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# *Preschool Family and Child Characteristics Associated With Stable Behavior Problems in Children*

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*This longitudinal study investigated child and family characteristics associated with stable behavior problems in children. Parents of 41 preschoolers with and without externalizing problems participated in a 5-year follow-forward assessment. Parents completed a behavioral checklist and children were placed into one of three behavior groups: stable problems, improved, and comparisons. Results indicated that, at preschool age, the group of children with stable behavior problems had mothers who used more controlling child-rearing practices, and had parents who used more aggressive tactics during conflict with each other than the parents of children in the other groups. Children with stable behavior problems were also more intense, active, and less easy to manage at preschool age than were the other two groups of children.*

Given developmental variations and the high prevalence of certain problem behaviors in preschoolers, it is quite a challenge to determine which preschoolers are at risk for more serious problems (Campbell, 1997). Nevertheless, the stability of problem behavior once children reach elementary school illustrates the importance of developing protocols to approach the task of early identification (Campbell, Pierce, Moore, Markovitz, & Newby, 1996). Furthermore, older children with serious behavior problems often have challenging behavioral histories, dating back to when they were in preschool. For example, the findings of one study indicated that preschool characteristics were very discriminative of antisocial outcomes at age 11. Specifically, 70% of the children in the antisocial group were accurately classified based on preschool variables, and parent ratings of behavior problems at age 5 was the strongest single predictor of anti-

social outcomes (White, Moffitt, Earls, Robins, & Silva, 1990).

The early onset of antisocial behavior patterns for many youth and the stability of problem behavior after children reach elementary school, indicates that there is a great need for more research in this area. To more precisely identify preschoolers who are at risk for stable behavior problems, more longitudinal research is needed identifying early characteristics that are associated with children who continue to have behavior problems in elementary school. The following review of the literature will present family and child characteristics that have been documented to be associated with or predictive of stable behavior problems in children.

### ***Family Characteristics***

Family characteristics have been associated with the manifestation of aggression and other

behavior problems in young children in a number of studies (e.g., Campbell, March, Pierce, Ewing, & Szumowski, 1991; Campbell et al., 1996; Dumas & Wahler, 1985; Renken, Egeland, Marvinney, Mangelsdorf, & Sroufe, 1989; Sanson, Smart, Prior, & Oberklaid, 1993; Shaw, Keenan, & Vondra, 1994; Stormont-Spurgin & Zentall, 1995). Furthermore, family characteristics might also greatly impact preschool children's future behavior. Specifically, family adversity and life stress have been associated with future behavior problems in young children (Campbell, 1994; Campbell & Ewing, 1990; Campbell et al., 1991; Moffit, 1990). In other similar research, children with stable problems in the third grade had parents who reported more stressful life events when their children were in the first grade than parents of children who improved in their behavior (Egeland, Kalkoske, Gottesman, & Erickson, 1990).

In addition to adversity and life stress, researchers have also investigated whether other specific family characteristics, such as child-rearing practices, maternal depression, and marital conflict, are associated with stable behavior problems over time. Maternal depression and control in child rearing have been associated with later behavior problems in children (Campbell et al., 1991). Research has also documented that children with stable problems at age 6 had families with more marital conflict, maternal depression, and negative maternal control than children whose behavior improved over time (Campbell, 1994). When the children in this sample were 9 years old and stable and improved behavior groups were reconfigured, they continued to differ on early marital distress and maternal depression, although they did not differ on observed maternal control when they were 4 years old. Children in the stable behavior problem group did have mothers, however, who reported using more negative discipline at the time of assessment than mothers of children whose behavior improved (Campbell et al., 1996).

In a similar longitudinal study, children with improved behavior had mothers with lower concurrent depression ratings than children with stable behavior problems did (Ege-

land et al., 1990). Nevertheless, the study did not indicate that maternal depression, assessed when children were preschoolers, was associated with stable behavior problems in those children when they were in third grade (Egeland et al., 1990). In addition, these researchers also assessed marital conflict when children were preschoolers and found that children in the improved group did not differ from children in the stable problem group on early violence in the home or marital satisfaction (Egeland et al., 1990). It is possible, however, that the number of children in the improved group was too small ( $n = 6$ ) to detect statistically significant differences (Egeland et al., 1990). Overall, it appears that family and life stress during the early years and ongoing maternal control in child rearing and maternal depression are associated with stable behavior problems in children, but equivocal findings have been documented for the impact of early maternal depression, maternal control, and marital conflict on children's behavioral outcomes. In addition to family characteristics during the early years, it is important to include child temperament variables in follow-forward studies as they might also contribute to stable behavior problems. The term follow-forward is used to illustrate that children and their families are followed forward in time. A review of this research follows.

### *Child Behavior and Temperament*

Although researchers have reported that early externalizing behavior is associated with later externalizing behavior (e.g., Fischer, Rolf, Hasazi, & Cummings, 1984), it is also important to identify other potential child predictors of future behavior problems. Researchers have investigated temperament characteristics of preschoolers with and without behavior problems and have found that children with behavior problems tend to have distinct temperaments (Barron & Earls, 1984; Campbell, Szumowski, Ewing, Gluck, & Breaux, 1982).

More pertinent to this study is the longitudinal research on early temperament ratings and later behavior problems. Early difficult temperament, as rated by mothers, has been documented to be a strong predictor of behav-

ior problems in children (Campbell & Ewing, 1990; Prior, Smart, Sanson, Pedlow, & Oberklaid, 1992; Sanson et al., 1993; Shaw, Vondra, Hommerding, Keenan, & Dunn, 1994). In a prospective longitudinal study, children with hyperactive or aggressive behavior problems at age 7 and 8 had mothers who rated them as more difficult infants (Sanson et al., 1993). Furthermore, children with later behavior problems were more likely than children in the comparison group to have been rated as more active, reactive, and irritable, and less manageable and persistent at age 3.

Overall, family and temperament characteristics in preschoolers have been associated with later behavior problems. Research findings are less conclusive, however, about the specific family and temperament characteristics that increase children's risk for later behavior problems. Additional research that I have conducted in this area is summarized next, followed by a statement of the specific purpose of this study.

### *Past Research and Purpose of This Study*

The participants in the study described here were included in two previous studies. The purpose of the first study, the intake study, was to concurrently measure family and child characteristics of children with different behavioral characteristics (Stormont-Spurgin & Zentall, 1995). The rationale for studying the specific behavioral groups was based on the research with older children, which indicates that children with hyperactivity and aggressive types of behavior are at greater risk for negative characteristics than children with either hyperactivity or aggression (Barkley et al., 2000). To document whether groups of preschoolers with elevated ratings of hyperactivity and aggression also had more negative characteristics than those with either characteristic (and comparisons), 63 preschoolers were recruited. All children were placed in behavioral groups, and family and child measures were administered. The main findings of the intake study showed that preschool children with both hyperactivity and aggression had mothers who reported using more control

in their child rearing and using and receiving more aggression in conflicts with their partners. Mothers also reported that preschoolers with hyperactivity and aggression were more likely than preschoolers with hyperactivity to have siblings who retaliated to aggression with aggression.

A 5-year follow-forward study was conducted on this sample to investigate two areas of interest. One area of interest was the validity of early behavioral groupings (Stormont, 2000). The specific question for this investigation was as follows: Do young children with elevated ratings of hyperactivity and aggression have poorer outcomes than young children with hyperactivity or children in the comparison group? (Children with aggression were dropped from this analysis because of their small number at the follow-forward assessment.) The main findings showed that children with hyperactivity, with and without aggression, had poorer outcomes than children in the comparison group. Furthermore, according to their father's ratings, children with hyperactivity and aggression had more externalizing problems, including delinquency and aggression, at the outcome assessment than did preschoolers with hyperactivity only.

The purpose of the study reported here is to investigate another area of interest with these participants, by grouping them according to their behavior at the time of the follow-forward study rather than maintaining their initial groupings. More specifically, the purpose of this study was to investigate whether specific family and temperament characteristics in preschoolers were associated with stable behavior problems. Although the existing research suggests that certain family characteristics are important to consider in longitudinal research (i.e., maternal depression, child-rearing techniques, and marital conflict) and that specific temperament characteristics are associated with current and future behavior problems, researchers have not investigated early temperament characteristics (e.g., intensity) that might be associated with stable problems and improved behavior. Thus, this study will extend temperament research and provide more information for family research in this area.

## METHOD

### *Participants From Intake Study*

Only preschool boys ( $n = 63$ ) were recruited for the initial sample (Stormont-Spurgin & Zentall, 1995) because of the higher prevalence of hyperactivity in boys (Barkley, 1990). Based on behavioral ratings, children were placed into one of the following four groups: hyperactive-aggressive, hyperactive, aggressive, or comparison. Participants were recruited from four affiliated child care facilities (40%) and from birth records in two adjoining Midwestern cities (60%). Children were placed into behavioral groups according to their ratings on the Preschool Behavior Questionnaire (PBQ; Behar, 1977).

In the intake study, 41 children (rated by their teacher or mother) met the criteria for the hyperactive group at the 90th percentile or above on the Hyperactive-Distractible factor of the PBQ. Children with hyperactivity whose mother or teacher also rated them as aggressive on the PBQ (90th percentile) met the criteria for the hyperactive-aggressive group ( $n = 29$ ). The remaining 12 children with elevated ratings of hyperactivity constituted the hyperactive group. Seven preschoolers rated as aggressive (but not hyperactive) were placed in the aggressive group. Fifteen preschoolers who did not meet the behavioral criteria served as comparisons.

### *Follow-Forward Participants*

The follow-forward assessment included 41 of the original 63 participants. One participant was lost in the intake study (new  $n = 62$ ). The response rate was 66%, which is similar to past research in this area (e.g., Campbell & Ewing, 1990). Twenty-eight of the original 47 fathers participated in the follow-forward assessment, which represents an attrition rate similar to that for mothers (60%). It is also important to note that the fathers who participated in the follow-forward assessment were the same fathers who had previously participated.

Participants were Caucasian, from grades 3 to 6, and between 8 and 11 years old. At the follow-forward assessment, participants were

placed into one of three groups based on their behavioral grouping at the initial assessment and based on whether they had behavioral problems at the follow-forward assessment. The behavioral groups consisted of 9 children with stable behavior problems, 22 children who had improved behavior, and 10 comparisons. Children were classified as having stable problems if they had behavior problems (hyperactivity, aggression, or both) at intake and continued to have behavior problems at the follow-forward assessment. As in past research (Egeland et al., 1990), children were rated as having stable problems at follow-forward if they had a T score  $\geq 65$  for total behavior problems on the CBCL according to one of their parents. One of the 9 children was included in the stable behavior problem group with a borderline T score of 64 because he had a T score of 72 on the Externalizing Broad Band factor.

Children were placed in the improved group if they were classified as hyperactive, aggressive, or hyperactive-aggressive in preschool but did not have clinical levels (T score  $\geq 65$ ) for total behavior problems at follow-forward. Children were classified as comparisons if they did not meet the hyperactive, hyperactive-aggressive, or aggressive grouping criteria in preschool and did not have clinical levels of behavior problems at the follow-forward assessment. No comparison children had developed clinically deviant behavior problems at the follow-forward assessment. No children from the preschool aggressive group sustained behavior problems in the follow-forward assessment. Children in the stable behavior problem group consisted of 6 children who were in the preschool hyperactive-aggressive group and 3 children who were in the preschool hyperactive group.

### *Procedures and Measures: Intake Study*

After obtaining permission for participation in the intake study, a home visit was made to collect data. Questionnaires were administered to parents, while the Woodcock-Johnson was administered to the child. Mothers and fathers both completed questionnaires on their child's behavior and their child-rearing practices, and

mothers also completed measures on depression and marital conflict. Assessments completed at the time of the intake study were used in the follow-forward analysis and are described below.

*The Temperament Assessment Battery* (TAB; Martin, 1984). To assess children's early personality styles, the parent form of the TAB was used. The parent form of the TAB consists of six temperamental areas: emotional intensity, persistence, activity, adaptability, approach/withdrawal and ease of management through distraction. The TAB has adequate psychometric properties, including moderate internal consistency coefficients for the six scales, ranging from .60 to .75 (Martin, 1984).

*The Woodcock-Johnson Psycho-Educational Battery* (Woodcock, 1978). The Woodcock-Johnson test of cognitive ability has a total of 22 subtests available for scoring, with the preschool battery containing a representative 12 of the 22 subtests. These 12 subtests are combined to form three clusters: broad cognitive ability (e.g., memory for sentences, picture vocabulary), knowledge (e.g., science), and skills (e.g., letter-word identification). Adequate concurrent validity for data collected using the Woodcock-Johnson has been established with, for example, data collected using the McCarthy General Cognitive Index and the Peabody Picture Vocabulary Test-Revised (Woodcock, 1978).

*The Modified Child-Rearing Practices Report* (M-CRPR; Rickel & Biasatti, 1982). The Modified CRPR is a 2-factor child-rearing practices report. Studies in which the M-CRPR has been used have consistently yielded the two factors of Restrictiveness and Support (for additional psychometric data see Rickel & Biasatti, 1982).

*The Center for Epidemiological Studies Questionnaire* (CES-D; Weissman, Sholomskas, Pottenger, Prusoff, & Locke, 1977). The CES-D questionnaire consists of 20 items assessing the major symptoms of depression. The items for the CES-D were selected by choosing redundant questions from other depression scales (e.g., Beck Depression Inventory; Beck, 1967; for validity data see Weissman et al., 1977).

*The Conflicts Tactics Questionnaire* (CTS; Straus, 1979). This questionnaire assesses strategies used when resolving conflict. Form A of the CTS was used in this study, with directions from the original scale (Form N) read to mothers to provide additional clarity about the purpose of the instrument. Mothers first selected strategies they themselves used in conflict and then reported on the strategies their partners used. The factors for this scale, which have been empirically supported, are Reasoning, Verbal Aggression, and Violence or Physical Aggression (for Cronbach's alphas, see Straus, 1979).

*Family Demographic Data.* Families completed a brief questionnaire at the intake assessment consisting of questions about the following demographics: marital status, family salary, the educational level of the mother, and the occupation of the mother.

### ***Measures and Procedures: Follow-Forward Study***

*The Child Behavior Checklist* (CBCL; Achenbach & Edelbrock, 1983). The CBCL is a thorough measure of behavior problems in children (Barkley, 1990; Lerner, Lowenthal, & Lerner, 1995). The CBCL has a 118-item Behavior Problems scale, including Internalizing and Externalizing Broad Band factors, subscales, and a total problem behavior score. The scores on the CBCL have strong psychometric properties, including adequate concurrent validity with scores on other measures of behavior problems in children, discriminant validity, and good test-retest reliability (Barkley, 1990).

*Follow-forward procedures.* Parents were located using multiple channels, including local phone books, the original contact information, and a people finder program available on Netsearch. Once parents were located and mailed a description of the follow-forward study and a permission letter, all parents agreed to participate. Once permission was granted, parents were mailed the CBCL to complete on their child. The CBCL has clear written instructions for ease of completion and parents were provided additional instructions in a letter regarding the time it would take to

**Table 1.**

*Group Means Scores (SDs), ANOVAs, and Magnitude of Effect Results for Statistically Significant Variables*

Characteristics at Intake	Stable (S)	Im- proved (I)	Compari son (C)	<i>F</i> (df)	<i>p</i>	<i>d</i> scores	
						S vs. I	S vs. C
Maternal Control	67.22 (9.86) <sub>a</sub>	56.05 (12.60) <sub>b</sub>	53.40 (7.92) <sub>b</sub>	4.33 (2, 37)	.021	0.99	1.55
Maternal Physical Aggression	2.25 (2.87) <sub>a</sub>	0.33 (0.66) <sub>b</sub>	0.10 (0.32) <sub>b</sub>	6.87 (2, 37)	.003	1.09	1.35
Paternal Physical Aggression	1.88 (4.12) <sub>a</sub>	0 (0) <sub>b</sub>	0 (0) <sub>b</sub>	3.50 (2, 37)	.041	0.91	0.91
Maternal Ed Level	4.44 (2.60) <sub>a</sub>	7.68 (2.06) <sub>b</sub>	7.10 (2.47) <sub>b</sub>	6.20 (2, 35)	.005	-1.39	-1.05
Child Activity-M	38.67 (7.70) <sub>a</sub>	29.19 (8.08) <sub>b</sub>	23.40 (4.97) <sub>b</sub>	10.40 (2, 37)	.0003	1.20	2.41
Child Intensity-M	6.67 (9.49) <sub>a</sub>	26.62 (6.48) <sub>b</sub>	24.10 (6.31) <sub>b</sub>	8.34 (2, 37)	.001	1.26	1.59
Child Ease of Management-M	34.22 (7.00) <sub>a</sub>	37.90 (8.11) <sub>ab</sub>	43.20 (6.71) <sub>b</sub>	3.44 (2, 37)	.043	-0.49	-1.31
Child Activity-F	36.71 (6.16) <sub>a</sub>	30.10 (8.64) <sub>b</sub>	25.20 (6.18) <sub>b</sub>	4.63 (2, 35)	.016	0.89	1.87
Child Ease of Management-F	29.71 (4.89) <sub>a</sub>	35.50 (4.23) <sub>b</sub>	39.80 (4.80) <sub>b</sub>	10.23 (2, 32)	.0004	-1.27	-2.08

*Note.* Different subscripts after group means indicate statistically significant differences between groups in follow-up Tukey analyses. Magnitude of effect was measured using standardized difference scores (*d*). M = mother-rated, F = father-rated.

complete (15 to 20 minutes). After parents returned the questionnaire, they were mailed compensation for their time (\$10 each). Teacher participation was requested, but only 5 teachers returned the rating scale.

## RESULTS

To determine if children from different groups (i.e., stable problems, improved behavior, or comparisons) differed on early characteristics, one-way Analyses of Variance (ANOVAs) were employed on the family and child data, with the level of group serving as the independent variable. Where statistically significant differences were documented for group ( $p < .05$ ), Tukey follow-up analyses were employed to determine specific group differences. A measure of magnitude of effect was also computed for each statistically significant follow-up comparison from the ANOVAs. Standardized difference (*d*) scores were used to measure the magnitude of effect for the statistically significant between-group differenc-

es. Cohen (1988) provided the following framework for interpreting *d* scores: An effect of .2 to .4 is small, .5 to .7 is medium, and above .8 is considered large.

### Family Characteristics

Analyses of family data yielded three statistically significant findings (see Table 1). The groups differed on maternal levels of control in child rearing and use of physical aggression during conflict. Follow-up Tukey analyses indicated that children with stable behavior problems had mothers, when they were preschoolers, who reported more controlling child-rearing practices, and more physical aggression given and received by their partners during conflict than mothers of children who improved in their behavior and mothers of children in the comparison group. According to Cohen (1988), the magnitudes of effect for these statistically significant differences in family characteristics are large. Comparison families and families of children who im-

proved did not statistically significantly differ from each other on any assessed family characteristic.

**Demographic data.** Demographic data collected at the intake assessment was analyzed at follow-forward to determine if groups differed on any family demographic variables during the child's preschool years. Groups differed on the educational level of the mother, with a follow-up Tukey analysis indicating that both mothers of children with improved behavior and mothers of comparisons, who did not differ from each other, had higher levels of education than mothers of children with stable behavior problems (see Table 1). The magnitudes of effect for these between-group differences are large. Analyses of variance did not yield statistically significant group differences for marital status,  $F(2, 35) = .156, p = .856$ ; family salary,  $F(2, 35) = 1.748, p = .189$ ; and occupation of the mother,  $F(2, 35) = .375, p = .690$ .

### **Child Characteristics**

Analyses of child characteristic data also yielded statistically significant group differences for three preschool temperament variables (see Table 1). Group differences were documented for mothers' ratings of their children's activity, intensity, and ease of management. Follow-up Tukey analyses indicated that children with stable behavior problems were rated as more active and intense when they were preschoolers than children who improved and children in the comparison group. In addition, mothers of children with stable behavior problems rated their children as less easy to manage than comparison children, but their ratings did not differ from those of children who had improved in their behavior. Children in the comparison group and children who improved did not statistically significantly differ from each other on any temperament characteristics.

When fathers' ratings of child temperament were analyzed, group differences were documented for children's activity level and ease of management. Follow-up analyses indicated that children with stable problems had higher activity ratings and were less easy to manage

than children in either the improved or the comparison groups. Between-group differences for mother and father ratings of child temperament were all considered large with one exception: The between-group difference score for children with stable problems and children who improved on mothers' ratings of their children's ease of management was in the small to medium effect range. Lastly, groups did not statistically significantly differ on the Woodcock-Johnson tests of preschool ability,  $F(2, 38) = 2.191, p = .126$ ; knowledge,  $F(2, 37) = .738, p = .485$ ; or skills,  $F(2, 37) = .525, p = .596$ .

### **DISCUSSION**

It has been documented that many youth with antisocial behavior problems have had a long history of behavior problems that can be traced back to their preschool years (e.g., White et al., 1990). Little systematic research has been conducted, however, to try to determine early characteristics associated with greater risk for such negative outcomes. The purpose of this study was to investigate preschool family and child characteristics that might be associated with children who have stable behavior problems. Children with stable problems had higher scores at preschool age on family characteristics such as maternal control in child rearing and marital aggression, and lower scores for maternal educational level. No statistically significant differences were found for maternal depression when children were preschoolers, which corroborates past research in this area (Egeland et al., 1990). It might be possible that ongoing depression in mothers or increases in depression levels are stronger predictors of stable problems in children than maternal depression as assessed at one point in time.

This study somewhat contradicted past research in the area of maternal control in child rearing. Past research did not find that early maternal control was associated with children who later had stable problems when compared to children who had improved (Campbell et al., 1996). These contradictory findings might exist because maternal control was assessed



differently in the two studies. To this end, maternal control as observed in mother-child interactions at preschool age might not be as predictive of future behavior problems as maternal ratings of use of control in child rearing.

This study also found that children with stable behavior problems had mothers who more often reported that physical aggression occurred when in conflict with their partners than mothers did of children who had improved behavior and children in the comparison group. Past research in this area has been equivocal; one study found that marital conflict was associated with stable behavior problems at follow-forward (Campbell et al., 1996), whereas another study found that violence in the home was not associated with stable behavior problems in children (Egeland et al., 1990). Again, equivocal findings might exist because of the fact that violence was assessed differently. In the study that did not document differences in children's behavior problems based on assessments of violence in the home, violence was assessed using an interview format (Egeland et al., 1990). The measure used in the present study had multiple questions on various conflict resolution strategies, including, but not limited to, the use of physical aggression, and was completed in a written format.

The two family findings related to marital conflict and control in child rearing might actually be related in ways beyond merely contributing to the stress of a family. That is, past research has addressed the relationship between early parental disagreement in child rearing and later behavior problems in children. Researchers have documented that preschoolers with parents who were in disagreement over child rearing were at greater risk for having behavior problems (Shaw, Vondra, Hommerding, Keenan, & Dunn, 1994). It might be possible that children with challenging behavior require so much disciplinary attention that parents spend extensive amounts of time discussing this topic. Parents might disagree about the ways they can or should handle child-management issues and might have heated conflicts with their partner over child rearing. Findings from this study par-

tially support this relationship, as parents of children in the stable problem group had mothers (but not fathers) who were more controlling in their child rearing and parents who engaged in aggressive conflicts with each other. Nevertheless, this study did not assess the topic of the conflicts and focused on how conflicts were resolved.

Group differences were also documented for maternal educational level. Mothers who had children with stable behavior problems reported a lower educational level when their children were preschoolers than did mothers of children who had improved and mothers of children in comparison groups. Overall, the behavioral groups at the follow-forward assessment had different family characteristics in preschool. Specific differences were documented between the stable behavior problem group and the other two groups who did not differ from each other on early family characteristics.

This research also acknowledged the reciprocal nature of interactions among early child characteristics and family stressors. To this end, temperament characteristics were also examined and results indicated that children in different behavioral groups at the follow-forward assessment also had, as preschoolers, different temperament characteristics. Specifically, children who improved over time had less difficult temperaments, according to their mothers or fathers, in terms of overall activity, intensity, and manageability than children with stable behavior problems. This study supports past research in this area, indicating that children with behavior problems were more likely than comparisons to have been rated as more active and less manageable at age 3 (Sanson et al., 1993). Other past research in temperament was also corroborated by the results of this study. Researchers have found that high levels of intensity was associated with behavior problems in children (Barron & Earls, 1984), and mothers of preschoolers with externalizing disorders have reported greater difficulty managing their children's behavior (Campbell et al., 1982). This research extended these findings by documenting specific temperament characteristics

that were more typical of children who had stable problems when compared to children who had improved behavior at the follow-forward assessment.

### **Implications**

There are several implications from this study for early childhood professionals. First, this study identified family characteristics at preschool age that were associated with children with stable behavior problems. In addition, the relative magnitudes for the family effects between the stable group and improved group, and the stable group and comparison group were all large. Thus, if professionals are working with challenging children who also have vulnerable families, the need for more professional support is illuminated. Specific characteristics of families at risk for supporting negative behavior in children include maternal control in child rearing, interspousal aggression during conflict, and lower educational level of mothers. It is important to provide ongoing support for mothers in their child-rearing practices, including providing them with less controlling and more supportive techniques to work with children's behavior.

This ongoing support might be particularly necessary given that mothers of preschoolers with behavior problems appear to use appropriate parenting techniques but then decrease their use of such strategies over time. That is, researchers have found that mothers of preschoolers with behavior problems used more redirection and alternative activity suggestions than comparison mothers did in the initial assessment but, when followed up one year later, did not differ from comparison mothers (Campbell, Breaux, Ewing, Szumowski, & Pierce, 1986). Parenting support is greatly needed during children's preschool years as mothers of younger children with hyperactivity report more parenting stress than mothers of older children with hyperactivity (Mash & Johnston, 1982).

Second, findings from this study underscore the importance of considering children's characteristics that might be creating or contributing to a more stressful family environment. One or both parents rated children with stable

behavior problems in preschool as being more intense, less easy to manage, and more active than children who improved and children in the comparison group. Children who improved in their behavior did not differ from comparisons on early temperament ratings. Thus, children from the improved group might have had their own intrachild buffers from having stable problems. The effect scores for between group differences for the temperament characteristics were all large except for mothers' ratings of ease to manage. A medium effect was found for differences between children with stable problems and children who improved on mothers' ease of management ratings. An unexpected large effect was documented between these groups on early ease of management according to fathers' ratings.

Third, in terms of early and later behavior groups, preschool children with elevated levels of aggression, without hyperactivity, did not sustain behavior problems in the follow-forward assessment. Furthermore, children who did not have externalizing problems in preschool did not develop behavior problems. This does not allow one to speculate that children cannot develop problems if they haven't by their preschool years. Researchers have found that some children do develop behavior problems, and family adversity is typically linked with such an onset of behavior problems in younger children (Egeland et al., 1990).

Fourth, future research is needed in this area. It is clear that early ratings of activity or aggression need to be considered as potential risk factors that can contribute to the development of or the sustainment of stable behavior problems when combined with other child and family risk factors. To build upon this knowledge base further, it is important to examine the relationships among these characteristics in greater depth. Therefore, one area for future research might be to conduct more longitudinal assessments of young children with and without externalizing behavior and their families over time. To be able to investigate the influence of concurrent and past stressors, it is critical to assess families and

preschool children on a yearly or bi-yearly basis. Another area for future research is to combine quantitative and qualitative methods to explore the relationships among child and family characteristics and how they interact to affect child behavior. Future qualitative research could explore whether parents of challenging children are in conflict over their child or over other matters. Direct observations of interactions among family members over time would also be a useful addition to the knowledge in this area. In addition, direct observations and teacher ratings of children's early temperament characteristics would add to the knowledge regarding the direction of influences in families of children with challenging behavior. Finally, future research should investigate whether similar child and family characteristics are associated with behavior problems in girls.

Overall, the main findings from this study indicated that children with stable behavior problems had, as preschoolers, more difficult temperaments and were also more likely to be in a more adverse family context than children who improved in their behavior and children in the comparison group. It is important to note, however, that this study has several limitations that should be addressed. First, the generalizability of these findings is limited to males. Second, family characteristics at follow-forward were not assessed and, therefore, the association of ongoing family adversity was not assessed. Third, only one measure was used in the follow-forward assessment because of logistical constraints and the small sample size. Finally, the small sample size warrants that future research replicates findings from this study and that findings be interpreted with caution.

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