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Parental control, parental warmth, and psychosocial adjustment in a sample of substance-abusing mothers and their school-aged and adolescent children

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Abstract

Parenting interventions for substance-abusing adults have been broadly based on two approaches, one emphasizing parental control as a means to managing children's behavior and the second emphasizing parental warmth and sensitivity as means to fostering children's psychological development. In this investigation, we examined associations of parental control and parental warmth, respectively, with children's behavioral and psychological adjustment in a sample of 98 women enrolled in methadone maintenance and their school-aged and adolescent children. Using collateral data collected during the baseline phase of a randomized clinical trial (Luthar, S. S., Suchman, N. E., & Altomare, M. [in press]. Relational Psychotherapy Mothers Group: A randomized clinical trial for substance abusing mothers [in preparation]), we tested predictions that (a) parental control would be more strongly associated with children's behavioral adjustment and (b) parental warmth would be more strongly associated with children's psychological adjustment. Both predictions were generally confirmed, although some crossover among parenting and child dimensions was also evident. Results support the theoretical stance that parental limit setting and autonomy support, as well as nurturance and involvement, are important factors, respectively, in children's behavioral and psychological adjustment.

Keywords

Parent–child relations; Mother–child relations; Maternal substance abuse; Family relations; Parenting intervention

1. Introduction

Although maternal substance use has been linked with deficits and disruptions in parenting and poor psychosocial outcomes for children (see Chaffin, Kelleher, & Hollenberg, 1996; Department of Health and Human Services [DHHS], 1999; Harden, 1998; Harmer, Sanderson, & Mertin, 1999; Mayes & Truman, 2002; McMahon & Luthar, 1998; Suchman & Luthar, 2000), little is understood about the *mechanisms* by which drug-using mothers' parenting influences their children's psychosocial adjustment. In this study, we were interested in examining how two broad and universal dimensions of parenting—*parental control* and *parental warmth*—might be differentially associated with children's psychosocial adjustment. Conceptually, parenting interventions tested in clinical trials with substance-abusing parents

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have emphasized one dimension (e.g., parental control or warmth) more strongly, although, in practice, these interventions are often delivered with an emphasis on both. Conceptually, cognitive-behavioral approaches (see Catalano, Gainey, Fleming, Haggerty, & Johnson, 1999; Kumpfer, 1998) have more strongly emphasized parental control as a means to managing children's conflict-producing behavior, and relational approaches (see Camp & Finkelstein, 1997; Luthar & Suchman, 2000; Moore & Finkelstein, 2001; Pajulo, Suchman, Kalland, & Mayes, in press; Suchman, Mayes, Conti, Slade, & Rounsaville, 2004) have more strongly emphasized parental warmth and sensitivity in response to children's emotional needs as a means to fostering children's psychological development. On the basis of these two distinct conceptualizations of mechanisms of change, in this study, we were interested in determining whether parental control would be more strongly associated with children's behavioral adjustment, whereas parental warmth would be more strongly associated with children's psychological adjustment.

1.1. Parental control and warmth

For the last 20 years, two broad realms of parenting have been identified as critical elements of the parenting process. Baumrind (1988) has referred to these realms as parental "demandingness" and "responsiveness." Baumrind has characterized parental demandingness as involving the use of direct confrontation and monitoring, patterns of firm and consistent discipline, and high maturity demands. She has characterized parental responsiveness as encompassing affective warmth, cognitive responsiveness, attachment and bonding, unconditional acceptance, sensitive attunement, involvement, and reciprocity. Amato (1990) has defined "parental control" as the amount of supervision parents exercise, the decisions parents make about their children's activities and friends, and the rules parents hold for their children. Amato has characterized parental warmth as the expression of interest in children's activities and friends, involvement in children's activities, expression of enthusiasm and praise for children's accomplishments, and demonstration of affection and love.

Grolnick (2003) has referred to parental "structure" and "autonomy support" as the means by which parents promote their children's behavioral competence and autonomy and has referred to parental "involvement" as the means by which parents promote their children's relatedness. Specifically, children's competence is thought to be promoted when parents provide structure and guidelines for behavior, communicate behavioral expectations, explain why expectations are important, and delineate consequences of meeting or not meeting expectations. Children's autonomy is thought to be promoted when parents avoid the use of coercion and instead allow their children to initiate actions. Parental involvement is thought to foster relatedness and connection in children through the acts of spending time with children, providing emotional resources (e.g., warmth, availability), showing interest in and knowledge about children's activities, and sharing an understanding with children about what happens on a day-to-day basis.

Rohner (2004) has used the term "parental acceptance" to convey a parent's contribution to the quality of the affectional relationship between parent and child and the physical, verbal, and symbolic behaviors parents use, or are perceived to use, to express these feelings. One end of the parental acceptance continuum is marked by the expression of warmth, affection, care, comfort, concern, nurturance, support, or, simply, love toward a child. The other end of this continuum is marked by parental rejection, characterized by the absence or significant withdrawal of parental warmth and by the presence of a variety of physically or psychologically hurtful behaviors and affects.

1.2. Parenting dimensions and children's psychosocial adjustment

Although no prior studies to our knowledge have examined the relative influence of parental control and warmth on children's psychosocial adjustment in families affected by parental substance use, recent findings from clinical trials with substance-abusing parents indicate that parental limit setting and induction have been associated with diminished maladaptive behavior in children but not with the emotional quality of the parent-child bond or children's psychological adjustment (Catalano et al., 1999; Catalano, Haggerty, Gainey, & Hoppe, 1997; Kumpfer, 1998). Parental coercion and psychological control have also been associated with children's maladaptive behavior (Amato, 1990). Parental control (the use of limit setting and support for autonomy) may therefore be more influential than parental warmth in the promotion of children's socially appropriate behavior and the prevention of inappropriate, conflict-producing behavior. Likewise, in clinical trials with drug-dependent parents, parental warmth and involvement have been found to be associated with reciprocity in the parent-child relationship and children's emotional development and psychological adjustment (Egeland, Weinfield, Bosquet, & Cheng, 2000; Field et al., 1998; Luthar & Suchman, 2000). Parental warmth may therefore be more influential than parental control in the promotion of children's emotional and psychological adjustment. In this study, our aim was to test each of these respective links between parental control, parental warmth, and child outcomes. We expected optimal parental control to be more strongly associated with children's behavioral adjustment and higher levels of parental warmth and involvement to be more strongly associated with children's psychological adjustment.

2. Method

2.1. Overview of procedures

Data used in this study were collected during baseline assessments of methadone-maintained mothers enrolled in a randomized clinical trial testing the efficacy of a new parenting intervention called the Relational Mothers' Parenting Group (RPMG; for a full report on the randomized clinical trial study, see Luthar, Suchman, & Altomare, in press). Opiate-addicted mothers interested in participating in parenting groups were recruited at three methadone clinics in New Haven, CT. Recruitment occurred via referrals by counselors, visits made by research assistants to counseling groups and medication lines, and referrals from mothers who had already participated in the study. To be eligible for inclusion, mothers had to (a) have at least one child under 16 years of age in their care and (b) report problems with parenting. Exclusion criteria included conditions that would impede ability to benefit from group therapy, such as cognitive deficits, psychotic thought processes, suicidality, and homicidality.

All eligible mothers who expressed interest in the study met with a research assistant who explained the nature of the study as a randomized trial and completed consent procedures with mothers. A subset of mothers caring for children aged 8 to 16 were also invited to complete assent procedures, allowing one child within this age range to participate in assessments as well. Initial assessments were scheduled with mothers and children who consented to participate. After mothers and children completed the baseline assessment, mothers were scheduled for a second meeting during which they were randomized to either RPMG or Recovery Training (RT), a comparison condition.

The RPMG and RT conditions each entailed weekly group meetings in addition to standard treatment at the clinic. Mothers were enrolled in their respective interventions for 24 weeks and in the study for 1 year. Mothers and children completed assessments about the mothers' parenting and mothers' and children's behavioral and psychological adjustment seven times during the year at 8-week intervals (Weeks 0, 8, 16, 24, 32, 40, and 48). To compensate mothers for time spent in assessments, we used a staggered reimbursement schedule, such that mothers

were paid US\$20 at the baseline visit; US\$25 at Weeks 8, 16, 24, and 32; US\$30 at Week 40; and US\$40 at Week 48. At each visit, children under 13 years of age received a US\$20 gift certificate to local merchants (e.g., toy or music store), and children 13 and older received US\$20 in cash. Mothers and children received bonus payments of US\$5 for completing their assessments on time.

2.2. Sample

A total of 182 mothers who expressed interest in the study were screened and found eligible for the study and completed baseline assessments. Of these 182 mothers, 144 had a biological child between the ages of 8 and 16 in their custody. Of the 144 eligible children, 98 (68%) completed the baseline assessment; the remaining eligible children did not participate because either the mother or the child declined. Data from this sample of 98 mother–child dyads were used in this study. Sociodemographic characteristics of the sample are presented in Table 1. Most mothers in the sample were Caucasian, never married, high-school educated women caring for 2 children. Children in the sample evenly represented both genders and were 11 years of age, on average.

2.3. Constructs and measures

2.3.1. Parental control and warmth—Mothers' self-perceptions of parental control and warmth were assessed with the Parent–Child Relationship Inventory (PCRI; Gerard, 1994) and the Parental Acceptance–Rejection Questionnaire (PARQ; Rohner, 1991). The PCRI (Gerard, 1994) is a 78-item maternal self-report measure rated on a four-point scale. The PCRI consists of six scales, including Communication, Involvement, Limit Setting, Autonomy, Satisfaction, and Support. Two of these scales—Communication (with higher scores indicating a capacity to talk and empathize with child) and Involvement (with higher scores indicating interest shown in child's activities)—were used to assess maternal self-perceptions of parental warmth. Two other scales—Limit Setting (with higher scores indicating the provision of appropriate discipline) and Autonomy scale (with higher scores indicating the promotion of child's independence)—were used to assess maternal self-perceptions of parental control. Adequate psychometric properties have been established for the PCRI (Gerard, 1994). For this sample of mothers, Cronbach's coefficient alphas were .71 for Communication, .81 for Involvement, .76 for Limit Setting, and .48 for Autonomy. The PARQ is a 60-item measure rated on a four-point scale, which determines a parent's stance on a warmth–rejection continuum in relation to her child. Parallel versions of the PARQ assess, respectively, the mothers' and children's perceptions of maternal behaviors. The PARQ is composed of four subscales: the Warmth/Affection scale (with higher scores indicating more expressed warmth and interest), the Aggression/Hostility scale (with high scores indicating more use of verbal and physical aggression), the Neglect/Indifference scale (with higher scores indicating less attention to children's needs), and the Undifferentiated Rejection scale (with higher scores indicating emotional coolness toward the child). Adequate psychometric properties have been documented for the PARQ (Rohner, 1991). In this sample of mothers, alpha coefficients for the four subscales were .89 for Warmth/Affection, .73 for Aggression/Hostility, .79 for Neglect/Indifference, and .62 for Rejection.

Children's perceptions of parental control and warmth were assessed with the PARQ (Rohner, 1991), the Child Report of Parenting Behavior Inventory (CRPBI; Schaefer, 1965), and the Maternal Involvement Scale (MINV), adapted from the revised version of the Supervision/Involvement Scale of the Pittsburgh Youth Study (Loeber, Farrington, Stouthamer-Loeber, & van Kammen, 1998). The child version of the PARQ is composed of the same four subscales as the parent version: the Warmth/Affection scale, the Aggression/Hostility scale, the Neglect/Indifference scale, and the Undifferentiated Rejection scale. In this sample of children, the

Cronbach's alpha coefficients for the four subscales were .91 for Warmth/Affection, .83 for Aggression/Hostility, .73 for Neglect/Indifference, and .62 for Rejection.

The CRPBI is a 56-item measure rated on a three-point scale, which assesses children's perceptions of their parents' child-rearing behavior. Separate but identical forms exist for the mother and father and can be rated by children ages 8 and older; children in this study completed only the form for mothers. The Acceptance versus Rejection scale (with higher scores indicating that the child feels valued or appreciated by and important to the mother) was used to measure children's perceptions of parental warmth. The Autonomy versus Psychological Control scale (with higher scores indicating promotion of child's independence) and the Firm versus Lax Control scale (with higher scores indicating the provision of appropriate discipline) were used to assess children's perceptions of parental control. Cronbach's coefficient alphas for the three scales in this sample of children were .89, .77, and .77, respectively. The 56-item CRPBI (which was adopted from the original questionnaire of 260 questions) has been found highly reliable and has a factor structure similar to the original measure (Margolies & Weintraub, 1977).

The MINV is a 14-item measure that assesses children's (ages 8 and older) perceptions of their primary caregiver's knowledge, interest, and involvement in their children's activities with higher scores indicating more maternal interest and involvement. The MINV yields a Total Involvement Score that was used for this study; the coefficient alpha for this sample of children was .81.

2.3.2. Children's behavioral and psychological adjustment—Children's behavioral adjustment was operationalized as (a) externalizing behavior problems and (b) problems getting along with teachers and peers at school. Children's psychological adjustment was operationalized as (a) internalizing problems, (b) clinical maladjustment, (c) personal adjustment, and (d) depression.

Children's self-reported behavioral and psychological adjustment were assessed using the Self-Report Scale (SRP) from the Behavioral Assessment System for Children (BASC; Reynolds & Kamphaus, 1992). Separate SRP forms are available for different age groups; the SRP Child (ages 8 through 11) and Adolescent (ages 12 through 18) forms have 152 and 186 items, respectively, each rated on a two-point (true/false) scale. *T* scores on the School Maladjustment scale served as a measure of children's self-reported behavioral adjustment. *T* scores on the Clinical Maladjustment and Personal Adjustment scales served as measures of children's self-reported psychological adjustment. *T* scores at or above 60 on maladjustment scales and below 40 on adjustment scales on the BASC are considered clinically significant (Reynolds & Kamphaus, 1992). Excellent psychometric properties for the BASC have been documented (Reynolds & Kamphaus, 1992). Within this sample of children, Cronbach's coefficient alpha for the SRP scales ranged from .82 to .96 (median = .87) across the two forms.

Children's self-reported psychological adjustment was also assessed with the Children's Depression Inventory (CDI; Kovacs, 1992). The CDI is a widely used 27-item questionnaire rated on a three-point scale designed for school-aged and adolescent children. Scores range from 0 to 54, with higher scores indicating endorsement of more depressive symptoms. Cronbach's coefficient alpha for this sample of children was .87.

The Parent Rating Scale (PRS) from the BASC was used to measure mothers' reports of children's behavioral and psychological adjustment. Separate PRS forms are available for different age groups of children: the Preschool (ages 4 through 5), Child (ages 6 through 11), and Adolescent (ages 12 through 18) versions, with 131, 138, and 126 items, respectively, all rated on four-point scales. *T* scores for Externalizing served as a measure of mothers' reports

of children's behavioral adjustment. *T* scores for Internalizing served as measures of mothers' reports of children's psychological adjustment. *T* scores at or above 60 on these scales are considered clinically significant (Reynolds & Kamphaus, 1992). Within this sample of mothers, Cronbach's coefficient alphas for the PRS composite scales ranged from .79 to .93 (median = .91) across the three forms.

2.4. Data analysis

The primary aim of the data analyses was to test the hypotheses that (a) parental control is more strongly associated with children's behavioral adjustment and (b) parental warmth is more strongly associated with children's psychological adjustment. Testing these hypotheses involved several steps that are elaborated below.

2.4.1. Intercorrelations—To insure that the six scales representing child adjustment were related but distinct constructs, we examined intercorrelations among each of these variables (i.e., externalizing, school maladjustment, internalizing, clinical maladjustment, personal adjustment, and depression). Tabachnick and Fidell (1996) suggest that there is a chance of multicollinearity when constructs are correlated at .80 or above; we therefore used this cutoff to rule out multicollinearity.

2.4.2. Factor analyses—The next step involved determining whether the two dimensions of parenting—control and warmth—were robust constructs in data collected from this sample of methadone-maintained mothers and their children. Factor analyses were conducted to determine, respectively, the factor structures of mothers' and children's reports on parenting measures. Scree plots from separate principal components analyses conducted with mothers' and children's reports of parenting, respectively, were examined to determine the factor solution for each set of measures. In each case, the factor solution indicated that the model contained two factors. Two-factor solutions were then used in two subsequent factor analyses using Varimax rotation to determine if parental control and warmth measures loaded, respectively, on separate factors (using .60 as the cutoff).

2.4.3. Covariates—Because parental socioeconomic status (SES), child age, and child gender are known to influence parenting and child adjustment, we held each of these factors constant in all subsequent analyses. Because occupation level is an unstable measure of SES in families affected by parental addiction and because a majority of women in substance abuse treatment are single parents, maternal education served as a proxy measure for family SES (Suchman & Luthar, 2000).

2.4.4. Regression analyses—In a series of regression analyses, we examined relative associations of parental control and parental warmth, respectively, with children's behavioral and psychological adjustment. In all regression analyses, maternal education and child's age and gender were entered in Step 1 as covariates, and mothers' and children's reports of children's adjustment (behavioral and psychological) served as the dependent measures. In the first set of regression analyses, children's scores on the maternal control scales were entered in Step 2, followed, in Step 3, by children's scores on maternal warmth scales. In the second set of regression analyses, the steps were reversed (maternal warmth scales were entered in Step 2 followed by maternal control scales in Step 3). Reversing the order of independent variable entry provided an estimate of the unique variance in child adjustment accounted for, respectively, by the parental control and warmth dimensions. This series of regressions was then repeated using mothers' scores of parental control and warmth as independent variables. Significance level was set at $p < .05$ (two tailed). To insure that the meaning of beta weight direction was consistent across variables, we adjusted the valence (+/−) for each individual standard beta weight, if necessary, so that positive beta weights represented higher levels of

functioning. Mean standardized beta weights were computed for measures entered in each block.

3. Results

3.1. Intercorrelations and descriptive data

The magnitude of intercorrelations among the six child adjustment variables ranged from .14 to .70 (median = .34), indicating that many constructs were related but not collinear (see Table 2). Descriptive data for all measures completed by mothers and children are shown in Table 3. Mothers generally rated themselves lower (less adaptive) on parenting measures than they were rated by their children. For mothers' reports, percentages of parenting scores falling beyond clinical cutoff scores ranged from 10 to 38.3, whereas, for children's reports, percentages of parenting scores falling beyond clinical cutoff scores ranged from 0 to 11.1. Children's self-ratings indicated higher levels of adjustment than mothers' ratings of children. For mothers' reports, percentages of child adjustment scores falling beyond clinical cutoff scores ranged from 18.4 to 26.5, whereas, for children's reports, child adjustment scores falling beyond clinical cutoff scores ranged from 10.4 to 18.4.

3.2. Factor analyses examining parental control and warmth parenting dimensions

Results of principal components analyses conducted, respectively, with mothers' and children's scores on all parenting indices yielded scree slopes showing that a two-factor solution was most appropriate for examining underlying factor structures. Scores representing parental warmth had high loadings on Factor I (above .60) and low loadings on Factor II (below .50). Scores representing parental control had high loadings on Factor II (above .60) and low loadings on Factor I (below .30). Patterns of factor loadings were consistent for both mothers' and children's ratings of parenting.

3.3. Parental control and children's behavioral adjustment

Results shown in Table 4 represent variance explained by each parenting domain after covariates and the other parenting domain were entered first in a regression model. The results indicate that, after variance due to sociodemographic (i.e., maternal education, child age, and child gender) and parental warmth factors was taken into account, parental control (by mothers' reports) explained significant unique variance in children's externalizing problems and marginally significant unique variance in children's school maladjustment. Parental control (by children's reports) explained significant unique variance in children's school maladjustment but not in children's externalizing problems. Mean standardized beta weights reported in Table 4 indicate that, as parental control increased, children's externalizing problems and school maladjustment problems decreased.

3.4. Parental warmth and children's psychological adjustment

As shown in Table 4, after variance due to sociodemographic factors and parental control factors was taken into account, parental warmth (by children's reports) explained significant variance in children's internalizing problems, clinical maladjustment, personal adjustment, and depression. Parental warmth (by mothers' reports) explained significant variance in children's internalizing problems but not other domains of psychosocial adjustment reported by children. Mean standard beta weights indicate that, as parental warmth (by children's reports) increased, children's clinical maladjustment and depression decreased and children's personal adjustment increased. However, contrary to predictions, as parental warmth (by mothers' and children's reports) increased, children's internalizing problems (by mothers' reports) *also* increased.

3.5. Additional findings

Although not predicted, parental warmth (by children's report) was significantly related to children's externalizing problems, and parental warmth (by mothers' report) was marginally related to children's externalizing problems. Beta weights reported in Table 4 indicate that, as parental warmth (by mothers' and children's reports) increased, children's externalizing problems decreased.

Although not predicted, parental control (by children's report only) explained significant variance in children's depression. Mean standardized beta weights indicate that, as parental control increased, children's depression decreased.

4. Discussion

In this study, using data collected collaterally from drug-dependent mothers and a subset of children, we examined the relative associations of two broad domains of parenting—parental control and parental warmth—with two broad domains of children's adjustment—behavioral adjustment and psychological adjustment. On the basis of results reported from previous clinical trials with substance-abusing parents, we predicted that, when parental control and warmth were examined together, (a) parental control would be more strongly associated with children's behavioral adjustment and (b) parental warmth would be more strongly associated with children's psychological adjustment. Findings for each prediction are discussed, in turn, below.

4.1. Parental control and children's behavioral adjustment

Mothers who rated themselves higher on parental control (i.e., reported having an easier time setting limits without being overly intrusive) viewed their children as having fewer externalizing problems; their children likewise reported having fewer problems getting along with teachers and peers in school. Children who rated their mothers higher on parental control (i.e., reported that their mothers set firm limits while supporting their autonomy) likewise reported having fewer problems getting along with their teachers and peers in school but were not viewed by their mothers as having fewer externalizing problems. Taken together, these findings are consistent with prior findings suggesting that the capacity to set firm limits while supporting autonomy is critical to the management of preadolescent and adolescent children (see Luthar, Cushing, Merikangas, & Rounsaville, 1998; Luthar, D'Avanzo, & Hites, 2003). The findings also suggest that effective parental control may be critical to children's adaptive behavior in other settings such as at school and at home.

One exception to this pattern of associations was that children who rated their mothers higher on parental control were not viewed by their mothers as having fewer externalizing problems. One possible explanation is that children may be less aware than their mothers, who are seeking support for their parenting, of their mothers' struggles to manage their children's behavior. Children may therefore have rated their mothers differently on parental control indices than mothers rated themselves.

4.2. Parental warmth and children's psychological adjustment

Children who rated their mothers higher on parental warmth (i.e., more affectionate and more involved and less hostile and less neglectful) rated themselves as less clinically maladjusted (i.e., having fewer symptoms of anxiety, depression, social stress, atypical thoughts, and somatization and a stronger internal locus of control) and more personally well adjusted (i.e., higher self-esteem and self-reliance and closer interpersonal relationships). These findings are consistent with theoretical views of parenting (e.g., relational and attachment theories) emphasizing that the emotional quality of parent-child relationships is critical to children's

psychological and emotional well-being. That is, children who experience their parents as genuinely caring and interested in their well-being and activities are thought to be less likely to incur psychological distress and more likely to experience realistic self-efficacy.

Surprisingly, mothers who were rated higher on parental warmth by themselves *and* their children were *more* likely to report their children as having internalizing problems (e.g., anxiety, depression, and somatization). It is possible that mothers who were more emotionally involved and invested in their relationships with their children were more likely to recognize subtle cues about their children's psychological distress.

Contrary to predictions, children whose mothers' self-ratings on parental warmth were higher did not rate themselves as more psychologically adjusted. As with parental control, it may be that mothers in this sample, who were seeking help for parenting, were more cognizant of maladaptive aspects of their relationships with their children.

4.3. Unexpected crossover among parenting factors

Although not predicted, parental warmth was also related (marginally by mothers' reports and significantly by children's reports) to children's externalizing behavior. Also, parental control (by children's reports only) was related to children's depression, such that higher levels of control predicted were linked with lower levels of depression. These findings suggest that there may be overlap or variation in pathways by which parenting dimensions influence children's development.

4.4. Limitations and implications for future research and intervention development

Several limitations of this study must be taken into account along with the interpretation of findings. First, for heuristic purposes, we conceived of parental control and parental warmth as mutually exclusive domains, when in fact, ideal parenting (e.g., Baumrind's "authoritative" parenting style) is thought to involve a blend or balance of parental control and parental warmth. Our analysis does not capture the complex and nuanced ways that parental control and warmth naturally commingle in the "real world" of parenting. There is a need to further investigate how the mechanisms of structure, guidance, and relatedness interact to influence child development. For example, is the capacity for parental warmth a prerequisite to effective parental control, or vice versa? Does parental warmth moderate the impact of parental control on child developmental outcomes? Does one class of child outcomes (e.g., psychological adjustment) mediate effects of parenting on another class of child outcomes (e.g., behavioral adjustment)?

For intervention development, it will be important to determine which intervention strategies are most appropriate given the patterns of association among the two parenting dimensions. In our own clinical work with substance-abusing mothers rearing young children (see Suchman et al., 2004; Suchman, Pajulo, DeCoste, & Mayes, 2006), we have observed that mothers' well-intended use of behavior management techniques learned in parenting classes to manage children's behavior often leads to diminished exploration and spontaneous play on the child's part. Moreover, the optimal balance of parental control and warmth dimensions may vary across stages of child development. For infants and toddlers who must rely entirely on the caregiver for emotional regulation, caregiver sensitivity takes precedence over behavior management. As toddlers increasingly exert autonomy and test their newfound skills, parental limits and guidance become increasingly critical.

Our findings also underscore the need for further investigation of how these various parenting mechanisms are altered or interrupted by parental substance abuse. Although findings from this study provide evidence for two pathways to maladaptive child outcomes in families being

affected by maternal drug abuse, little is understood about the developmental course or hierarchical nature of these pathways. There is already some evidence that, in families affected by parental substance use, parental preoccupation with obtaining substances (Harden, 1998) and emotional attachments to substances (Flores, 2004) can often interfere with the financial and psychological resources necessary for child care. There is also evidence that the neurological pathways involved in illicit substance use (i.e., cocaine and heroin) are also critically involved in adult capacity to invest in caring for children (Leckman & Mayes, 1998). Substance use may therefore be understood as a co-optation or “hijacking” of parental capacity to invest in parenting. There is a need to further examine psychophysiological pathways of parental substance in the development and interference of parenting capacities in the control versus warmth dimensions. Specific attention is needed regarding age of substance abuse onset, severity and type of substance used and disorder (e.g., abuse vs. dependence and presence of comorbid psychopathology), and related consequences of substance abuse (e.g., legal problems, health problems, and unemployment) in terms of their collective impact on parental control versus warmth in the parent–child relationship. Whether these factors differentially impact a parent’s capacity to set firm limits, have developmentally realistic expectations for their children, recognize children’s emotional cues, and remain emotionally available to their children will have important implications for future intervention development. It will also be important to understand the differential impact of parental control and parental warmth on children’s well-being at different stages of development.

A second methodological limitation involves the confound between variables and informants that is most likely responsible for a portion of the within-subject associations between parenting and child adjustment scores. Generally, maternal reports of parenting behavior were associated with maternal reports of dependent variables, and child reports of parenting behavior were associated with child reports on dependent variables. However, if this reporting bias were the sole explanation of associations between parenting factors and child adjustment, then child-reported adjustment factors would be equally associated with child-reported parental warmth and parental control. Instead, children’s reports on Clinical Maladjustment and Personal Adjustment Composite scales were associated with parental warmth and *not* with parental control, suggesting the importance of differentiating across domains of children’s experience of parenting to predict their psychosocial well-being. There were also two other exceptions to the pattern of associations between variables and informants: Child reports of parental warmth were associated with maternal reports of internalizing and maternal reports of externalizing. This exception may be explained in part by the fact that parallel versions of the PARQ completed by mothers and children were used to measure parental warmth but not parental control. This “unbalanced” use of parallel measures might have introduced an instrument bias that was independent of the effects of the mechanisms being tested. Taken together, these potential confounds point to the need to use more objective assessments of parenting and psychosocial adjustment in future research. Our research team has recently begun a new program of research using measures that involve direct observation of mother–child interactions and independent evaluations of maternal and child psychosocial adjustment completed by professional clinicians to assess mechanisms of influence in mother–child dyads (see Suchman et al., 2006).

A third shortcoming of this research is that mothers and children may understandably be underreporting parenting problems because of concerns about custody disruptions (Mayes, 1995). Given the stresses incurred by families under investigation by child welfare systems, particularly mothers who are mandated to treatment and who may lose child custody, direct observations of mother–child interactions by trained professionals would provide a more objective assessment of parenting behaviors and child adjustment. Nonetheless, there is a significant and perhaps underestimated value in the analysis of self-report data in measuring subjective experiences (e.g., how children’s experience of their mothers’ parenting influences

their psychosocial adjustment) and in noting differences in subjective experience across reporters. In this study, for example, mothers more frequently reported parenting problems than their children, indicating potentially different levels or types of recognition of parenting styles.

Limitations notwithstanding, results of this investigation underscore the need for parenting intervention development for substance-abusing parents. In light of the many environmental, developmental, and neurophysiological factors associated with parental addiction that lead to disruptions in the parenting process across generations, how can parenting interventions best support parents in recovery to become fully engaged in the process of nurturing and guiding their children? Several clinical trials testing the efficacy of behavioral parenting interventions for substance-abusing parents (see Catalano et al., 1999; Kumpfer, 1998) have shown promise in reducing children's misbehavior and increasing parents' use of limit setting strategies. Several preliminary clinical trials testing the efficacy of relational interventions (see Luthar & Suchman, 2000; Luthar, Suchman, & Altomare, 2005; Suchman, Mayes, Conti, Slade, & Rounsaville, 2004) have also shown preliminary promise for improving relational quality and children's psychological adjustment (for a review, see Suchman et al., 2006). It is the desire to continue parenting their young children that often provides the primary impetus for many substance-using women to enter treatment (DHHS, 1999). The onus is now on funding agencies, treatment providers, and intervention researchers to support substance-using women in meeting this goal.

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Table 1Sociodemographic data ($N = 98$)

Sociodemographics	Value
Mothers	
Age [M (SD)]	36.97 (6.83)
Ethnicity (%)	
Caucasian	50.00
African American	30.60
Hispanic	15.3
Other	4.1
Education (years) [M (SD)]	11.47 (1.91)
Marital status (%)	
Married	18.3
Divorced or separated	21.5
Never married	53.1
Widowed	07.1
Legally employed (%)	17.3
Number of minor biological children [M (SD)]	2.15 (1.05)
Target children	
Age [M (SD)]	11.13 (2.86)
Male (%)	45.9

Table 2

Intercorrelations of child measures

	1	2	3	4
1. Externalizing				
2. School maladjustment	.42 ^{***}			
3. Internalizing	.66 ^{***}	.14		
4. Clinical maladjustment	.24 [*]	.48 ^{***}	.22 [*]	
5. Depression	.15	.50 ^{***}	.15	.70 ^{***}

* $p < .05$.

*** $p < .001$.

Table 3

Descriptive data

Construct/Subscale	Measure	<i>M (SD)</i>	Clinical cutoff ^a	% Beyond clinical cutoff
Mothers' ratings				
Parental warmth				
Warmth/Acceptance	PARQ-M	71.44 (8.19)	<71	32.3
Aggression/Hostility	PARQ-M	26.21 (5.88)	>35	10.0
Neglect/Indifference	PARQ-M	23.08 (5.52)	>27	23.2
Rejection	PARQ-M	16.05 (4.22)	>23	10.1
Involvement	PCRI	44.44 (12.22)	≤40	38.8
Communication	PCRI	44.63 (10.64)	≤40	37.8
Parental control				
Limit setting	PCRI	46.81 (8.92)	≤40	12.2
Autonomy	PCRI	40.75 (8.11)	≤40	33.7
Children's behavioral adjustment				
Externalizing	BASC-PRS	48.52 (11.07)	≥60	26.5
Children's psychological adjustment				
Internalizing	BASC-PRS	52.46 (14.70)	≥60	18.4
Children's ratings				
Parental warmth				
Warmth/Acceptance	PARQ-C	71.18 (9.17)	<60	11.1
Aggression/Hostility	PARQ-C	22.29 (6.82)	>38	4.0
Neglect/Indifference	PARQ-C	22.54 (5.47)	>34	3.0
Rejection	PARQ-C	15.77 (4.93)	>24	7.0
Involvement	SUPINV	20.33 (3.13)	—	—
Acceptance/Rejection	CRPBI	61.14 (7.02)	<51	9.2
Parental control				
Firm vs. lax	CRPBI	35.98 (5.90)	<19	0.0
Autonomy vs. control	CRPBI	35.33 (6.06)	<26	5.1
Children's behavioral adjustment				
School maladjustment	BASC-SRP	47.75 (10.39)	≥60	15.6
Children's psychological adjustment				
Depression	CDI	6.78 (6.43)	>12	18.4
Clinical maladjustment	BASC-SRP	45.28 (9.54)	≥60	10.4
Personal adjustment	BASC-SRP	47.82 (9.24)	≤40	16.5

^aClinical cutoff scores for the MPARQ-M and MPARQ-C were provided by Rohner (1991, personal communication, March 21, 2000); those for the CRPBI were derived from means and standard deviations reported for nonclinical samples of boys and girls Grades 4–8 reported by Armentrout and Burger (1972); those for the PCRI, BASC-PRS and BASC-SRP were based on *T* scores of nonclinical samples reported by Gerard (1994) for the PCRI, and by Reynolds and Kamphaus (1992) for the BASC; and those for the CDI were reported by Kovacs (1992).

Results of hierarchical regression analyses testing associations of parental control and parental warmth with children's behavioral and psychological adjustment

Table 4

Variable	Step	Child behavioral adjustment		Child psychological adjustment			Depression
		Externalizing	School maladjustment	Mothers' reports	Children's reports		
					Internalizing	Clinical maladjustment	
Sociodemographic (R^2)	1	.01	.04	.05	.05	.11*	.03
Parental control [R^{2a} (β)/ b]	3	.20 (-.22)***	.06 (-.11) [†]	.04 (-.12)	.03 (-.07)	.02 (-.01)	.01 (-.03)
Children's reports	3	.02 (-.04)	.06 (-.14)*	.00 (-.03)	.01 (-.06)	.02 (.09)	.07 (-.15)*
Parental warmth [R^{2a} (β)]	3	.08 (-.01) [†]	.06 (.02)	.12 (.05)*	.03 (.00)	.07 (-.02)	.02 (-.03)
Children's reports	3	.15 (-.12)*	.06 (-.03)	.14 (.02)*	.24 (-.08)***	.21 (.08)***	.17 (-.09)***

^a Represents unique variance.

^b Represents mean standardized beta weight for variables entered in the block.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

[†] $p < .10$.