salient. By exploring several literatures, a new combination of positive parenting variables may be identified to better explain the continuance and desistance of CP between toddlerhood and the preschool years.

3. Adolescent parenting and CP

The United States has the highest adolescent pregnancy rate in the West. One-

fourth of girls are pregnant by the age of 19, and one-half of those pregnancies are brought to term (Brooks-Gunn & Chase-Lansdale, 1995). Adolescent mothers and their children comprise a group at-risk for developmental difficulties. Some of these risks are due to maternal age. Other risk factors are poverty, inadequate prenatal care, and low maternal education level (Brooks-Gunn & Chase-Lansdale, 1995; Klerman, 1993). Poverty increases the risk for a number of associated problems, such as stress, living in high-crime and high-violence neighborhoods, and an impoverished learning environment. The children of adolescents are more likely to be abused and neglected than children of adult mothers, even when socioeconomic status (SES), education, and prenatal care are controlled (Klerman, 1993). However, more is known about the socio-demographic risk of this group and the outcomes for the mothers themselves than is known about adolescent parenting.

As parents, adolescent mothers have been found to be less verbal with their infants and provide a less cognitively stimulating home environment (Brooks-Gunn & Chase-Lansdale, 1995; Osofsky, Hann, & Peebles, 1993). Aspects of adolescent mothers' play may differ from adult mothers' play. Adolescent mothers sometimes play with toys next to their children in a type of parallel play not seen in adult mothers (Brooks-Gunn & Chase-Lansdale, 1995). They tend to have lower self confidence, unrealistic developmental expectations of their infants and young children and may attribute hostile intent to difficult, yet typical, child behaviors (East, Matthews, & Felice, 1994). Adolescent mothers have been characterized as less sensitive, less involved, and less positive (Osofsky et al., 1993). Adolescent mothers have also been found to be less emotionally available and affectively attuned to their infants (Osofsky, Eberhart-Wright, 1988). However, adolescents were shown to be more nurturant parents (defined by observations of mother's praise, sharing, and meeting the infant's needs) given the right environmental support (e.g., high perceived support from the grandfather, low support from the grandmother) (Oyserman, Radin, & Saltz, 1994).

The effects of environmental risk and suboptimal parenting on children of

adolescents have not been sufficiently investigated. Studies of cognitive developmental outcomes show that IQ scores of children of adolescents decline over time compared to children of older mothers (Broman, 1981; Brooks-Gunn & Chase-Lansdale, 1995). Interestingly, mothers' cognitive achievement, environmental stimulation, and SES may have a more important impact on the child's cognitive scores than mother's age (Broman, 1981; Moore & Snyder, 1991). Some evidence also shows that behavioral difficulties of these children may increase over time, although little information is available on this important aspect of child development (Brooks-Gunn & Chase-Lansdale, 1995). Maternal factors such as social support, educational achievement, self-esteem, and lack of depression have been hypothesized to protect children from adverse outcomes (Osofsky et al., 1993), although I am aware of no study that investigates this directly.

4. Statement of purpose and hypotheses

The purpose of this dissertation is to investigate the impact of positive parenting on child CP. In pursuit of this overarching goal, three steps were taken. First, theoretically and empirically derived measures of positive parenting were constructed. For theoretical reasons, positive parenting was defined as both a parenting practice and a parenting style. This study simultaneously investigated both the cross-sectional and longitudinal relationship of positive parenting styles and practices to child CP. Cross-sectional analyses during grade 1 and grade 2 investigated the relationship between positive parenting and child compliance and negative behavior. The relationship between positive parenting and child externalizing behavior as reported by the parent and teacher was also investigated. Longitudinal analyses used positive parenting during grades 1 and 2 to predict CP in grade 3. Measuring positive parenting over two time points allowed parenting behavior to be categorized based on its stability between first and second grade. Parenting was categorized as Stable Positive, Stable Non-Positive, and Unstable. Thus, this study presents the first evidence regarding the cross-sectional and longitudinal relationships of the positive parenting practices and styles of adolescent

mothers on CP in young school-aged children. The findings should contribute to understanding more about the strengths of this at-risk group of mothers and how these strengths may be used to design interventions for addressing and preventing CP in their children.

Hypotheses:

1) A model of positive parenting consisting of two factors, positive parenting style and positive parenting practice, was tested against a single-factor model of positive parenting, that did not distinguish between style and practice. I hypothesized that the two-factor model of positive parenting would better fit the data than the single-factor model.

2) I hypothesized that positive parenting practices and child CP may be moderated by positive parenting style. For mothers low on positive parenting style, high levels of positive practices, such as compliments to the child, would have little impact on the child's compliance or overall level of CP. However, for mothers characterized by a highly positive parenting style, positive parenting practices would to be significantly related to higher child compliance and lower CP.

3) It was hypothesized that cross-sectional analyses would show that mothers who engaged in more frequent positive parenting would have children with lower levels of CP. CP was measured on two levels. First, CP was measured using microanalytic observations of child compliance and negative behavior. Second, CP was measured more broadly as a pattern of externalizing behaviors at home as reported by parents, and at school as reported by teachers. It was hypothesized that a) mothers who engaged in more frequent positive parenting would have children who were more compliant and less negative in observed interactions, b) mothers who engaged in more frequent positive parenting would have children with lower concurrent externalizing problems at home,

and c) mothers who engaged in more frequent positive parenting would have children whose teachers reported lower externalizing problems at school. If the two-factor model was supported in hypothesis 1, the preceding hypotheses would be tested separately for parenting practices and parenting styles.

4) It was hypothesized that longitudinal analyses would show that stability in mothers' scores on Positive Parenting in grade 1 and grade 2 to be related to lower CP in grade 3. Parenting was categorized into three groups: parents who scored high on Positive Parenting at both grades (Stable High Positive); parents who scored low on Positive Parenting at both grades (Stable Low Positive); and parents whose scores changed between grade 1 and grade 2 (Unstable). It was hypothesized that mothers in the Stable High Positive group would have children with lower CP at grade 3. It was also hypothesized that longitudinal correlations between Positive Parenting scores and measures of CP would be significant. If the two-factor model was supported, this hypothesis would be tested separately for parenting practice and style.

5) It was hypothesized that in longitudinal analyses, child CP would be related to lower levels of positive parenting at subsequent time points. CP in grade 1 was hypothesized to be negatively correlated with positive parenting at grade 2. CP was measured during observed parent-child interaction and by parent and teacher report of externalizing behavior. All three measures of CP in grade 1 were hypothesized to significantly relate to positive parenting in grade 2.

6) Since there are consistent gender differences in children's CP, differential effects of positive parenting on CP on boys versus girls were hypothesized. These analyses were exploratory; thus no specific hypotheses were offered.

7) It was hypothesized that higher levels of positive parenting would be associated with

higher levels of observed child positive behavior and parent and teacher reported child positive behavior both cross-sectionally and longitudinally.

II. Method

1. Participants

This study utilized data from a larger study on adolescent mothering and infant attachment. The original participants were recruited in 1986-1989 from 37 different sources, including 18 high schools, 10 public health departments, 6 clinics with adolescent programs, and 3 programs providing services to young, single mothers. Mothers' age at child's birth ranged from a minimum of 14.5 years to a maximum of 20 years. The mean age of mothers at child's birth was 17.4 years. This study involved 104 mother-child pairs who participated in at least two out of three assessments during the summer after grade 1 ($n = 95$), grade 2 ($n = 94$) and grade 3 ($n = 96$). The children ranged from 6 to 10 years of age during the three assessment points of this study. Most (51.9%) of the 104 children in this sample are female and white (69%). Most mothers are also white (78%) in this sample.

Spieker and McMahon (1993) reported that, based on data from the preschool waves of data collection, this sample did meet the definition of a risk sample. The children in this study were more likely to live in poverty, to have no contact with their fathers, to have insecure attachment status, and to show language delays than non-risk peers. The mothers experienced higher stress and more depression than would be expected. Almost half of the children (47.4%, $n=54$) showed externalizing problems on at least one measure (i.e., parent report, teacher report, or observer report). A subsample ($n=40$) of the total sample was given a structured diagnostic interview when the children were 5 1/2. At that time, 20% of the children met diagnostic criteria for at least one of the DSM-III-R (American Psychiatric Association, 1987) Disruptive Behavior Disorders (Attention-deficit Hyperactivity Disorder, Oppositional Defiant Disorder, or Conduct Disorder).

2. Measures

a. Parent interview:

The Child Behavior Checklist/ 4-18 (CBCL; Achenbach, 1991a) is an empirically-derived behavior rating scale designed for use with children between the ages of 4 and 18. Measures of social competence and behavior problems were derived. The CBCL broad-band Externalizing scale was used as a measure of CP in this study. The Externalizing scale is comprised of items from the Aggression and Delinquency narrow-band syndrome scales and includes ratings of behaviors such as argues, demands attention, stubborn, disobedient, fights, and lies. The CBCL is normed separately for girls and boys within two age groups: 4-11 and 12-18 years. T scores based on the normal standardization sample are assigned separately for each of the four sex/age groups. T scores have a mean of 50 and a standard deviation of 10, and represent the child's relative standing compared to the same-sex standardization sample. The same T scores can thus refer to different raw scores for boys and girls. T scores for a given child over time are directly comparable in this study, as scores were based on the same 4-11 year old standardization sample. Empirically-derived measures of social competence used in this study include: an Activities t-score indicating the number and degree of participation in sports, non-school activities, and jobs/chores; a Social t-score indicating number of friends, organizations involved with, and degree of social behavior; and a Total Competence t-score which combines the two scores described above (Activities and Social) and a third score, School, which measures school competence. Where as high t-scores are clinically significant on the behavior problems scale, low t-scores are clinically significant on the social competence scales.

The Alabama Parenting Questionnaire (APQ; Frick, 1991) was developed for use with parents of elementary school-aged children (6-13 years old). It consists of 42 items were rated on a 5-point Likert-type scale assessing frequency of a particular parenting behavior. In this study, the parent-report version was used. The items have been divided into five a priori constructs: Involvement, Positive Parenting, Poor Monitoring/Supervision, Inconsistent Discipline, and Corporal Punishment, as well as a

set of Other Discipline Practices. The construct of Involvement was used in constructing a measure of positive parenting style and Positive Parenting was used in constructing a measure of positive parenting practices. Preliminary data concerning the psychometric properties of the parent questionnaire version of the APQ suggests adequate internal consistency and validity of the instrument (Shelton, Frick, & Wootton, 1996). In particular, their study showed that the APQ was able to differentiate parents of children with CP from parents of children without CP.

b. Teacher interview:

Teacher Report Form of the Child Behavior Checklist (TRF; Achenbach, 1991b).

The teacher completed the adaptive functioning and behavior problems items of this standardized instrument. The TRF yields nine subscale scores and Internalizing, Externalizing, and Total Problem scores. The scores are highly reliable (alphas and test-retest $r > .85$) and valid (Achenbach, 1991b). The Externalizing T score was used as a measure of CP in this study. Scores on the Behaving Appropriately, Happy and Total Adaptive Functioning scales were used as a measure of child positive behavior in this study. Teachers are asked to base ratings on the preceding 2 months, in contrast to 6 months for the CBCL. The format of teacher-reports on the TRF and parent-reports on the CBCL are designed to be easily comparable. The CBCL and the TRF share the same eight syndrome scales (withdrawn, somatic complaints, anxious/depressed, social problems, thought problems, attention problems, delinquent behavior, aggressive behavior). The two questionnaires share many of the items that comprise the syndrome scales, but the TRF also contains 28 items that are not on the CBCL.

c. Parent-child observation:

Parent-Child Interaction Task (PCIT) is a series of six structured tasks (each 5 minutes) adapted from those used by Forehand and McMahon (1981) and Reid (1989). The PCIT was completed by the mother and child during their visits to the lab. The tasks

were observed and videotaped in a laboratory playroom for each mother-child pair during grades 1-3. Six tasks (Social Teaching Task, Family Problem Solving, Child's Game, Parent's Game, the Lego Task, and Clean-Up) were used in the current study. In the Social Teaching Task, the interviewer presented one of five randomly chosen vignettes that described typical difficulties children face in social situations (e.g., "Mom is taking the target child (TC) out of town to visit old friends. The friend has a child close to the TC's age, but TC and child have never met. What kinds of things can TC do to give mom and her friend some time to talk and catch up?"). The mother was instructed to discuss with the child how she would want him or her to handle the situation if it were to occur in the future. In the Family Problem Solving task, the mother and child discussed an issue that the mother identified as problematic earlier in the interview. They were instructed to come up with a solution or solutions to the problem. In the Child's Game, the parent was instructed to engage in any activity that the child chose and to allow the child to determine the course of the play. Thus, the Child's Game was essentially a free-play situation. In the Parent's Game, the parent was instructed to engage the child in activities whose rules and nature were determined by the parent (e.g., playing with certain toys, sitting quietly). The Parent's Game was essentially a command situation. The fifth task involved the parent verbally instructing the child to build a Lego figure. The Lego figure was designed to be developmentally challenging and difficult to complete in the allotted time. The parent then instructed the child to put away all the toys in the playroom (Clean-Up). See Appendix A for greater detail.

Interpersonal Process Code (IPC; Rusby, Estes, & Dishion, 1991). This is the newest revision of the microanalytic coding systems developed at OSLC (cf. Patterson et al., 1992). The IPC includes behavioral content codes, affect ratings, and optional activity codes (Appendix B). Codes are recorded in real time; thus measures of frequency, rate, and duration are available. Observers were trained to criterion through a manual, guided practice and role-play, and practice videotapes over approximately 80 hours of training. Interobserver agreement was checked on 15% of the observations and

was adequate in this study (Table 1).

Table 1

IPC interobserver reliability

	<i>Content Codes</i>	<i>Affect Codes</i>
% agree	88	93
kappa	.80	.75

Lab Task Impressions (LTI; Reid, 1989). The LTI is adapted from various revisions of the OSLC Observer Impressions Inventory (cf. Capaldi & Patterson, 1989) to systematically assess coders' subjective impressions of parent-child interaction (Appendix C). This version consists of 79 items describing the parent, child, or their interaction during each of the six PCIT tasks as well as the coders' general impressions. Earlier versions of the measure have been shown to contribute significantly to various OSLC latent constructs of parent and child behavior.

3. Procedures

This study was part of a larger longitudinal project; however, I will report only the aspects that are relevant to the current study. The three elementary school assessments included school data collection and a laboratory visit. Participants were visited at home approximately 4-6 weeks prior to the first school assessment. The study was described and consent/assent was obtained from the mother and child. The school assessments were conducted in April/May of first, second, and third grade. Laboratory visits occurred for each mother-child pair during each summer following the school assessments. Mothers and children were interviewed separately, and all measures used were obtained during these assessments.

a) Grade 1, 2, and 3 school assessment: This assessment consisted of three components: a) teacher reports, b) observation, and c) school archival records. Only the teacher report of child behavior problems was used in this study. This data was collected

by an interviewer as part of the larger battery. On day one, the interviewer presented the questionnaire packet to the teacher and on day two, the interviewer collected the packet.

b) Grade 1, 2, and 3 laboratory visits: This assessment consisted of four components: a) parent report, b) child report, c) child testing, and d) parent-child interaction. Most measures used in this study were administered at each assessment. Laboratory visits were scheduled during the summer break from school. Transportation was provided for each mother-child pair. Attempts were made to match the ethnicity of the interviewers and mothers. One interviewer interviewed the child while a second interviewer assisted the mother in completing the various parent-report measures. The interviewers read all items to the mother and child to minimize problems with illiteracy. The PCIT took place in the middle of the assessment following a short break for refreshments. The tasks were conducted in a 9x14 ft. playroom equipped with a one-way observation window and wired for sound. The playroom was furnished with two chairs and a variety of age-appropriate toys. Each observation was videotaped. The entire laboratory assessment (including the 30-minute PCIT and breaks) took between 2 1/2 and 3 hours. The videotapes of the PCIT were coded at the Oregon Social Learning Center (OSLC) by professional observers who had been trained to criterion on the IPC and the LTI.

III. Results

I. Overview

The initial series of analyses was undertaken with the aim of constructing a measure of positive parenting. Preliminary analyses of the data were used to construct indicators of positive parenting. Descriptive statistics were examined for each indicator at each relevant time period, and transformations were performed so that each indicator met statistical assumptions. These analyses were performed using SPSS for Windows (Version 6.1.3). After the indicators were derived, a confirmatory factor analysis was performed to test two competing models of positive parenting. These analyses were performed using EQS for Windows (Version 4.0; Bentler & Wu, 1993). The next set of analyses was conducted to examine the hypothesized relationship between positive parenting and the development of CP. Cross-sectional analyses were conducted to test whether positive parenting was associated with observed CP, parent-reported externalizing behavior, or teacher-reported externalizing behavior at grade 1 and grade 2. In longitudinal analyses, parenting practices were categorized as Stable High Positive, Stable Low Positive, and Unstable Positive based on Positive Parenting scores at grade 1 and grade 2. The stability of positive parenting was used to predict CP in grade 3. Longitudinal correlations between positive parenting and CP were examined. To explore the possibility of differential effects of positive parenting on CP in boys versus girls, gender differences in correlations between positive parenting and CP were tested.

2. Derivation of the Positive Parenting construct (Hypothesis 1)

Following the process described by Capaldi and Patterson (1989) to build latent constructs, items from a variety of measures were selected on an a priori, conceptually driven basis to form indicators. The indicators employed multiple measures of the construct, each utilizing different reporters (parent, observer) and conducted within different settings (home, lab) in order to maximize stability and representativeness of

measurement. A range of relevant variables was examined in constructing positive parenting, including measures related to parenting style and parenting practices. Parenting style included variables from observational ratings on the LTI, microanalytic affect codes from the IPC, and parent self-report on the APQ. Parenting practices included microanalytic behavioral content codes from the IPC and parent self-report on the APQ. Because reliability is considered an important prerequisite to theory testing, and because several of the indicators are relatively new or were constructed for this study, I first examined each indicator for internal consistency (coefficient alphas). On the basis of these initial analyses, the items on each indicator were either included or excluded from the indicator used in subsequent analyses.

a. Preliminary Analyses:

Alabama Parenting Questionnaire (APQ): The Positive Parenting scale and the Involvement scale (Shelton et al., 1996) were chosen for conceptual reasons as indicators of the positive parenting construct. The Positive Parenting scale consisted of 6 items that measure specific parenting behaviors which are contingent upon positive child behavior and was judged to be a measure of Parenting Practices (see Appendix D). The Involvement scale consisted of 9 items measuring noncontingent parenting behaviors and was judged to be a measure of Parenting Style (see Appendix D). These scales were examined separately for grade 1 and grade 2 (Table 2). Data from the current study corroborated the adequate internal reliability of the Involvement (grade 1 alpha = .72, grade 2 alpha = .76) and Positive Parenting (grade 1 alpha = .76, grade 2 alpha = .82) scales reported by Shelton et al. (1996). APQ-Involvement and APQ-Positive Parenting were moderately related at each time point (grade 1, $r = .49$, $p < .01$; grade 2, $r = .62$, $p < .01$).

Table 2

Descriptive statistics for the APQ and LTI

	<u>M</u>	<u>SD</u>	<i>Skewness</i>	<i>Kurtosis</i>
APQ-Involvement				
Grade 1 ^a	3.80	.47	-.22	-.25
Grade 2 ^b	3.79	.49	-.45	-.26
APQ-Positive Parenting				
Grade 1 ^a	4.33	.47	-.75	-.01
Grade 2 ^b	4.21	.52	-.63	-.06
LTI Mother-Positive				
Grade 1 ^a	3.36	.69	-.25	.61
Grade 2 ^b	3.19	.49	.32	-.37

^an = 95 ^bn = 94

Lab Task Impressions (LTI): Items from the LTI were chosen a priori because of their conceptual relevance to the positive parenting construct. It consisted of 26 items reflecting broader aspects of the parent-child relationship and was judged to be a measure of Parenting Style. The LTI scale was examined separately for grade 1 and grade 2 (Table 2). It showed adequate internal reliability in grade 1 and in grade 2 (grade 1, alpha = .95; grade 2, alpha = .94), so all items were retained. See Appendix C for a list of the items comprising the LTI Mother-Positive scale.

Interpersonal Process Code (IPC): Two indicators of positive parenting were constructed from the IPC. IPC-Content (IPC-C) corresponded to positive parenting practices and IPC-Valence (IPC-V) corresponded to positive parenting style. The following process was used to construct the indicators IPC-C and IPC-V. A subset of IPC codes was chosen a priori to represent parenting practice (IPC-C). Since parenting practices were defined as specific, discrete behaviors, the IPC content codes were used. From these codes, maternal behaviors that appeared to represent maternal involvement and positive interactions were chosen. Thus, of the 13 content codes, 4 content codes were included in further analyses: Positive Talk, Talk, Positive Interpersonal, and Cooperation. The content codes were measured as rates per minute.

A subset of IPC codes was chosen a priori to represent parenting style (IPC-V).

Parenting style was defined as a broader approach to parenting and the parent-child relationship. The valence codes of the IPC were chosen to represent style since they describe the emotional tone of maternal behaviors, independent of the particular behavioral content. The positive valence codes (Happy and Caring) were chosen for further analysis. Codes comprising IPC-V were measured as rates per minute.

A series of reliability analyses provided empirical criteria for decisions about how to use the IPC data. Specifically, it was unclear whether data from all six PCIT tasks or data from only a subset of the tasks should be used in this study. Since there was no theory or previous research to guide this decision, the codes were examined for reliability across tasks and within tasks (Table 3). IPC-V (defined above as rates per minute of Happy plus Caring) and Positive Content (defined above as rates per minute of the sum of Positive Talk, Talk, Positive Interpersonal, and Cooperation) were shown to be more reliable across all six tasks than within any single task². As indicated in Table 3, both the IPC-V and IPC-C showed adequate internal consistency ($\alpha = .82$ and $\alpha = .80$, respectively).

² This may be a conceptual issue as well as a measurement issue. The question relates to how one thinks "positive parenting" is likely to be performed. The conceptual issue is whether parents perform each discrete behavior that comprises positive parenting at the same level a) within each 5-minute task, b) within a particular 5-minute task such as Child's Game, or c) whether "positive parents" perform a single positive parenting behavior during each 5-minute task. Since IPC data is sequential and microanalytic, the alpha analyses can shed light on this issue. The alpha analyses in Table 3 suggest that parents do not do all the positive parenting behaviors during each 5-minute trial; rather, parents perform one or two positive parenting behaviors during each task.

Table 3

Alpha coefficients for Positive Valence (IPC-V) and Positive Content (IPC-C) indicators across and within tasks

	<i>IPC-V</i>	<i>IPC-C</i>
Across Tasks 1-6	.82	.80
Within Task 1	.02	-.01
Within Task 2	-.35	.02
Within Task 3	.11	.27
Within Task 4	.07	.06
Within Task 5	-.00	.17
Within Task 6	.14	.04

Based on these findings, positive parenting was measured across all six tasks of the PCIT. To create the IPC-C scale, its constituent variables were added within each task to obtain the rate per minute of IPC-C by task. Then the mean of IPC-C across tasks was obtained (i.e., the sum of IPC-C across the tasks was divided by 6) (Table 4). Codes comprising the IPC-V scale (Happy and Caring) were added first within each task and these values were summed between the tasks. The IPC-V scale was transformed to meet the assumption of normality using a square root (Table 4).

Table 4
Descriptive statistics for the IPC

<i>IPC</i>	<i>M</i>	<i>SD</i>	<i>Skewness</i>	<i>Kurtosis</i>
IPC-Content				
grade 1 ^a	6.38	1.45	-.03	-.08
grade 2 ^b	6.27	1.48	-.80	2.30
IPC-Valence ^c				
grade 1 ^a	2.27	.93	.87	2.85
grade 2 ^b	2.43	.93	.41	1.90

^a $n = 95$ ^b $n = 94$ ^c values after square root transformation

b. Testing the structure of positive parenting:

Confirmatory factor analysis was used to test the multidimensionality of positive parenting. This procedure utilized the covariance structure of the data to examine the two models of positive parenting. The competing models were compared with respect to their goodness of fit. In the two-factor model (Figure 1), a positive parenting style factor (with style measures from the APQ, LTI and IPC loading on it) and a positive parenting practice factor (with practice measures from the APQ and IPC loading on it) were hypothesized. The one-factor model (Figure 2) that posited a general positive parenting factor with all positive parenting indicators loading on it, was tested against the two-factor model of positive parenting. Each of these models was tested against the null hypothesis that posited the independence of all observed measurements. Only grade 1 data were used for the initial model testing.

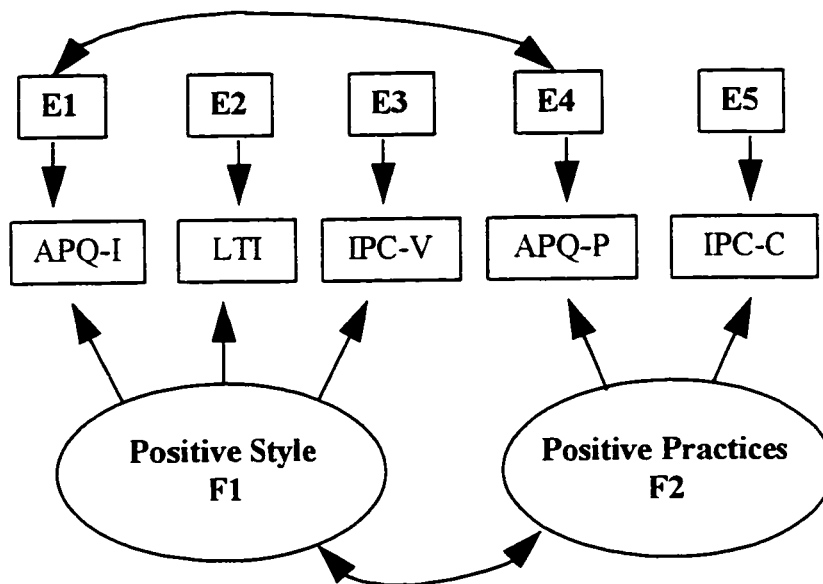


Figure 1: Two-factor model of positive parenting

The two-factor model of positive parenting structure was examined first. The Lagrangian Multiplier Test for adding parameters indicated that allowing the error terms of the two APQ indicators to vary would significantly improve the fit of the model. Thus, these error terms were estimated in the model. Although a series of analyses was conducted to attempt to obtain a valid estimate of the two-factor model, the two factors were so highly correlated that EQS could not converge on a solution.

The single-factor model of positive parenting structure, in which all the indicators were posited to load on one factor, was examined next. Initial assessment of overall fit indicated that the model was a moderate fit to the data (chi-square = 24.18, $df = 5$, $p < .001$; Comparative Fit Index = .739). To obtain the best fit for this model, the error terms for the APQ-I and APQ-P were allowed to vary. These correlated error terms were thought to represent method variance associated with the parent self-report measure (APQ) and thus were estimated in the model. Assessment of the overall fit indicated that this model did provide a good fit to the data (chi-square = 2.17, $df = 4$, $p > .10$;

Comparative Fit Index = 1.0). Thus, in all subsequent analyses, positive parenting was treated as a single factor.

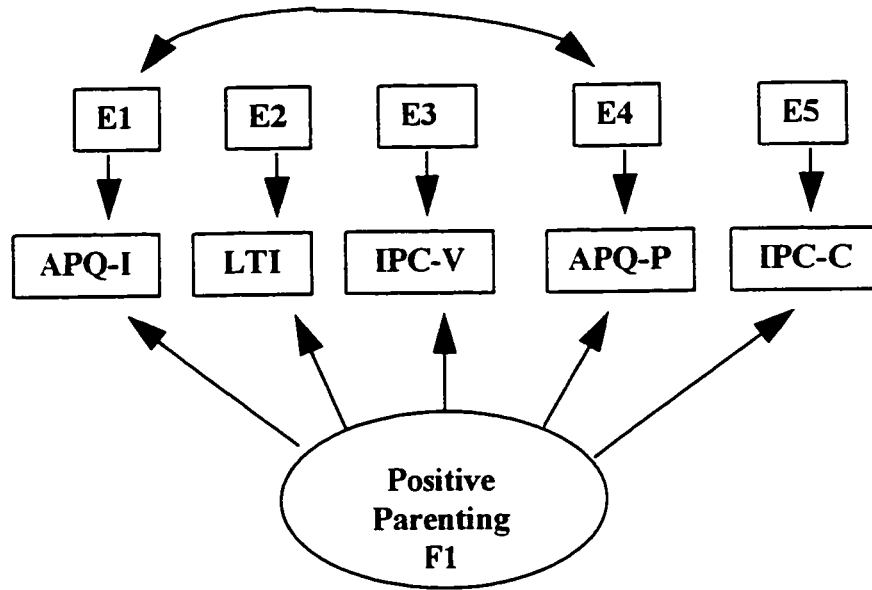


Figure 2: Single-factor model of positive parenting

c. Testing for invariant structure:

Because positive parenting was a new construct, and because parenting behavior may change over time, I tested whether the single-factor structure of positive parenting remained the same between grade 1 and grade 2. A test of invariant structure was conducted in which grade 1 and grade 2 data were constrained to be equal and the null hypothesis (i.e., that they were completely independent) was tested. First, a baseline model was established for grade 2. It proved to be equivalent to the baseline model for grade 1 (see Figure 2) (chi-square = 3.59, $df = 4$, $p = .46$; Comparative Fit Index = 1.0). The test for invariance was considered stringent because the covariance of error terms for the APQ as well as the structure of indicators were constrained to be equal (Byrne, 1994). The null hypothesis was not rejected (chi-square = 12.3, $df = 14$, $p = .56$;

Comparative Fit Index = 1.0), so the structure of Positive Parenting was considered equivalent across grades 1 and 2.

d. The positive parenting scales:

Using the single-factor model of positive parenting, positive parenting scales were created for grade 1 and grade 2 (PP1 and PP2). Scores on each of the indicator variables were converted to standardized scores and summed, and descriptive statistics were obtained (PP1, $M = .067$, $SD = 3.17$; PP2, $M = -.037$, $SD = 2.87$). Both scores appeared to be normally distributed.

Based on the equivalency of Grade 1 and Grade 2 data, a third positive parenting scale was created, combining the data from these two years (PP12). The means of combined positive parenting scores were obtained for each indicator, and new variables were created based on these mean scores. (APQ-Involvement; $M = 3.79$, $SD = .45$; APQ-Positive Parenting; $M = 4.26$, $SD = .44$; IPC-Content; $M = 6.32$, $SD = 1.27$; IPC-Valence; $M = 2.34$, $SD = .78$; LTI Mother-Positive; $M = 3.29$, $SD = .60$) All the variables were normally distributed. These scores were converted to standardized scores and summed to create PP12. Because a single-factor model of positive parenting was supported by the data, Hypothesis 2 (that parenting style was a moderator of parenting practices) was not tested.

3. Cross-sectional correlations between positive parenting and CP (Hypothesis 3)

The next set of analyses was conducted to examine the hypothesized concurrent relationships between positive parenting and CP. CP was measured in multiple settings (lab, home, and school) and by multiple informants (observer, parent, and teacher). During the PCIT, CP was measured by observers using microanalytic IPC content codes and affect codes. It was also measured by parent report on the CBCL (Externalizing), and by teacher report on the TRF (Externalizing). Thus, CP was defined on two levels. The narrowest level was microanalytic measures of negative interpersonal behavior

observed during the 30-minute PCIT. The broader level was a pattern of externalizing behavior reported by parents and teachers on the CBCL and TRF over a 6-month time period.

a. Cross-sectional correlations between positive parenting and CP in the lab
(Hypothesis 3a)

It was hypothesized that positive parenting would be associated with lower levels of CP as measured microanalytically on the IPC. Linear composites called cluster scores were created using the individual child behaviors coded with the IPC combined across all trials of the PCIT and measured as rates per minute. The cluster scores used in this analysis of child CP were Child Negative Physical (Neg Phys), Child Negative Engagement (Neg Eng), and Child Noncooperative (Non Cop). Neg Phys was derived by summing the rates per minute of Negative Physical content in happy, neutral, and aversive affect. Neg Eng was derived by summing the rates per minute of the Talk, Negative Talk, Negative Interpersonal, Command, and Social Involvement codes in Aversive affect and Negative Interpersonal in neutral Affect. Non Cop was derived by summing the rates per minute of Noncooperative in happy, neutral, and aversive affect. The mean across the six PCIT trials was obtained to compute the final score for each code clusters described above. The correlations between positive parenting and child CP are reported in Table 5. A nonsignificant trend indicated that Negative Physical behavior toward mothers may be related to lower scores on Positive Parenting in grade 1 ($r = -.19$, $p < .10$) but Negative Engagement and Noncooperation were not significantly related to scores on Positive Parenting at either grade.

Table 5

Cross-sectional correlations between positive parenting and negative child behavior

<i>Positive Parenting</i>	Neg Phys Grade 1	Neg Eng Grade 1	Non Cop Grade 1	Neg Phys Grade 2	Neg Eng Grade 2	Non Cop Grade 2
<i>PP1</i>	-.19 ⁺	-.13	-.10			
<i>PP2</i>				.03	-.13	-.15

+ = $p < .10$

b. Cross-sectional correlations between positive parenting and CP at home (Hypothesis 3b) and at school (Hypothesis 3c)

It was hypothesized that higher levels of positive parenting would be associated with lower levels of CP in the home and at school. Positive Parenting scores at grade 1 were significantly associated with lower teacher reports of child externalizing behavior ($r = -.22, p < .05$) but parent report was not (Table 6). In grade 2, Positive Parenting scores were associated with significantly lower levels of child externalizing behavior as reported by mothers on the CBCL ($r = -.27, p < .01$) and teachers on the TRF ($r = -.28, p < .01$) (Table 6).

Table 6

Cross-sectional correlations between positive parenting and child Externalizing on the CBCL and TRF

<i>Positive Parenting</i>	CBCL Grade 1	TRF Grade 1	CBCL Grade 2	TRF Grade 2
<i>PP1</i>	-.10	-.22*		
<i>PP2</i>			-.27**	-.28**

* = $p < .05$ ** = $p < .01$

4. Testing the longitudinal relationship between positive parenting and CP (Hypothesis 4)

In longitudinal analyses, mothers' positive parenting was measured at two time points, grade 1 and grade 2. Positive Parenting scores at grade 1 and grade 2 were significantly correlated ($r = .55, p < .001$). Parenting was categorized into three groups: high positive parenting at both grades (Stable High Positive; $n = 34$); low positive parenting at both grades (Stable Low Positive; $n = 26$); and changing Positive Parenting between grade 1 and grade 2 (Unstable; $n = 28$) (Table 7). High Positive and Low Positive groups were computed based on a cutting point of zero, since all variables comprising the Positive Parenting scale were standardized with means of zero. Mothers in the Stable High Positive group were hypothesized to have children with lower CP at grade 3.

Table 7

Number of mothers characterized as Stable Low Positive, Stable High Positive, and Unstable Positive Parenting (Low to High and High to Low)

	<i>Low 1</i>	<i>High 1</i>
Low 2	26	15
High 2	13	34

A one-way analysis of variance was conducted to compare parent-reported Externalizing scores in grade 3 across the three positive parenting groups (Stable High, Stable Low, Unstable). No significant differences were found $F(2, 80) = .37, p > .10$. A one-way analysis of variance was also conducted to compare teacher-reported Externalizing scores in grade 3 across the three parent groups. No significant differences were found ($F(2, 79) = .59, p > .10$) (Table 8).

Table 8

Means of CBCL and TRF Externalizing scores in grade 3 by positive parenting group

	<i>M</i>	<i>SD</i>	<i>N</i>
CBCL: High	56.06	8.62	33
CBCL: Unst	57.19	8.18	26
CBCL: Low	55.00	10.46	24
TRF: High	56.09	11.74	33
TRF: Unst	58.84	10.61	25
TRF: Low	58.58	9.36	24

In a second set of longitudinal analyses correlations between positive parenting (grade 1, grade 2, and grade 1 and 2 combined) and child CP (grade 2 and grade 3) were conducted. No significant relationships were found between Positive Parenting scores in grade 1 and child CP in grade 2 (Table 9).

Table 9

Longitudinal correlations between positive parenting at grade 1 and child CP at grade 2

<i>Positive Parenting</i>	Neg Phys Grade 2	Neg Eng Grade 2	Non Cop Grade 2	CBCL Ext Gr 2	TRF Ext Gr 2
<i>PPI</i>	.01	-.09	-.09	.06	.02

Correlations between positive parenting (at grade 1, grade 2, and grades 1 and 2 combined) and child CP are presented in Table 10. Only one correlation was significant between Positive Parenting scores at grade 1 and child CP at grade 3. Positive Parenting scores were negatively correlated with child Negative Engagement ($r = -.21, p < .05$). A nonsignificant trend was found between Positive Parenting scores at grade 2 and Externalizing at grade 3 (CBCL) ($r = -.20, p < .10$) and a significant relationship was

found with Externalizing (TRF) ($r = -.25, p < .05$). When Positive Parenting scores were combined for grades 1 and 2, they were negatively correlated with Negative Engagement ($r = .22, p < .05$). There were also non-significant trends with Negative Physical ($r = -.17, p < .10$) and Externalizing (TRF) ($r = -.19, p < .10$).

Table 10

Longitudinal correlations between positive parenting and child CP during grade 3

<i>Positive Parenting</i>	Neg Phys Grade 3	Neg Eng Grade 3	Non Cop Grade 3	CBCL Ext Gr 3	TRF Ext Gr 3
<i>PP1</i>	-.17	-.21*	.02	-.01	-.05
<i>PP2</i>	-.11	-.14	.01	-.20 [†]	-.25*
<i>PP12</i>	-.17 [†]	-.22*	.00	-.14	-.19 [†]

[†] = $p < .10$ * = $p < .05$

5. Testing the longitudinal relationship between child CP and subsequent positive parenting (Hypothesis 5)

Longitudinal correlations between child behavior during grade 1 (measured by the IPC, CBCL and TRF) and positive parenting during grade 2 were examined. Results showed that both child Externalizing at school and child Externalizing at home in grade 1 were significantly related to Positive Parenting scores in grade 2 ($r_s = -.24, p < .05$ and $-.27, p < .01$, respectively) (Table 11). A nonsignificant trend was also obtained between child Negative Physical behavior and Positive Parenting scores ($r = -.20, p < .10$) (Table 11).

Table 11

Longitudinal correlations between grade 1 CP and grade 2 positive parenting

<i>Grade 1 CP</i>	<i>Pos Par Grade 2</i>
<i>Neg Phys</i>	-.20 ⁺
<i>Neg Eng</i>	-.08
<i>Non Cop</i>	-.15
<i>CBCL</i>	-.24*
<i>TRF</i>	-.27**

⁺ = $p < .10$ * = $p < .05$ ** = $p < .01$

6. Sex differences in the relationship between positive parenting and CP (Hypothesis 6)

Analyses were conducted to test the hypothesis that the relationship between CP and positive parenting would be different for boys and girls. First, descriptive statistics and t -tests were used to examine levels of Externalizing T -scores by sex in grade 1 and grade 2. No significant differences between girls and boys Externalizing T -scores at home or school were found during grade 1 (Table 12), although there was a nonsignificant trend for girls to have higher T -scores than boys on the Externalizing scale of the CBCL ($t(93) = -1.7, p < .10$).

Table 12

Grade 1 sex differences on the Externalizing scales of the CBCL and TRF

	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t-value</i>	<i>df</i>
CBC Boys	45	56.2	9.4	-1.7 ⁺	93
CBC Girls	50	59.5	9.1		
TRF Boys	45	55.9	9.8	-0.6	93
TRF Girls	50	57.0	10.0		

⁺ = $p < .10$

Girls had significantly higher T -scores than boys on the Externalizing scale of the CBCL at grade 2, but no differences were found on the Externalizing scale of the TRF (Table

13).

Table 13

Grade 2 sex differences on the Externalizing scales of the CBCL and TRF

	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t-value</i>	<i>df</i>
CBC Boys	46	54.1	8.8	-3.0**	96
CBC Girls	52	59.8	9.6		
TRF Boys	48	55.8	9.0	-1.1	99
TRF Girls	53	57.9	9.9		

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

The Fisher r -to- Z transformation was used to test for differences in the strength of the relationship between positive parenting and CP in boys versus girls. The cross-sectional correlations between Positive Parenting scores and parent and teacher-reported Externalizing scores (Table 6 and Table 9) were examined separately for boys ($n = 50$) and girls ($n = 54$). No significant differences in the strength of the relationship between positive parenting and CP were found for Externalizing scores on the CBCL (Table 14).

Table 14

Sex differences in the relationship between positive parenting and Externalizing scores on the CBCL in grade 1 and grade 2

<i>Positive Parenting</i>	Grade 1			Grade 2		
	Boys r	Girls r	Z	Boys r	Girls r	Z
<i>PP1</i>	-.04	-.17	.61			
<i>PP2</i>				-.21	-.23	.12

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

Significant differences in the relationship between Positive Parenting scores and Externalizing were found on the TRF (Table 15). Boys' Externalizing scores on the TRF were more strongly related to Positive Parenting scores than girls' scores during grade 1

($r_s = -.39$ and $-.06$, respectively).

Table 15

Sex differences in the relationship between positive parenting and teacher-report of Externalizing scores on the TRF in grade 1 and grade 2

	Grade 1			Grade 2		
	Boys r	Girls r	Z	Boys r	Girls r	Z
<i>Positive Parenting</i>						
<i>PP1</i>	-.39**	-.06	-1.60			
<i>PP2</i>				-.31*	-.23	-.42

$\bar{r} = p < .10$ * = $p < .05$ ** = $p < .01$

7. Exploratory analyses of the relationship between positive parenting and positive child behaviors

It was hypothesized that positive parenting would be associated with higher levels of positive child behavior on the IPC, CBCL, and TRF. Exploratory analyses of the correlations between Positive Parenting scores and IPC cluster scores representing positive child interactions were conducted. The cluster scores used in the analysis of positive child behaviors were Child Neutral Engagement (Neut Eng), Child Positive Engagement (Pos Eng), and Child Cooperative (Cop). The cross-sectional correlations between positive parenting and positive child behavior are reported in Table 16. In grade 1, higher Positive Parenting scores were significantly related to higher frequencies of child Neutral Engagement ($r = .36$, $p < .01$) and Positive Engagement ($r = .25$, $p < .05$) but was not related to Cooperation. In grade 2, Positive Parenting scores were significantly related to Positive Engagement ($r = .37$, $p < .01$) but not to Neutral Engagement or Cooperation.

Table 16

Cross-sectional correlations between positive parenting and positive child interaction

<i>Positive Parenting</i>	Neut Eng Grade 1	Pos Eng Grade 1	Cop Grade 1	Neut Eng Grade 2	Pos Eng Grade 2	Cop Grade 2
<i>PP1</i>	.36**	.25*	.08			
<i>PP2</i>				.11	.37**	.09

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

Longitudinal analyses using Positive Parenting scores in grades 1 and 2 to predict child positive behavior in grade 3 were also conducted (Table 17). Positive Parenting scores in grade 1 were significantly related to Neutral Engagement ($r = .42, p < .01$) and Cooperation ($r = .24, p < .05$) in grade 3 but not to Positive Engagement. Positive Parenting scores in grade 2 were significantly related to Neutral Engagement ($r = .33, p < .01$) in grade 3 but not to Positive Engagement or Cooperation.

Table 17

Longitudinal correlations between positive parenting and positive child interaction

<i>Positive Parenting</i>	Neut Eng Grade 3	Pos Eng Grade 3	Cop Grade 3
<i>PP1</i>	.42**	-.04	.24*
<i>PP2</i>	.33**	.17	.16

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

Analyses of cross-sectional correlations between Positive Parenting scores and child positive behavior (CBCL and TRF) were also conducted to test the hypothesis that positive parenting is related to positive child behavior. Cross-sectional analyses showed that Positive Parenting scores in grade 1 were related to higher scores on the CBCL Total Competence scale ($r = .26, p < .01$) and Activities scale ($r = .25, p < .01$). Nonsignificant trends were noted with the CBCL Social scale ($r = .17, p < .10$) and the TRF Happy scale ($r = .20, p < .10$) (Table 18).

Table 18

Grade 1 correlations between positive parenting and child competence

<i>Positive Parenting</i>	CBCL Com	CBCL Act	CBCL Soc	TRF Adfx	TRF Aprbeh	TRF Happy
<i>PP1</i>	.26**	.25**	.17 ⁺	.11	.05	.20 ⁺

⁺ = $p < .10$ * = $p < .05$ ** = $p < .01$

In grade 2, the CBCL Social scale was significantly related to Positive Parenting scores ($r = .21$, $p < .05$) as was the TRF Happy scale ($r = .25$, $p < .05$) (Table 19). A nonsignificant trend was noted with Appropriate Behavior on the TRF ($r = .19$, $p < .10$).

Table 19

Grade 2 correlations between positive parenting and child competence

<i>Positive Parenting</i>	CBCL Com	CBCL Act	CBCL Soc	TRF Adfx	TRF Aprbeh	TRF Happy
<i>PP2</i>	.12	.03	.21*	.15	.19 ⁺	.25*

⁺ = $p < .10$ * = $p < .05$ ** = $p < .01$

Longitudinal analyses were conducted to test the post-hoc hypothesis that positive parenting was associated with subsequent positive child behavior. No longitudinal relationships were found between Positive Parenting scores and measures of child competence on either the CBCL or the TRF in grades 1 or 2 (Table 20).

Table 20

Longitudinal correlations between positive parenting and child competence in grade 3

<i>Positive Parenting</i>	CBCL Com	CBCL Act	CBCL Soc	TRF Adfx	TRF Aprbeh	TRF Happy
<i>PP1</i>	.09	.09	.15	.09	.06	-.02
<i>PP2</i>	.14	-.00	.17	.09	.17	-.01

° = $p < .10$ * = $p < .05$ ** = $p < .01$

IV. Discussion

1. Overview

This study investigated positive parenting in adolescent mothers and its relationship to CP in early school-aged children. A new measure of positive parenting was constructed using a combination of conceptual, methodological, and empirical criteria. The conceptual basis of this work integrated research related both to normal development and socialization and to abnormal development and problems in socialization. Conceptual concerns guided the initial selection of measures. The methodology used in this study measured positive parenting through a combination of microanalytic observation, global observer ratings, and parent self-report. The empirical approach (suggested by Capaldi & Patterson, 1989) employed preliminary internal consistency analyses for item selection, and confirmatory factor analysis in the model testing process. Evidence for a single-factor model of positive parenting was obtained. Positive parenting was significantly related to CP in several domains (family interaction in the lab, child behavior at home, and child behavior in the school) and at several time points (grades 1, 2, and 3). Gender differences in the strength of this association were found, with CP in boys being more strongly related to positive parenting than CP in girls. Analyses also indicated that positive parenting may be related to prosocial behavior in this age group.

2. Summary and interpretation of results

Darling and Steinberg's (1993) model of parenting led me to predict a two-factor model of positive parenting, comprised of measures of parenting style and parenting practice. These data did not support a two-factor model. Instead, results of the confirmatory factor analysis supported a single-factor model of positive parenting that combined indicators associated with parenting style and parenting practices. A test of invariant structure showed that the single-factor model was consistent across grade 1 and

grade 2, lending more support for the validity of the single-factor model of positive parenting.

The excellent fit of the single-factor model can be interpreted in several ways. It could mean that the distinction between style and practice is not useful in measuring and understanding positive parenting. This is particularly possible given that the data in this study measured only positive parenting variables, whereas Darling and Steinberg (1993) initially conceptualized parenting styles and practices as encompassing a broader array of parenting behaviors, including controlling and negative interpersonal interactions. Thus, positive parenting alone may not operate on these two levels, but on a single level that combines positive practices and styles.

It is also possible that positive parenting is best thought of as either a style or a practice, but not as a combination of style and practice. The single-factor model may have best fit the data because positive parenting is a style. Alternatively, the single-factor model may fit because positive parenting is a set of practices. Although these questions are testable, the current study was not designed to answer them. Nevertheless, by showing that a single-factor model fits the data and is invariant across grades 1 and 2, progress has been made toward clarifying this issue.

Another interpretation is that positive parenting is best described by a two-factor model consisting of style and practice, but that this study did not adequately operationalize these factors. A closer examination of the parent self-report instrument (APQ) used to measure style and practices illustrates this point. The subscales of the APQ have been shown to possess adequate psychometric properties in this and previous studies; however, they were not designed as measures of style and practice per se. So the validity of the subscale Involvement as a measure of style and the subscale Positive Parenting as a measure of practices is open to question. Items comprising the Involvement subscale related to positive parenting behaviors that are not contingent upon child behavior, and thus were thought to represent a more pervasive parenting “set” or style. In contrast, the items comprising the Positive Parenting subscale are all contingent

upon positive child behavior; thus, this scale was used as a measure of parenting practices. However, it could be that there are ways of operationalizing parent self-report of style versus practices such that the two are better distinguished from one another.

Hypothesis three stated that cross-sectional analyses would show that mothers who engaged in more frequent positive parenting would have children with lower levels of CP. This hypothesis was largely supported by the data. Lower levels of child Externalizing as reported by parents were significantly related to higher Positive Parenting scores in grade 2. Teacher ratings of child Externalizing were negatively correlated with Positive Parenting scores in both grade 1 and grade 2. Thus, positive parenting was related to lower levels of CP across multiple domains (home and school) and multiple reporters (parent and teacher). The consistency of these findings supports the hypothesis that positive parenting may be an important facet of the family processes involved in child CP. The lack of significant findings with observational measures of CP in the lab qualify this conclusion. Microanalytic observations of child behavior indicated only a nonsignificant trend toward a relationship between lower Negative Physical behavior in grade 1 and higher Positive Parenting scores.

Method variance is an important factor to consider when interpreting the meaning of inconsistencies between microanalytic coding versus teacher and parenting ratings of CP. The observational measures employed in this study sampled child behavior over only 30 minutes, whereas the CBCL and TRF assess larger patterns of behavior over the previous 6 and 2 months, respectively. It may be important to measure the dependent variable (CP) as a larger pattern of behavior in studies of positive parenting. If the Positive Parenting scale is, even in part, a measure of parenting style, then it could also be regarded as a larger pattern of behavior. The relatively longstanding pattern of CP captured on the CBCL and TRF may share a greater proportion of method variance with the Positive Parenting scale than the briefer and more narrowly defined measures of CP obtained using the IPC.

Only limited support was found for hypothesis four, that longitudinal analyses

would show that mothers who engaged in higher levels of positive parenting would have children with lower levels of CP at subsequent time points. When parenting behavior was categorized as Stable High Positive, Stable Low Positive, or Unstable, no significant relationships to child Externalizing in the home or at school were found. However, when positive parenting was not categorized in this way, but was used as a continuous scale, some significant relationships were found. Grade 1 positive parenting was significantly correlated with lower observed child Negative Engagement during grade 3, but not to parent or teacher-reported Externalizing. Positive parenting during grade 2 was significantly related to teacher-reported Externalizing and a nonsignificant trend was noted with parent-reported Externalizing. Positive parenting in grade 1 was not related to any measure of child CP, and positive parenting in grade 2 was not related to any grade 3 observational measures.

The more stringent longitudinal analyses did not show a consistent pattern of significant relationships between positive parenting and measures of CP. This could be due to a number of factors. Positive parenting and CP may only be related cross-sectionally, not longitudinally. In this scenario, positive parenting is related to the absence of CP and *visa versa*. The correlational design of this study does not allow for inferences of causality, but one could speculate that positive parenting may not play an important causal role in the development of CP. Rather, the factors identified in previous research such as harsh or lax discipline, unclear verbal commands, poor monitoring, and parental rejection may be the main parental contributors to CP (e.g., Kendziora & O'Leary, 1992; Loeber & Stouthamer-Loeber, 1986; Patterson et al., 1992). It is also possible that positive parenting should be included in models explaining the development of CP, but a lack of positive parenting, without the presence of negative parenting, is not enough to predict CP in longitudinal analyses.

Another factor that could limit the ability to detect longitudinal relationships between positive parenting and CP is the measurement and operationalization of positive parenting in this study. The IPC was chosen to measure the microsocial parent-child

interactions because of its careful construction, the sequential data it provides, and its psychometric properties, but it may fail to adequately capture some important facets of positive parenting. A microsocial coding system designed to measure the parent-child relationship, rather than parent behavior and child behavior separately, could be more appropriate to the study of positive parenting. For example, higher levels of mother-child synchrony, defined as maintaining the topic of play/conversation, were related to lower levels of CP in toddlers (Rocissano et al., 1987). The concept of synchrony seems consistent with Wahler's (1994) social continuity theory, which explains CP as a child's attempt to elicit predictable parental behavior, even if that behavior is punitive. The IPC is not designed to assess whether the content of an interaction is synchronous or asynchronous. Responsiveness, defined as complying to a child's request or responding to a child's question with play, talk or other positive behavior, has also been shown to be related to lower levels of CP (Dowdney et al., 1984, Gardner, 1994). The IPC could be used to obtain maternal compliance rates, but it is not designed to systematically measure other parental responses to the child. Maternal initiation of interaction has also been shown to relate to lower levels of CP (Pettit & Bates, 1989); however, the IPC cannot distinguish between behavior that is a response versus an initiation. Thus, although the IPC does code maternal positive behavior on one level, and the affect codes of the IPC are congruent with previous research that linked parental warmth with CP (e.g., Vostanis et al., 1994), it may not be the ideal instrument to measure all the important facets of positive parenting.

Hypothesis five predicted that significant relationships would be found between child CP and lower levels of positive parenting at subsequent time points. Taken as a whole, the evidence supports the hypothesis that child CP may be related to subsequent positive parenting. Parent and teacher reports of Externalizing in grade 1 were significantly negatively correlated with Positive Parenting scores in grade 2. (Since positive parenting was not measured at grade 3, the relationship between measures of CP at grade 1 with respect to positive parenting at grade 2 was examined.) A nonsignificant

trend was noted in which Negative Physical behavior was related to Positive Parenting scores, although other observational measures were not significantly related. As noted in previous analyses, correlations were stronger for parent and teacher report measures, which measure a longstanding pattern of CP, than for observed CP during one 30-minute interaction, possibly indicating method effects.

Taken as a whole, the results reported above could be interpreted as evidence of a transactional relationship between positive parenting and child CP. To begin with, there are significant cross-sectional relationships between CP and positive parenting. However, comparing the results reported in Table 9 with those reported in Table 11, there is no relationship between positive parenting in grade 1 and parent and teacher-reports of CP in grade 2 ($r = .06$ and $.02$, respectively) but there is a significant relationship between parent- and teacher-reports of CP in grade 1 and positive parenting in grade 2 ($r = -.24$ and $-.27$, respectively). Given these results, child CP could even be influencing positive parenting, rather than *visa versa*. This interpretation is consistent with the increasingly accepted perspective that parents not only influence child behavior, but that children influence parent's behavior as well (cf. Lytton, 1990). However, this study was not designed to address the issue of whether the relationship between positive parenting and CP is unidirectional or transactional. The correlational design of this study precludes anything other than speculation about these questions.

Hypothesis six, predicting that the relationship between positive parenting and CP would be different for boys versus girls, was supported. Descriptive analyses showed that the girls in this sample had equal or higher levels of Externalizing on the CBCL and the TRF compared to the boys. This study found a stronger relationship between teacher reports of Externalizing and Positive Parenting scores for boys than for girls in grade 1. Moderate correlations between these variables were found for boys at this age, but virtually no relationship was found for girls. During grade 2, the relationship between positive parenting and CP for boys remained at a similar level (grade 1 = $-.39$, grade 2 = $-.31$), but the relationship increased for girls between the two grades (grade 1 = $-.06$,

grade 2 = -.23). As a result, no significant sex differences were found in the relationship between Positive Parenting scores and teacher-reported Externalizing in grade 2.

Why is there a stronger relationship between positive parenting and CP for boys in grade 1 than for girls? First, this question must be understood in relation to the unique pattern of gender differences observed in this study. Girls have equal or higher rates of CP than boys. The larger theoretical frameworks proposed to date were developed to explain why boys have higher rates of CP than girls (e.g., Emery & Kavanagh, 1995). Furthermore, studies of gender differences in the relationship between parenting and CP are still infrequent (cf., Webster-Stratton, 1996). Therefore, a clear interpretation of this finding is not readily apparent.

Hypothesis seven, that positive child behavior may be significantly related to higher levels of positive parenting, was supported. Cross-sectional analyses showed that children were more interpersonally engaged with their mothers (both in neutral and positive interactions) when their mothers scored higher on Positive Parenting. Longitudinal analyses demonstrated that mothers who scored higher Positive Parenting had children who were more engaged and more cooperative in grade 3. Mothers higher on Positive Parenting in grade 1 also had children who were higher on a number of parent-reported and teacher-reported measures of competence.

The construct of Positive Parenting used in this study was influenced in part by previous studies that showed positive parenting was related to various aspects of prosocial child development (Achermann et al., 1991; Kochanska & Aksan, 1995; Parpal & Maccoby, 1985). So, although the primary focus of this study was the development of CP, a secondary interest was whether positive parenting was related to the development of positive child behaviors. It is possible that children who are engaged in prosocial behaviors have less time, and less need, to be involved with CP behaviors. Thus, these findings lend some validation to the findings reported above that higher positive parenting is related to lower CP. Although it is only possible to speculate about causal processes with correlational data, these findings could indicate that positive parenting

encourages the development of the prosocial interpersonal behaviors that early school-aged children need to successfully navigate their expanding social world. Prosocial children are, almost by definition, more pleasant than children with CP while interacting with their parents, and teachers probably provide more positive feedback to parents of prosocial children. So, it is equally possible that mothers are more positive when their children are prosocial at home and at school.

3. Conclusions and future research agendas

This is the first direct investigation of the structure of positive parenting. As such, it can serve as a starting point for greater understanding and more accurate measurement of this important, yet neglected, aspect of the parent-child relationship. The use of multiple methods and multiple reporters has been shown to be an important strategy for increasing stability and representativeness of measurement, particularly regarding the multifaceted processes involved in the development of CP (Achenbach, 1993; Chamberlain & Bank, 1989; Kamphaus & Frick, 1996). The more confident investigators are about the measurement of positive parenting, the more conclusive decisions about whether to include positive parenting in models of CP can be. This study has extended understanding of positive parenting by using this form of measurement.

However, the limitations of the measurement and operationalization of positive parenting used in this study make the need for future studies all the more pressing. New parent self-report measures designed to distinguish between parenting style and parenting practice are needed. Future studies using such an instrument could better test whether positive parenting is a) a combination of practice and style, b) a style or, c) a set of practices. New observational measures, building on previous studies that demonstrated relationships between positive parenting and child behavior, also should be used. Behaviors that encompass broader aspects of the parent-child relationship, such as

responsiveness and initiations, should be targeted by these measures.

The observational paradigm used in this study may also have limited the ability of the microanalytic coding system to detect effects of positive parenting on CP. The PCIT may unintentionally create a positive parenting “condition” in which all parents are forced to, at least minimally, interact with their children. Involvement is one of the aspects of positive parenting that has been found to influence child behavior. The PCIT may create artificially high levels of involvement by structuring parent-child interactions and providing a variety of parent-child activities so that the parent doesn’t have as many opportunities to be non-responsive. Including home observations or longer periods of unstructured interaction in the lab may be important in future microanalytic studies of positive parenting.

Even given the limitations noted above, this study provided evidence that positive parenting is related to lower levels of CP, across multiple domains, multiple reporters, and multiple measures. However, these results need replication and extension. Research indicates the importance of testing reciprocal parent-child influences (Lytton, 1990; Shaw & Bell, 1993). Cross-sectional analyses do not shed light on whether positive parenting is related to subsequent CP or whether CP is related to subsequent positive parenting, or whether there is a transactional process between CP and positive parenting. Further longitudinal analyses are needed to clarify whether lower positive parenting should be seen as a response to the negative interpersonal characteristic of children with CP or whether positive parenting plays a causal role in the development or desistance of CP.

This study provided new information about adolescent parenting with respect to positive parenting, CP, and positive child behaviors. Although understanding adolescent parenting is important in and of itself, questions remain about whether adolescent parents are engaging in adequate levels of positive parenting compared to older mothers. The mothers in this sample have a higher percentage of children with CP than would be expected, so it is possible that adolescent mothers are less positive than necessary for

optimal child development. This data also showed that when adolescent mothers use positive parenting they have children with less CP and more positive behaviors. Positive parenting could be an important factor to consider when predicting outcomes for children of adolescent mothers. Conversely, a limitation of this study is that the results found for adolescent mothers may not be generalizable to parents in general or to all children with CP. Future research should include samples of older mothers of clinic-referred children with CP and older mothers of nonclinic-referred children in order to address these unresolved issues.

Questions also remain about gender differences in the rates of CP for girls versus boys of adolescent parents. Why is it that girls in this study have equal or higher rates of CP than boys? There could be some mechanism, either biological or psychosocial, that is more salient in children of adolescent mothers than in children of older mothers. This possibility should be investigated in future studies. It is also unclear how to interpret the observed differential impact of positive parenting on boys versus girls in this sample. The findings in this study share some similarities with those reported in McFadyen-Ketchum, Bates, Dodge, & Pettit (1996). They reported that high coercion and low affection in mother-child interactions predicted initial high levels of aggression for both boys and girls in kindergarten. However, for boys this parenting combination predicted increasing levels of aggression through third grade whereas for girls it predicted decreases in aggression. While the current study differs in many respects from McFadyen-Ketchum et al. (1996), it shares the finding that CP in boys may have a different relationship to positive parenting than CP in girls. Eme and Kavanaugh (1995) report that boys "may be more susceptible to being aroused into states of positive excitement" as well as negative excitement. Future studies should investigate whether boys benefit more from positive parenting, particularly in the presence of other risk-factors, than girls.

Once measurement issues related to positive parenting have been improved, and further evidence has been gathered regarding the relationship between positive parenting

and CP, will positive parenting be included in models of the development of CP? Why was positive parenting neglected in the first place? One reason may be that research in clinical psychology has traditionally been concerned with dysfunction and abnormal behavior, to the virtual exclusion of normal or optimal behavior. Descriptions of normal and optimal parenting and its relationship to child development have been left to other disciplines and fields. As a result it is difficult to clearly conceptualize and measure positive parenting, or healthy behavior in general, from the perspective of clinical psychology. However, the relatively new domain of developmental psychopathology has shown that much can be learned from studying both normal and abnormal behavior and development. Theories about CP may change if we discover that some children develop CP even given high levels of positive parenting, or if children with many other risk factors do not develop CP given high levels of positive parenting. These changes may improve our description, prediction, and interventions with parents of children with CP.

A focus on the positive is particularly important when investigating adolescent parents, who are known to be at-risk in a number of arenas, including problematic parenting. A more complete picture of adolescent parenting that includes strengths as well as weaknesses could benefit adolescent parents in a number of ways. Clinicians would be better able to assess parenting competence and help parents build upon their strengths if research clearly identified the components of positive parenting. Research on positive parenting could also guide the development of strength-focused services to adolescent parents. Current political discourse about adolescent parents tends to focus on the problems they face. While this is clearly a group at risk for many difficulties, images of healthy parenting and hope for raising successful children are not fostered in such a climate. A more balanced perspective on the strengths and weaknesses of this at-risk group may help create programs that empower and encourage young mothers and their children.

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Appendix A

Parent-Child Interaction Task

I. The Early Parenting Project: Instructions for the PCIT

Materials: Laminated cue card for the parent, social situation cards (5), issue that parent indicated on the Parent Issues Checklist.

Administration: The parent interviewer explains the instructions for the PCIT to the parent after completing the Parent Issues Checklist and immediately before the break.

Introduction: "We are interested in learning the different ways parents and children do things together. For the next 30 minutes or so, we're going to have you and (TC) talk about some things and play with some toys that we have brought along. I'm going to have you and (TC) play with the toys in different ways and do different things. Altogether, there are six different games. Each game lasts five minutes. Here is a card that lists the six games." (Hand the card to the parent.)

Instructions for the Parent: "The first thing I am going to ask you and (TC) to do is called the social teaching task. In this task, I will describe a pretend situation to you. Your task will be to have a conversation with (TC) about it. Here is the situation. (Choose randomly one of the 5 situations.) Take the first minute or so and describe the situation to (TC). Tell him/her that it isn't really going to happen now, but if it did happen sometime, you want to talk with him/her about what you would want him/her to do in this situation. Do you have any questions? If you finish the task before I return, you can talk about anything else, but please do not move on to the next task." (Hand parent the appropriate social situation card. Explain it is for her to refer to in case she can't remember the entire situation.) "When the 5 minutes is up I will knock on the door and say 'its time to move on to #2'".

"The second game is called the parent/child problem solving task. We are also interested in how families go about solving day to day problems. You will have 5 minutes to talk about the issue you selected earlier, which was (refer to the issue the parent selected off the Parent Issues Checklist). I'd like you to talk about what the issue is and try to come up with the best solution or solutions to it. If you get done early talking about the issue, you can talk about whatever you like. But again please do not move on to the next task until I knock on the door and tell you to move on to #3. After the second task I will knock on the door and bring in some toys for you and (TC) to play with during the third and fourth games."

"The third game is called the Child's Game because you tell (TC) that he/she may play with whatever toys he/she chooses. You just follow (TC)'s lead and play along with him/her. You will also have five minutes for this part as which time I will knock on the

door and say it is time to go on to #4. The fourth game is called the Parent's Game because it is your turn to choose which toys to play with. You should have (TC) play with several different sets of toys during the 5 minutes, and have him/her play according to YOUR rules. Do you see the difference between these first two games? (Check for understanding.) In the first game, (TC) gets to choose the toys and you just follow along. In the second game, you choose the toys to play with."

"For the fifth game, you'll use some Lego blocks and you'll have (TC) build a figure. I'll give you more directions about this when its time. The last game listed as #6 is Clean-up. We want (TC) to pick up the Legos and put them back in the bucket and to also put away the other toys. Make sure you have (TC) put all the toys away. Again, I'll let you know when to go from one game to the next by peeking my head in the door and saying "OKAY, it is time to move on to task # __. Please refer to the card if you don't remember which task comes next."

Protocol for Transitioning Parent and TC between Tasks:

After giving these instructions to the parent, ask if they have any questions. If they understand the directions, tell the parent that they can now have a short break with (TC). After the break is finished, the parent and child are both fitted with microphones and led into the playroom. The playroom should have two chairs facing the one-way mirror on a diagonal and the table is pushed up against the far wall. The playroom should be empty of all other items.

After the parent and the TC are seated, explain to the TC, "you and your parent are going to play some games and talk about some things. You can do anything you like in this room, except go on this side of the white line." (Show TC and parent which side to stay on and which side not to go on – if the TC asks why just say that it really helps you out so you can see him/her better.)

Excuse yourself and check with the camera person to make sure the microphones are working. Make any necessary adjustments to the microphones, ask if the parent has any question and then instruct them to begin task #1, reminding the parent to not move on to the next task until you knock on the door and instruct them to do so.

Stay in close proximity to the camera room so that you know when 5 minutes are up, and then transition the parent to the next task. The first and second tasks (Social Teaching and Problem Solving) do not require any additional items in the playroom. When you transition the parent and child to the third task, you need to bring in the 3 bins of toys, which are positioned on the floor at the white line so that the parent and TC are in full view of the camera. Also, move the chairs up against the far wall so they are out of the way. These toys are used for task #3 and #4 and will remain in the room for the remaining PCIT time. Task #5 (the Lego task) requires the following additional instructions, the box of Legos, and the Lego figure picture.

The instructions for the Lego task, given immediately before the task is started, are as follows: "OK, now we'll try something else. This time, we'll play with the Lego blocks. Let's take them out and spread them around on the floor. (Parent interviewer takes out approximately ½ of the Legos.) Here is a picture of a figure that we would like you to build. (Parent interviewer places the picture on the floor.) It's a big figure, and it's one that is hard for some children to build, so we want you to help (TC) with the figure as you think he/she needs it. There is only one rule: (Parent), you are not allowed to touch any of the Legos. So, (Parent) you can help (TC) by talking to him/her or by pointing to the picture or the Legos, but you are not allowed to touch any of the legos. OK? We'll do this for a few minutes, and we'll see how far you can get. We know you won't finish the whole figure, but get as far as you can. And have fun! OK, let's start."

After 5 minutes transition the parent on to the final task by saying: "that was a hard one. You did a really good job on it. (It is important to praise their hard work.) Now, lets do the final one."

Note: It is imperative that the parent interviewer avoids saying, "It's time to clean up". The child should hear this directive from the parent, not the interviewer.

The Clean-up task lasts 3-5 minutes (if the parent and TC are finished cleaning up you can stop them at 3 minutes, but allow 5 minutes for Clean-up if needed). When the parent and TC are finished or when the time is up, the parent interviewer says "That's all the time we have for the toys today. You both did a great job. Let's move on to the rest of the things we have to do today." The parent interviewer picks up the rest of the toys, while the child interviewer gives the child a chance for another bathroom break.

The parent interviewer resumes the interview with the parent.

Appendix B

Overview of the Interpersonal Process Code

The Interpersonal Process Code (IPC) is designed to track frequency, sequence, and duration of interactive behavior. Frequency is recorded by each entry of a code as it occurs. Sequence is the order in which the behaviors are coded. Duration extends from the entry of the first digit of the five digit code to the entry of the first digit of the next code.

The IPC consists of three dimensions called Activity, Content, and Affect, which are recorded concurrently.

1- **ACTIVITY** refers to the global context or setting in which the interactions occur. The activity aspect of the coding system will vary according to the setting and the specific research question. This manual will list possible choices for activity codes that have been used in other studies. Details of each possible Activity code will be included in the Appendix of this manual. It is possible to code the IPC with no assigned Activity code.

2- **CONTENT CODES** describe each behavior initiated by the target, peers, teacher, parent, or any other person who interacts with the targeted interactant. The content codes are divided among three relatively independent categories, namely Verbal, Non-verbal, and Physical. The content codes are defined a priori as positive, negative, or neutral.

	POSITIVE	NEUTRAL	NEGATIVE
VERBAL	Positive Talk Positive-Interpersonal	Talk Advise Directive	Negative Talk Negative- Interpersonal
NON-VERBAL	Cooperative	Social Involvement	Non-cooperative
PHYSICAL	Positive Physical	Physical Interact	Negative Physical

3- **AFFECT** is the emotional tone accompanying the entry of every Content code and comprises six ratings: happy, caring, neutral, distress, aversive, and sad. Observers are trained to use facial cues, tone of voice and body language when coding affect.

Appendix C

Lab Task Impressions

I. Items included in the Mother-Positive Scale

Task 1:

- Was mom supportive/empathetic?
- Was mom positive/reinforcing?
- Was mom cooperative or helpful?
- How involved was mom in the interaction?

Task 2:

- Was mom supportive/empathetic?
- Was mom positive/reinforcing?
- Was mom cooperative or helpful?
- How involved was mom in the interaction?

Task 3:

- Was mom supportive/empathetic?
- Was mom positive/reinforcing?
- Was mom cooperative or helpful?
- How involved was mom in the interaction?
- Was mom having fun?
- Did Mom and child play or talk together?

Task 4:

- Was mom supportive/empathetic?
- Was mom positive/reinforcing?
- Was mom cooperative or helpful?
- How involved was mom in the interaction?
- Did Mom and child play or talk together?

Task 5:

- Was mom supportive/empathetic?
- Was mom positive/reinforcing?
- Was mom cooperative or helpful?
- How involved was mom in the interaction?

Task 6:

- How involved was mom in the interaction?

General PCIT:

- Was mom friendly/pleasant to child?
- Did mom positively reinforce child?

Appendix D

Subscales of the Alabama Parenting Questionnaire

I. Items on the Involvement scale

(1= Never, 2 = Almost Never, 3 = Sometimes, 4 = Often, 5 = Always)

1. You have a friendly talk with your child.
4. You volunteer to help with special activities that your child is involved in (such as sports, boy/girl scouts, church youth group).
7. You play games or do other fun things with your child.
9. You ask your child about his/her day in school.
11. You help your child with his/her homework.
14. You ask your child what his/her plans are for the coming day.
15. You drive your child to a special activity.
20. You talk to your child about his/her friends.
23. Your child helps plan family activities.
26. You attend PTA meetings, parent/teacher conferences, or other meetings at your child's school.

II. Items on the Positive Parenting scale

(1= Never, 2 = Almost Never, 3 = Sometimes, 4 = Often, 5 = Always)

2. You let your child know when he/she is doing a good job with something.
5. You reward or give something extra to your child for obeying you or behaving well.
13. You compliment your child when he/she does something well.
16. You praise your child when he/she behaves well.
18. You hug or kiss your child when he/she has done something well.
27. You tell your child that you like it when he/she helps out around the house.

CURRICULUM VITAE

ANNETTE M. ESTES

Business address: Psychological Services and Training Center
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E-mail address: estesa@u.washington.edu

EDUCATION

Doctoral candidate, University of Washington, Seattle, WA. Estimated date of completion of dissertation: July, 1997.

Major: Child Clinical Psychology
Minor: Developmental Psychology
Advisor: Robert J. McMahon, Ph.D.

Dissertation Title: "Does Positive Parenting Influence the Development of Conduct Problems in Children of Adolescent Mothers?"

Master of Science in Child Clinical Psychology, University of Washington, Seattle, WA. 1994

Thesis Title: "Psychometric Properties of the Coder Impressions Inventory"

Bachelor of Arts, The Evergreen State College, Olympia, WA. 1988

CLINICAL EXPERIENCE

6/97-7/97 **Acting Clinic Director: Psychological Services and Training Center, University of Washington, Seattle, WA.** Provided crisis supervision and consultation for student therapists and clinic staff, assigned supervisors to staff therapists, screened potential clinic clients and matched new clients with therapists, developed a program evaluation proposal for the University of Washington Human Subjects Review Board. Supervisor: Corey Fagan, Ph.D.

9/95-3/97 **Clinical Teaching Assistant: Psychological Services and Training Center, University of Washington, Seattle, WA.** Conducted intake interviews with

prospective clients, provided referrals for people seeking therapy, provided crisis supervision and consultation for student therapists and office staff, provided group supervision to staff therapists, assisted teaching Clinical Methods; Interviewing (Psych 587) and Ethics (Psych 588) to clinical psychology graduate students. Supervisor: Corey Fagan, Ph.D.

9/92-present **Staff Therapist: Psychological Services and Training Center**, University of Washington, Seattle, WA. Diagnosis and treatment of adults, families and children. Provided cognitive, behavioral and psychodynamic play therapy to children; cognitive behavioral, psychodynamic and feminist therapy to adults; and parent training to families. Supervisors: Laura Brown, Ph.D., Steve Clancey, Ph.D., Decky Feidler, Ph.D., Lew Humphries, Ph.D., Lisa Kahan, Ph.D., Robert J. McMahon, Ph.D., Susan Radant, Ph.D.

6/95-9/96 **Family Therapy Team:** University of Washington, Seattle, WA. Conducted structural and strategic family therapy as part of a team. Engaged in training seminars based on videotapes and readings. Supervisors: Kim Barrett, Ph.D., Corey Fagan, Ph.D.

6/95-2/96 **Group therapist: Woodinville Medical Center**, Woodinville, WA. Developed curriculum for social skills group for behaviorally disordered children. Conducted group meetings in private practice setting. Supervisor: Molly Reid, Ph.D.

9/94-6/95 **Psychology Extern: Mary Bridge Children's Health Center**, Tacoma, WA. Conducted evaluations for Attention Deficit Hyperactivity Disorder; inpatient consultation to medical staff; outpatient child and family therapy for children and adolescents with acute or chronic medical conditions; Cofacilitated support group for girls with Turner's Syndrome. Supervisors: Robert Beilke, Ph.D., Arthur Lewy, Ph.D.

12/94-4/95 **Parent Training Group Cotherapist: Parenting Clinic**, Department of Family and Child Nursing, University of Washington, Seattle, WA. Implemented an eight week parent training curriculum as part of a prevention project with Seattle Headstart. Supervisor: Carolyn Webster-Stratton, Ph.D.

9/93-10/94 **Psychology Extern: Parent Evaluation Training Program**, Outpatient Psychiatry, University of Washington Medical Center, Seattle, WA. Conducted comprehensive, forensic evaluations regarding custody decisions in disputed divorces; provided expert testimony to King County Family Court. Supervisor: G. Andrew H. Benjamin, J.D., Ph.D. Consultants: Arthur Davis, Ph.D., Steven Feldman, J.D., Ph.D., Marjorie Helman, MSW

9/92-5/93 **Friendship Group Cofacilitator: FAST (Families and Schools Together) Track Project**, University of Washington, Seattle, WA. Cofacilitated social

skills group for first grade children at-risk for conduct problems. Supervisor: Mark T. Greenberg, Ph.D.

8/87-6/88 **Counseling Intern:** The Evergreen State College (TESC), Olympia, WA. Conducted crisis, short-term, and weekly counseling with individual clients; participated in weekly supervision; cofacilitated an assertiveness training group and a dream interpretation group; chaired hiring committee; interviewed prospective counselors. Supervisor: Shari Smith, M.A.

RESEARCH EXPERIENCE

1/92-8/94 **Home Observation Coordinator: FAST Track Project,** University of Washington, Seattle, WA. Developed observational coding procedures; developed comprehensive training procedures; trained observation supervisors and research assistants at four project sites; supervised Seattle observation team; conducted reliability checks.

4/90-7/91 **Data Manager: Oregon Social Learning Center (OSLC),** Eugene, OR. Edited data files using BRIEF and EVE; ran reliabilities; uploaded files to the VAX; created data entry formats; coordinated data entry with assessment and research teams; produced documentation and backup requests.

12/89-7/91 **Family Process Code Supervisor and Coding coordinator: OSLC,** Eugene, OR. Hired and trained observers; supervised coding team; disseminated coding information to interested universities and visiting scientists; administered budget and out-of-house coding contracts, developed a new observational coding system.

9/88-7/91 **Family Process Code Observer: OSLC,** Eugene, OR. Conducted home observations and coded video tapes using FPC.

1/90-6/90 **Adolescent Transitions Project Coordinator: OSLC,** Eugene, OR. Supervised team of thirteen research assistants; conducted assessment of three waves of three cohorts of twenty-four to thirty-two families each; paid families and responded to their concerns; projected staffing needs; hired staff.

1/89-6/90 **Adolescent Transitions Project Recruitment: OSLC,** Eugene, OR. Publicized study in the community; conducted screening interviews; conducted initial home visits.

1/89-6/90 **Interviewer: OSLC,** Eugene, OR. Conducted structured research interviews, Diagnostic Interview Schedule for Children (Parent and Child versions; DISC), Parent Daily Report telephone interviews, and screening interviews.

6/89-10/90 **Interview Supervisor: OSLC, Eugene, OR.** Developed and implemented interview training procedures; hired staff; assessed and monitored performance of team of eleven interviewers on structured research interviews and DISC interviews; facilitated weekly staff meetings.

9/88-10/90 **Data Checking and Coding: OSLC, Eugene, OR.** Supervised and trained data checkers and trackers; checked, coded, and batched data; developed coding categories and revising instruments.

TEACHING EXPERIENCE

9/91-Present **Teaching Assistant:** University of Washington, Seattle, WA. Graduate level: Advanced Child Assessment, Intelligence Assessment, Clinical Methods, Clinical Ethics Undergraduate level: Personality Theory, Child Development, Abnormal Psychology.

6/95-9/95 and 6/96-9/96 **Course Instructor: Child Behavior Disorders, (Psych 410).** Department of Psychology, University of Washington, Seattle, WA. Developed curriculum, syllabus and lectures for an advanced undergraduate course. Lectured and facilitated participatory learning experiences. Evaluated student papers, presentations, and participation. Gave graded and written evaluations.

9/93-3/94 **Course Instructor: Writing Link to Introductory Psychology (Engl 197).** Joint position with Department of English and Department of Psychology, University of Washington, Seattle, WA. Developed interdisciplinary writing curriculum for undergraduates taking introductory psychology. Taught principles of writing and library research in psychology, facilitated student writing critique groups, gave individual feedback to student on three major writing assignments each quarter. Gave graded and written evaluations of their work.

10/92-present **Guest Lecturer:** Department of Psychology, University of Washington, Seattle, WA. Abnormal Psychology; Fall Quarter 1996, depression, Child Behavior Disorders; Winter Quarter 1996 & 1995, parenting practices workshop, Summer Quarter 1994, child depression; Clinical Methods; Fall Quarter 1996 & 1995, introduction to child intakes, Freshman Interest Group; Fall Quarter 1995, introduction to child clinical psychology, Child Development; Fall Quarter 1992, intelligence assessment.

9/86-6/87 **Tutoring Aide:** TESC, Olympia, WA. Tutored students in essay, research, and creative writing; taught spelling and grammar; taught English to Japanese and German ESL students; team taught two writing response groups.

PUBLICATIONS

Estes, A. (1992). Lead Observer's Manual. Unpublished Manuscript, FAST Track Project, Seattle, WA.

McMahon, R.J. & Estes, A. (in press). Oppositional and conduct disorders. In E.J. Mash and L.G. Terdal (Eds.), Behavioral Assessment of Childhood Disorders (3rd ed.). New York: Guilford Press.

McMahon, R.J., Estes, A. (1992). Behavioral Coding System. Unpublished Manuscript, FAST Track Project, Seattle, WA.

Rusby, J.C., Estes, A., & Dishion, T.J. (1991). Interpersonal Process Code. Unpublished Manuscript, Oregon Social Learning Center, Eugene, OR.

PRESENTATIONS

Estes, A., & Cauce, A.M. (1995). The work/family interface: Maternal working environments and adolescent well-being in African American families. Poster presented at convention of the Association for the Advancement of Behavior Therapy, Washington D.C.

Estes, A., McMahon, R.J., Mason, C., & Conduct Problems Prevention Research Group (CPPRG) (1994). Psychometric Properties of the Coder Impressions Inventory. Poster presented at convention of the Association for the Advancement of Behavior Therapy, San Diego, CA.

Estes, A. (1996) The research process in a study of the work/family interface in African American families. Presented at the Child Clinical Research Seminar, University of Washington, Seattle, WA.

Estes, A. (Jan., 1996) Observational methods, observer training, and reliability. Presented at the Meta-Emotions Research Lab, University of Washington, Seattle, WA.

Estes, A. (Jan., 1995) Observational methods and observer training. Presented at the Parenting Clinic research group University of Washington, Seattle, WA.

PROFESSIONAL ACTIVITIES

Student Member: Association for the Advancement of Behavior Therapy, American Psychological Association

Student Representative: Search Committee for Child Clinical Associate Professor, 10/95-2/96

Minority Concerns Committee: Undergraduate Mentor Program; 1995-present.

Washington State Psychological Association (WSPA) Spring Convention, 1996

Domestic Violence Workshop; Seattle VA Hospital, January, 1996

WSPA Fall Convention, 1995

WSPA conference; Ethical Issues in Rural Practice, September, 1995

AABT Convention, 1994

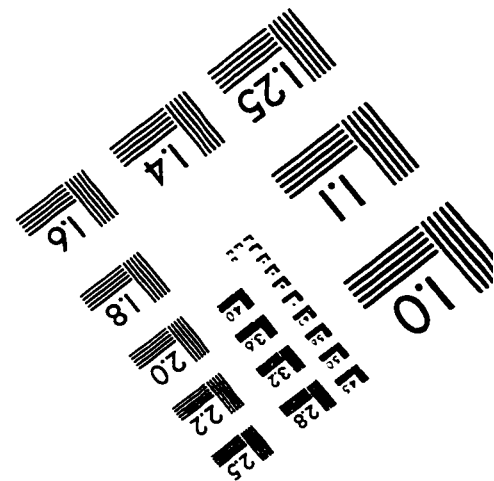
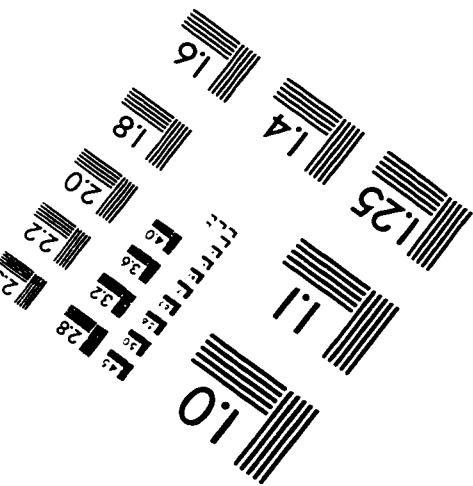
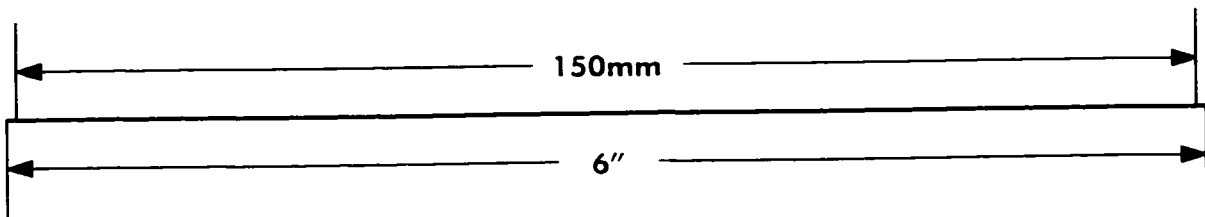
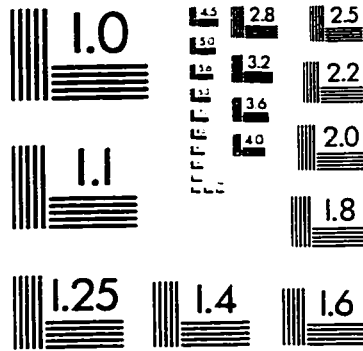
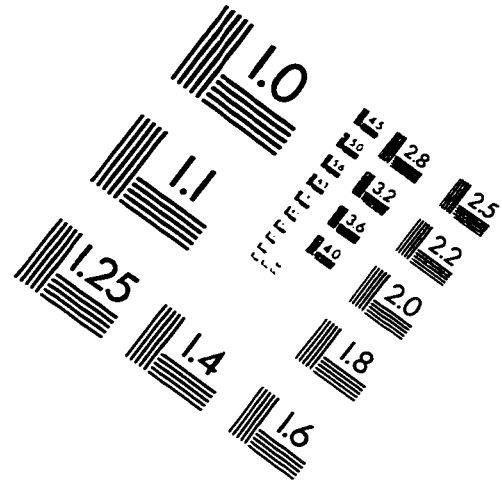
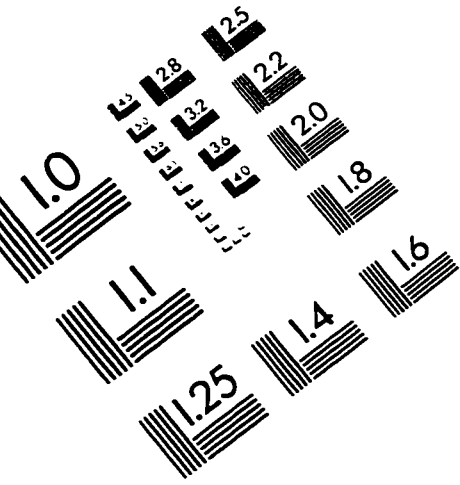
Student Group Coordinator: TESC, Innerplace; the Campus Center for Spiritual Exploration, Olympia, WA. (9/85-6/86) Administered, wrote, and presented a budget; conceived and produced workshops, lectures, and other campus events.

Peer Advisor: TESC, Olympia, WA. (9/84-6/85) Assisted new students during registration; made presentations regarding campus services; participated in workshops on counseling skills and cultural awareness.

HONORS and AWARDS

1994	Nathaniel Wagner Memorial Travel Fellowship
1984-1985	The Evergreen State College Foundation Scholarship
1984, 1985	Mary Borg Charitable Trust Education Grant

IMAGE EVALUATION TEST TARGET (QA-3)



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