The extensive literature on cumulative risk indicates that as the number of contextual risk factors accumulate, child behavior problems increase and cognitive performance declines (e.g., Ackerman, Izard, Schoff, Youngstrom, & Kogos, 1999; Rutter, 1979; Sameroff, Seifer, Barocas, Zax, & Greenspan, 1987). Identifying predictors of behavior problems during early childhood is a worthwhile goal for research on cumulative risk due to the increased rate of later psychiatric diagnosis, delinquency, and school drop out among children with early-starting behavior problems (Moffitt, Caspi, Harrington, & Milne, 2002). Previous research linking indices of cumulative risk to later child behavior problems have included more distal contextual risks (e.g., maternal education; Sameroff et al., 1987) and more proximal risks (e.g., parent-child relationship quality; Gassman-Pines & Yoshikawa, 2006); however, when proximal risks are used in conjunction with more distal risks, it becomes difficult to unpack the underlying mechanisms through which risk affects the child. Examining selected proximal variables as potential mediators of relations between more distal indices of risk and child outcomes provides a more theoretically-compelling approach for informing basic research on risk processes, and has applications for preventive interventions and social policy. This approach may be especially worthwhile in early childhood when parent-child relationships are paramount and effects of contextual risk on child behavior are likely to be largely accounted for by the quality of the caregiving context. Thus, the present study was designed to examine the relations among cumulative risk, parenting, and child behavior problems using a sample of ethnically diverse, low-income families with toddlers at high-risk for early-starting problem behavior and followed longitudinally from the toddler to preschool periods.

Cumulative Risk Research
A cumulative risk index is typically tabulated by summing the number of dichotomized risk factors (Sameroff, Seifer, & McDonough, 2004). Investigations of cumulative risk and child outcomes began with Rutter’s (1979) seminal investigation of the Isle of Wight sample. Rutter created a cumulative risk index across six risk factors: marital discord, low socioeconomic standing, household overcrowding, paternal criminality, maternal psychiatric disorder, and child involvement with foster care. No differences were found in child adjustment for families with zero versus one risk factor, but a greater than fourfold increase occurred with the accumulation of two risks and an additional multiplicative increase at the level of four or more risks. Following Rutter’s early work,
numerous investigations demonstrated associations between cumulative risk and behavior problems and cognitive functioning (e.g., Blanz, Schmidt, & Esser, 1991; Sameroff et al., 1987; Shaw, Vondra, Hommerding, Keenan, & Dunn, 1994). In general, these latter investigations supported a linear relation between the number of risk factors and child outcomes, including work that focused on cumulative risk and behavior problems in early childhood (Appleyard, Egeland, van Dulmen, & Sroufe, 2005; Sanson, Oberklaid, Pedlow, & Prior, 1991).

Many indexes of cumulative risk are based primarily on the wider contextual ecology and include risk indicators such as relationship and residential instability and police contact (e.g., Ackerman, Brown, & Izard, 2004). Other research has taken a broader approach to generating indices of cumulative risk and included factors more proximal to the child’s behavioral development (e.g., parental warmth) in addition to the more distal ecological factors (Gassman-Pines & Yoshikawa, 2006). Yet another approach partitions risk into separate individual sub-indexes by sociodemographic, parenting, child, and peer domains (Deater-Deckard, Dodge, Bates, & Pettit, 1998). Although each approach adds to the collective understanding of cumulative risk and child development, the various approaches serve somewhat different purposes. When cumulative risk indexes include both distal ecological risk and more proximal factors in children’s adjustment (e.g., the parent’s emotional well-being, facets of parenting), the opportunity to examine these proximal factors as mediators or moderators of relations between broader contextual risk and child outcomes is lost. For example, Ackerman and colleagues (1999) demonstrated that high maternal positive emotionality attenuated the relation between cumulative risk and child outcomes. Because the majority of previous research has included proximal variables in the cumulative risk index, examination of mediators and moderators of the relation between cumulative risk and child outcomes has been relatively limited. Our primary goal was to examine nurturant and involved parenting as a mediator of relations between cumulative risk and behavior problems in high-risk young children.

**Cumulative Risk and Parenting**

In early childhood, numerous risk indicators such as income to needs, household overcrowding, and criminal involvement influence the level of early-starting child behavior problems and warrant inclusion in a cumulative index of environmental risk (Shaw et al., 1994). Although direct associations with these more distal risk factors may be evident in early childhood, we propose that parenting constructs are likely to exert a stronger direct effect on the child’s day to day functioning and behavior problems and may mediate associations between distal ecological risk and child problem behavior. Consistent with Bronfenbrenner’s (1979) ecological perspective on human development, a cumulative index serves as a valuable indicator of the family’s overall context of adversity. Not surprisingly, a specific outgrowth of this perspective is the need for research on the relations among ecological context, proximal processes, and child dysfunction in socioeconomically disadvantaged populations (Bronfenbrenner & Morris, 2006).

Research on the development of children’s behavior problems is consistent with the ecological perspective. For example, parental discipline and monitoring mediated the relations between socioeconomic status and delinquency among a sample of school-age children (Larzelere & Patterson, 1990). As Rutter’s early work on cumulative risk and child psychiatric diagnosis suggests, many parents are able to cope with a single risk factor such as low income level. As ecological risk factors mount, as with an impoverished single parent raising four children in a small apartment in a dangerous neighborhood, the likelihood of measurable harm to the parenting context should increase substantially. In a situation where multiple risk factors are present, the capacity for adequate attention, warmth, and support directed toward the children in the home are likely to decrease and harsh reprisals to child noncompliance are likely to increase. Moreover, the parent-child relationship is the primary context for toddlers and preschoolers, and the provision of nurturant parenting may be particularly difficult during this period due to toddlers’ increased physical mobility without comparable increases in cognitive understanding of basic scientific principles (e.g., electricity, gravity; Shaw, Bell, & Gilliom, 2000).

Little research has examined how parenting might mediate associations between cumulative risk and child problem behavior during early childhood. In a recent study of a primarily middle-class sample, parenting at age 3 mediated the relation between a nine-item cumulative risk index and child effortful control and social competence six months later (Lengua, Honrado, & Bush, 2007). However, this work was conducted with a relatively low-risk sample; nearly half of the sample did not meet criteria for any of the nine risk factors. Furthermore, the prediction to effortful control and social competence does not elucidate whether parenting accounts for the well-established relations between cumulative risk and child behavior problems in samples of high-risk young children.

**Goals of the Current Study**

The present investigation of cumulative risk, parent-
ing, and child behavior problems occurred in the context of a multi-site research evaluation of a prevention program for toddlers at increased risk for clinically-elevated levels of conduct problems and associated maladjustment. We sought to advance understanding of mechanisms underlying associations between cumulative family risk and child conduct problems by examining the potential mediating role of parental involvement and nurturance. Specifically, we hypothesized direct relations between cumulative risk at age 2 and observed parental nurturance and involvement at age 3 such that higher scores on a cumulative risk index would predict less nurturant and involved parenting. Furthermore, we expected parental nurturance and involvement at age 3 to directly predict child behavior problems at age 4 and account for an indirect effect of cumulative risk on preschoolers’ behavior problems. The research design allowed us to statistically control for the stability of behavior problems from age 2 to 4 and to account for the established intervention effect of involvement in the prevention program on behavior problems at age 4 (see Dishion et al., 2007). Although the primary focus of the prevention research program was on externalizing behavior problems, we were able to also use parental reports of internalizing behavior problems as a secondary outcome.

Method

Participants

Mother–child dyads were initially recruited between 2002 and 2003 from Women-Infant Children (WIC) nutritional supplement programs in the metropolitan areas of Pittsburgh, Pennsylvania, and Eugene, Oregon, and within and outside the town of Charlottesville, Virginia (see Dishion et al., 2007 for more information). Families were contacted at WIC sites and invited to participate if they had a son or daughter between age 2 years 0 months and 2 years 11 months. Screening procedures were developed to recruit families at especially high risk for conduct problems. Risk criteria for recruitment were defined as at or above one standard deviation above normative averages on several screening measures in the following three domains: (a) child behavior (conduct problems, high-conflict relationships with adults), (b) family problems (maternal depression, daily parenting challenges, substance use problems, teen parent status), and (c) socio-demographic risk (low education achievement and low family income using WIC criterion). Risk factors across two or more of the three domains were required for inclusion in the sample. The research protocol was approved by the Institutional Review Board at the respective universities, and participating primary caregivers provided informed consent.

Recruitment. Of the 1666 families who had children in the appropriate age range and who were contacted at WIC sites across the three study sites, 879 met the eligibility requirements (52% in Pittsburgh, 57% in Eugene, 49% in Charlottesville) and 731 (83.2%) agreed to participate (88% in Pittsburgh, 84% in Eugene, 76% in Charlottesville). The children in the sample had a mean age of 29.9 months (SD = 3.2) at the time of the age 2 assessment. Of the 731 families (49% female), 272 (37%) were recruited in Pittsburgh, 271 (37%) in Eugene, and 188 (26%) in Charlottesville. Across sites, primary caregivers self-identified as belonging to the following ethnic groups: 28% African American, 50% European American, 13% biracial, and 9% other groups (e.g., American Indian, Native Hawaiian). Thirteen percent of the sample reported being Hispanic American.

Retention. Of the 731 families who initially participated, 659 (90%) were available at the one-year follow-up and 619 (85%) participated at the two-year follow-up when children were between 4 and 4 years 11 months old. For the present study, 557 families had complete data and were included in the analyses. Selective attrition analyses revealed no significant differences between members of the initial sample with missing data and the 557 families with complete data on the cumulative risk index, parenting measure, or on behavior problem ratings.

Design and Procedure

Study assessments were scheduled yearly at ages 2, 3, and 4. Primary caregivers who agreed to participate in the study were scheduled for a 2.5-hour home visit, and alternative caregivers (e.g., fathers, grandmothers) were also invited to participate when applicable. After 15 minutes of child free play, each primary caregiver and child participated in a clean-up task, followed by a delay of gratification task, teaching tasks, a second free play, a second clean-up task with the alternate caregiver, the presentation of two inhibition-inducing toys, and a meal preparation and lunch task. To ensure blindness, the examiner opened a sealed envelope, revealing the family’s group assignment only after the assessment was completed, and shared this information with the family. Examiners carrying out follow-up assessments were not informed of the family’s assigned condition.

Families randomly assigned to the intervention condition were then scheduled to meet with a parent consultant for two or more sessions of a family check-up (FCU) intervention. The FCU is a brief, three-session intervention based on motivational interviewing and modeled after the Drinker’s Check-Up (Miller & Rollnick, 2002). This procedure for families in the
intervention condition was repeated at ages 3 and 4. For a more detailed description of the intervention, see Dishion et al. (2007). For the present study, the cumulative risk index was based on measures collected at the age 2 assessment, observations of parenting were based on the age 3 assessment, and behavior problem scores came from primary caregiver ratings at ages 2 and 4.

Measures

**Cumulative risk index.** The cumulative risk index was generated from seven indicators of socio-demographic risk. These seven indicators were: (1) teen parent status, (2) maternal education, (3) single adult in the home, (4) household overcrowding, (5) household member legal conviction, (6) primary caregiver drug or alcohol problem, and (7) neighborhood dangerousness. Families received a score of ‘1’ for each indicator to represent the presence of risk or a score of ‘0’ to represent the absence of risk. Descriptions of criteria and the data source for each indicator and the percentage of families meeting the indicator’s criteria are presented in Table 1. Although income poverty is often included in cumulative risk indices, we did not include income as an indicator of risk in the present study because approximately 75% of families had an income that fell in the same range as the U.S. poverty line and over 93% of family incomes were less than 200% of the poverty line.

### Table 1: Cumulative Risk Indicator Descriptions, and Percentage Meeting Criteria

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description of Criteria</th>
<th>Percentage Meeting Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teen Parent Status</td>
<td>Under 19 years of age at birth of first child</td>
<td>21.2%</td>
</tr>
<tr>
<td>Low Education</td>
<td>Primary caregiver has less than high school education</td>
<td>21.5%</td>
</tr>
<tr>
<td>Single Parent</td>
<td>Single adult in the home</td>
<td>23.4%</td>
</tr>
<tr>
<td>Overcrowding</td>
<td>6 or more children or 2 or more rooms than people (not counting bathrooms or hallways)</td>
<td>26.6%</td>
</tr>
<tr>
<td>Criminal Conviction</td>
<td>At least one household member convicted of a crime</td>
<td>26.1%</td>
</tr>
<tr>
<td>Drug/Alcohol Problem</td>
<td>Primary caregivers report using one or more of the following criteria: (a) at least one 6-month period of use, (b) use more than once a month, or (c) more than once a year</td>
<td>15.8%</td>
</tr>
<tr>
<td>Neighborhood Dangerousness</td>
<td>A single item on a 4-point scale (“There was a gang fighting near our home”)</td>
<td>16.8%</td>
</tr>
</tbody>
</table>

Note: *Items screened out in Wave 2. Items in parentheses are nonsignificant and were eliminated.*

### Table 2: Means, Standard Deviations, and Range of Scores for Study Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Age 2</th>
<th>Age 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cumulative Risk Index</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>Maximum</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>Mean</td>
<td>1.54</td>
<td>1.59</td>
</tr>
<tr>
<td>SD</td>
<td>1.12</td>
<td>5.89</td>
</tr>
<tr>
<td><strong>CBCL Externalizing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raw</td>
<td>8</td>
<td>44</td>
</tr>
<tr>
<td>Mean (T-score)</td>
<td>20.71</td>
<td>15.93</td>
</tr>
<tr>
<td>SD</td>
<td>7.26</td>
<td>5.89</td>
</tr>
<tr>
<td><strong>CBCL Internalizing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raw</td>
<td>32</td>
<td>33</td>
</tr>
<tr>
<td>Mean (T-score)</td>
<td>29.47</td>
<td>56.29</td>
</tr>
<tr>
<td>SD</td>
<td>10.17</td>
<td>8.16</td>
</tr>
</tbody>
</table>

### Results

Table 2 presents means, standard deviations, and ranges for the cumulative risk, parenting, and behavior problems variable among the 557 families with complete data. As the CBCL T-scores indicate, the sample mean for CBCL Externalizing problems was nearly one standard deviation above the normative mean, supporting the high-risk nature of the sample. CBCL raw scores were used for all subsequent analyses. Preliminary correlation analyses between individual risk factors and CBCL raw scores at age 4 indicated very small and largely non-significant correlations, ranging from correlations of -.04 to .11 for early childhood problem behavior. Primary caregiver reports on the Child Behavior Checklist for Ages 1.5–5 (CBCL; Achenbach & Rescorla, 2000) were used to assess internalizing and externalizing behavior problems. The CBCL Externalizing factor includes items assessing aggression and rule-breaking behavior, and the Internalizing factor includes items assessing anxiety, depressive symptoms, withdrawal, and somatic complaints. The Externalizing factor demonstrated excellent internal reliability in the present sample (α = .86 and .86 at ages 2 and 4, respectively), as did the Internalizing factor (α = .82 and .91 at ages 2 and 4, respectively).

**Parental nurturance and involvement.** An adaptation of the Home Observation for Measurement of the Environment (HOME; Caldwell & Bradley, 1984) was used to index parental nurturance and involvement. The original HOME measure includes 36 items that assess the quality and quantity of support and stimulation in the home environment. We selected the HOME for use in the present study because it is designed for use following a naturalistic observation of the parenting context. Thus, the HOME is an ideal measure for examiner use following the 2.5 hour home visit that included various opportunities to observe parent-child interaction and parental provision of warmth and support. HOME item content was streamlined for the present study to eliminate items that typically require interviews with caregivers and was based entirely on the examiner’s observation of the home environment. This version consisted of 21 items from the HOME Responsivity, Acceptance, and Involvement scales and demonstrated excellent internal reliability (α = .75).
Externalizing (with the highest correlation for the low education risk factor, \( r = .11, p < .01 \)) and correlations of -0.08 to 0.14 for Internalizing (with the highest correlation for the low education risk factor, \( r = .14, p < .01 \)).

Because only 1% of the families met criteria for more than 4 of the cumulative risk indicators, risk levels of “5” or “6” were transformed to “4” for the cumulative risk index. Table 3 presents the frequency of the families with each level of cumulative risk and lists the HOME nurturant and involved parenting scores at age 3 and CBCL Internalizing and Externalizing raw scores at age 4 for each level of cumulative risk. In accord with the majority of recent research on cumulative risk, the cumulative risk index was treated as a continuous variable for all subsequent analyses. All correlations between the cumulative risk index, child behavior problems, and parenting were significant (\( p < .05 \); see Table 4).

**Model Estimation**

Path analytic models were examined with maximum likelihood estimation using AMOS 5.0 (Arbuckle, 2003). Figure 1 presents the path analytic model to examine predictors of externalizing problems at age 4, with standardized coefficients for the separate model to examine internalizing problems at age 4 in parentheses. This model included three exogenous predictors: 1) cumulative risk, 2) intervention status, and 3) age 2 externalizing problems; and two endogenous variables: 1) nurturant and involved parenting and 2) age 4 externalizing problems. In keeping with our theoretical framework, direct paths was included from the cumulative risk index to nurturant and involved parenting and from nurturant and involved parenting to age 4 externalizing problems. To control for stability in externalizing problems, a direct path was included from age 2 to age 4 externalizing problems. Based on significant bivariate correlations, direct paths were also included from age 2 externalizing problems to nurturant and involved parenting and from intervention status to age 4 externalizing problems. Lastly, a direct path from cumulative risk to age 4 externalizing problems was included to examine whether direct relations existed between these two constructs while accounting for all other paths in the model.

Model fit was tested with multiple indices. The chi-square goodness of fit index tests exact model fit, and a nonsignificant chi-square value supports model fit. Root Mean Square Error of Approximation (RMSEA) values below .06 support good model fit, and Comparative Fit Index (CFI) and the Tucker-Lewis Index values above .90 indicate good model fit.
(TLI) values above .95 for the CFI and TLI indicate good model fit (Hu & Bentler, 1999). The model for externalizing problems demonstrated excellent model fit, with $\chi^2 = .015$, RMSEA = .00, CFI = 1.00, and TLI = 1.05.

Based on the path coefficients, the model for externalizing problems supported direct paths from the cumulative risk index to nurturant and involved parenting and from nurturant and involved parenting to age 4 externalizing problems. In addition, all other direct paths were statistically significant except for the direct path from cumulative risk to age 4 externalizing problems. Predictors in the model explained 6.5% of the variance in nurturant and involved parenting and 27.1% of the variance in age 4 externalizing problems. To more closely examine the indirect prediction of age 4 externalizing problems from the cumulative risk index, we evaluated the indirect effect of the cumulative risk index on age 4 externalizing problems through nurturant and involved parenting. Following the procedures described by Shrout and Bolger (2002), 95% confidence intervals for indirect effects were estimated using bias-corrected bootstrap sampling methods over 1,000 iterations. The confidence intervals (lower limit = .018 and upper limit = .063) for the standardized indirect effect of the cumulative risk index on age 4 externalizing problems did not overlap with zero, and the indirect effect was statistically significant ($p < .01$). Thus, the model supported an indirect effect of cumulative risk on age 4 externalizing problems through nurturant and involved parenting.

A separate model (see coefficients in parentheses in Figure 1) was created to examine predictors of internalizing problems at age 4. This model demonstrated excellent model fit, with $\chi^2 = .002$, RMSEA = .00, CFI = 1.00, and TLI = 1.04, and supported direct paths from the cumulative risk index to nurturant and involved parenting and from nurturant and involved parenting to age 4 internalizing problems. The additional direct paths were also statistically significant except for the direct path from the cumulative risk index to age 4 internalizing problems. Predictors in the model explained 8.7% of the variance in nurturant and involved parenting and 32.4% of the variance in age 4 internalizing problems. Confidence intervals (lower limit = .008 and upper limit = .053) for the standardized indirect effect of the cumulative risk index on age 4 internalizing problems did not overlap with zero, and the indirect effect was statistically significant ($p < .01$). Thus, this model supported an indirect effect of cumulative risk on age 4 internalizing problems through nurturant and involved parenting.

Testing Intervention Group Differences in the Models

Because the magnitude of the relations among cumulative risk, parenting, and problem behaviors may have differed between the intervention and control groups, steps were taken to examine group invariance in the overall path models. Path models were tested that were identical to those in Figure 1 except for the elimination of intervention status as an exogenous predictor and the elimination of the non-significant path from cumulative risk to age 4 problem behaviors in each model. An unconstrained model where path coefficients were allowed to vary across intervention and control group models was compared with a model where all path coefficients were constrained to be equal. The chi-square difference test was used to compare the chi-square statistics and degrees of freedom for the two models to examine whether constraining the path coefficients worsened model fit (see Byrne, 2004). The constrained model did not significantly worsen model fit for the externalizing problems model ($\Delta \chi^2 = 5.28, \Delta df = 4, p > .05$) or the internalizing problems model ($\Delta \chi^2 = 5.29, \Delta df = 4, p > .05$). Thus, differences between intervention and control groups in the overall models of cumulative risk, parenting, and behavior problems were not supported.

Discussion

The present study supported cumulative risk in early childhood as a predictor of nurturant and involved parenting and also supported parental nurturance and involvement as a predictor of later internalizing and externalizing behavior problems. In addition, nurturant and involved parenting accounted for the indirect effect of the cumulative risk index on externalizing and internalizing problem behavior. Path analytic models simultaneously accounted for stability in behavior problems across early childhood, making these findings particularly robust. Furthermore, many families in this high-risk prevention research sample of young children endorsed multiple cumulative stressors. Thus, the measure of cumulative risk in the present study captured important stressors for families already facing serious economic hardship, and the risk index was predictive of factors in early childhood that are consistent indicators of later maladjustment and psychopathology.

These findings add to a growing body of literature that has examined more proximal aspects of the family environment to account for the relations between cumulative risk and child outcomes (e.g., Ackerman et al., 1999). It is not surprising that the level of broad contextual risk influences the degree to which caregivers can provide involved and nurturant parenting. It appears that parents who experience multiple contextual stressors have more difficulty providing warm
and supportive contexts for their children, and that this association becomes more apparent as the number of contextual risk factors increases. Furthermore, in accord with a substantial body of previous research on parenting and child behavior problems (e.g., NICHD Early Child Care Research Network, 1999), the level of nurturant and involved parenting was associated with both externalizing and internalizing problems during early childhood. More broadly, these findings are consistent with an ecological perspective on early childhood development where aspects of the larger family system influence the parent-child relationship and, subsequently, the child’s behavioral adjustment (Bronfenbrenner & Morris, 2006).

The present work extends previous findings (e.g., Lengua et al., 2007) by examining family risk in young children at increased risk for later conduct problems and by focusing on child behavior problems as the indirect outcome of cumulative risk. As a noteworthy contrast, at least one study of school-age children demonstrated direct relations between a cumulative risk index and externalizing problems even after accounting for the relation between harsh parenting and child externalizing behavior (Ackerman et al., 2004). Relations between cumulative risk and child behavior problems may be primarily indirect in early childhood, but direct associations between risk and behavior problems may emerge later in childhood.

Limitations
The present sample of low-income families limits the degree to which results can be generalized. Nearly all of the families in the present study experienced economic hardship as measured by their standing relative to the U.S. poverty line at the age 2 assessment, and all families were recruited through WIC nutrition supplement programs for low-income families. Thus, the results are most directly applicable to families living at or near poverty. Relations between cumulative risk, parenting, and child adjustment may differ for middle class or higher income families.

Use of a single respondent for each study construct is an additional weakness. The measurement of nurturant and involved parenting was based on a single independent observation. Furthermore, ratings of child behavior were based entirely on parental report, and parents’ experience of risk may have biased their perception of child behavior. Lastly, although the cumulative risk index was a relatively comprehensive measure of more distal risk factors, it did not include all risk factors that could influence child well-being. For example, ethnic minority status is one contextual risk factor that may influence family-level stress, parenting, and child adjustment. Additional research with our ethnically diverse sample indicates that ethnic minority status is an important factor to consider when examining variability in child outcomes among low-income families (Wilson et al., 2007).

Implications and Future Directions
The present findings have potentially important implications for social policy and prevention research with low-income families. One of the most important needs for families facing multiple contextual stressors may be involvement in intervention programs that promote attentive and nurturant parenting. These intervention needs may be most pressing for multiply stressed parenting of young toddlers because noncompliant and increasingly mobile toddlers add further stress to already unstable family situations. Positive parenting intervention programs exist, but multiply stressed families may be less willing to engage in parenting programs that require time and effort. Thus, approaches to enhance motivation as used in the prevention research program with the present sample (see Dishion et al., 2007) may be particularly useful for high-risk families. In addition, families facing multiple contextual stressors may require support aimed more directly at reducing the family’s stress burden.

Future research should track relations among cumulative risk, parenting, and child behavior problems longitudinally across early childhood, middle childhood, and adolescence. Direct relations between cumulative risk and child behavior problems may emerge later in childhood when children spend less time with their parents and are more likely to experience the immediate negative impact of certain contextual risks. Although many of the cumulative risk indicators in the present study were purported to be relatively stable, it would also be important to track change in the level of contextual risk across childhood. Previous experimental and quasi-experimental research with older children demonstrates that altering a single risk factor (e.g., income level, neighborhood residence) can lead to reductions in child psychopathology (Costello, Compton, Keeler, & Angold, 2003; Leventhal & Brooks-Gunn, 2003). Understanding how change in the level of contextual risk influences parenting and subsequent child behavior can inform policy and intervention to prevent early-emerging forms of child psychopathology.

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