

BEHAVIOR THERAPY 35, 513–535, 2004

Does Parental Attributional Retraining and Anger Management Enhance the Effects of the Triple P—Positive Parenting Program With Parents at Risk of Child Maltreatment?

MATTHEW R. SANDERS

AILEEN M. PIDGEON

The University of Queensland

FRED GRAVESTOCK

Abused Child Trust, Brisbane

MARK D. CONNORS

SAMANTHA BROWN

ROSS W. YOUNG

The University of Queensland

Ninety-eight parents experiencing significant difficulties in managing their own anger in their interactions with their preschool-aged children were randomly assigned either to an enhanced group-administered behavioral family intervention program based on the Triple P—Positive Parenting Program that incorporated attributional retraining and anger management (EBFI) or a standard behavioral family intervention program (SBFI) that provided training in parenting skills alone. At post-intervention, both conditions were associated with lower levels of observed and parent-reported disruptive child behavior, lower levels of parent-reported dysfunctional parenting, greater parental self-efficacy, less parental distress, relationship conflict and similarly

This study was supported by grants from the National Centre for the Prevention of Child Abuse (NCPCA) and Queensland Health. We gratefully acknowledge the assistance of the following persons in the delivery of therapeutic interventions and in the collection and coding of observational, interview, and parent-report data: Jennifer Barbour, Anita Blakeley-Smith, Barbara Devenish-Meares, Kellie Cullen, Sarah Dwyer, Bronwyn Fowler, Divna Haslam, Lohsnah Jeevanandam, Caroline Johnson, Lauren Kalikow, Hebaat Karam, Janine Lonsdale, Annette McCarthy, Linda McGuire, Mala McHale, Philippa McTaggart, Alina Morawska, Saraan Morton, Elizabeth Pagan, Ven-nice Ryan, Emma Sanders, Edwina Shallcross, and Matthew Woo.

Address correspondence to Matthew R. Sanders, School of Psychology, The University of Queensland, Brisbane, Australia, 4072; e-mail: matts@psy.uq.edu.au or triplep@psy.uq.edu.au.

high levels of consumer satisfaction. EBFI showed a significantly greater short-term improvement on measures of negative parental attributions for children's misbehavior, potential for child abuse and unrealistic parental expectations than SBFI. At 6-month follow-up both conditions showed similarly positive outcomes on all measures of child abuse potential, parent practices, parental adjustment, and child behavior and adjustment; however, EBFI continued to show greater change in negative parental attributions. Implications for tailoring early-intervention programs to the needs of parents at risk of child maltreatment are discussed.

As in most Western countries child abuse is a major social and health issue in Australia, with over 25,000 substantiated cases of maltreatment each year (Australian Institute of Health and Welfare [AIHW], 2000). Child maltreatment, in its broadest sense, can be defined as "a failure to protect the child from harm and a failure to provide the positive aspects of a parent-child relationship that can foster development" (Wekerle & Wolfe, 1996, p. 492). From 1998 to 1999, parents (including natural, step-, and de-facto parents) accounted for 82% of all the persons believed to be responsible for perpetrating the substantiated cases of maltreatment in Australia (AIHW, 2000).

The consequences of child maltreatment are both immediate and far-reaching. Severe physical and health concerns may stem directly from the abusive experience and include brain damage and death (James, 1994a). A variety of psychiatric problems may also develop over time, including anxiety and depressive disorders (Haugaard, Reppucci, & Feerick, 1997); aggression and violent behavior (Haugaard et al., 1997); self-harming behavior (National Research Council [NRC], 1993); and suicidal ideation (Silverman, Reinherz, & Giacomia, 1996). Other sequelae include cognitive delays and learning difficulties (Haugaard et al., 1997); poor social relationships (Haugaard et al., 1997); and substance abuse (NRC, 1993). Finally, the cycle of violence may continue with the intergenerational transmission of maltreatment once the victim reaches adulthood (NRC, 1993).

The literature on the prevention of child abuse has emphasized the importance of parenting skills intervention to address the deficits in child management skills often found in abusive parents (Black, Heyman, & Slep, 2001). These deficits include the use of coercive and punitive parenting strategies that intensify and perpetuate child behavior problems, and increase the likelihood of child maltreatment in the family. Behavioral family interventions (BFI), based on social learning principles, are increasingly considered an essential component of child abuse prevention and treatment interventions (Chalk & King, 1998).

BFIs are among the most extensively evaluated interventions available to assist children with conduct problems (Brestan & Eyberg, 1998). Typically, parents are taught to increase positive interactions with children and to reduce coercive and inconsistent parenting practices. A variety of different delivery formats have been demonstrated to be effective, including individually administered face-to-face programs (e.g., Forehand & McMahon, 1981), group programs (e.g., Webster-Stratton, 1990), telephone-assisted programs

(e.g., Connell, Sanders, & Markie-Dadds, 1997), and self-directed programs (e.g., Markie-Dadds & Sanders, 2002). The success of BFI highlights the importance of including parenting interventions in any comprehensive preventive intervention designed to prevent child maltreatment as abusive parents often report significant conduct problems in their children.

Although there is less parent training research with maltreating parents, available evidence suggests that parent training leads to improvements in parenting competence and behavior, and that these changes are an important aspect of minimizing the risk for further abusive behavior, reports to protective agencies, and visits to hospital (James, 1994b). While parenting interventions appear to be helpful for maltreating families, they may only address part of a much larger problem with family interactions (Azar, 1997). The complex nature of child maltreatment and the multiple needs of parents have led many investigators to argue for more comprehensive interventions, rather than relying solely on parenting skills training (Azar, 1997). Two areas that have received particular attention include targeting parents' negative attributions for child behavior and parents' anger-control deficits (Whiteman, Fanshel, & Grundy, 1987). These cognitive and affective factors differentiate between maltreating parents and other parents (Stern & Azar, 1998).

There is some evidence showing a relationship between parents' dysfunctional attributions and negative outcomes for children (Bugental, 2000). Parental attributions are proposed to mediate the relationship between child misbehavior and parental response to this behavior (Slep & O'Leary, 1998). Maltreating parents tend to hold distorted beliefs and unrealistic expectations regarding the developmental capabilities of children, the age-appropriateness of child behaviors, and their own behavior when interacting with children (Black et al., 2001). These cognitive distortions have been linked to parents attributing hostile intent to their child's behavior, which in turn has been linked with overreactive and coercive parenting (Bugental, 2000); angry feelings in parents (Slep & O'Leary, 1998); child behavior problems (Slep & O'Leary, 1998); and the use of harsh punishment (Azar, 1997). Moreover, experimental manipulation of parents' attributions has shown that attributing responsibility and intent to children for their misbehavior has a direct influence on over-reactive parenting, parental anger, and negative affect in children (Slep & O'Leary, 1998). Hence, family interventions with maltreating parents may be enhanced through cognitive-behavioral strategies that specifically focus on changing parental attributions, by identifying dysfunctional interpretations and by providing active skills training to help them challenge these interpretations (Sanders & McFarland, 2000).

Parental anger has been associated with poor parental adjustment, child behavior problems and adjustment difficulties (Renk, Phares, & Epps, 1999), and the use of physical punishment and coercive discipline strategies (Thompson et al., 1999). When combined with a tendency toward hostile attributions, parents' deficits in anger control may increase the risk of using physical punishment that is excessive or severe in nature (Whiteman et al., 1987). Parental

deficits in anger control, both alone and when combined with parental stress, have been found to be positively correlated with an increased potential for child abuse (Thompson et al., 1999). Hence, cognitive-behavioral skills training aimed at increasing parental self-efficacy in the regulation of anger and negative emotion (Stern & Azar, 1998) may help maltreating parents from losing emotional control and harming their children and be better able to implement more positive child-management skills.

The interrelatedness of negative parental attributions, parental anger, and inadequate parenting practices suggests that an integrated approach that concurrently targets improving parenting skills, changing parents' interpretations of their child's behavior and their own parenting behavior would be useful. Such an approach should improve parents' regulation of their own negative emotions, preventing overarousal and reducing the risk that parents may harm their children. Studies have indicated that families who received integrated interventions, targeting multiple risk factors for maltreatment, did equally well (Egan, 1983) or significantly better (Whiteman et al., 1987) than those families given an intervention that targeted one factor alone (e.g., anger management). Other studies targeting parental attributions and regulation of negative emotion have also revealed encouraging results (e.g., Kolko, 1996).

Despite the promise of concurrently targeting parenting skills and other risk factors, it is unclear what contribution the adjunctive interventions make over-and-above the effects of standard behavioral family interventions. There is also conflicting evidence in the broader behavioral family intervention literature on whether adjunctive interventions significantly improve outcomes for parent or child in high-risk families (see Sanders, 1999). A range of methodological limitations have been evident in family intervention research with abuse populations, including inadequate research designs and inadequate assessment protocols; small sample sizes; lack of statistical power to detect treatment effects; and a failure to include adequate child outcome measures (Chalk & King, 1998).

The present study sought to extend the child maltreatment literature by conducting a randomized controlled trial evaluating the effects of an enhanced group behavioral family intervention (EBFI) for parents at risk of child maltreatment that specifically targeted parents' negative attributions regarding their child's and their own behavior and parents' anger-control deficits. This intervention was compared to a standard-care group parent training intervention (SBFI), which has been extensively used both as an early preventive intervention and as a treatment for conduct problem children (Sanders, 1999). Methodological limitations in previous research were addressed by including specific measures to assess parents' negative attributions and anger, a randomized group design, employing a credible standard-care parenting intervention, and multimodal and multi-informant assessment.

We chose to use a well-established group behavioral family intervention program (Group Triple P) as a "standard care" or treatment-as-usual comparison condition, rather than either a wait-list or nonintervention control or placebo

control condition for several reasons. First, it allowed the effects of specific targeting of attributions and parental anger to be judged against a credible, empirically supported parenting intervention that is widely used in early intervention, primary care, and child mental health services in Australia as a preventive early intervention. Second, local community child health services that use Triple P as a routine preventive intervention wished to determine whether the intervention would be appropriate for families where there was a risk of child maltreatment. Third, prior research has already demonstrated that the group form of BFI used here is more effective than no intervention and wait-list control conditions with other populations (Zubrick et al., in press) and other studies have established the individually administered variants as more effective than nonintervention controls (Sanders, Markie-Dadds, Tully, & Bor, 2000). The standard program offered has been thoroughly evaluated with various populations and has proven to be a powerful intervention with high credibility for nonmaltreating parents where behavior problems exist with pre-adolescent children (Sanders, 1999).

Although such a decision raises some methodological issues, we believed it was unethical to withhold treatment from families where there was a significant risk of child maltreatment and a readily available alternative, which, though not specifically tested with a child abuse population, represented the best available alternative treatment. The alternative of randomizing families to usual child protection services was not feasible as not all participating families had reached the threshold for child abuse notification. Furthermore, these concerns are mitigated to some extent by the fact that dysfunctional patterns of parent-child interaction tend to be fairly stable, particularly where children experience significant conduct problems in association with parental adjustment difficulties.

The group format of Triple P was selected as a cost-effective method of intervention that offered parents a way of reducing social isolation, increasing support, and provided additional learning experiences through sharing information and ideas and through modeling positive behaviors (Chalk & King, 1998).

We predicted that compared to SBFI parents receiving EBFI would show significantly greater improvements across a variety of areas of child, parent, and family functioning compared to the SBFI comparison group. EBFI condition would be associated with greater reductions in parents' negative attributions for children's behavior, would show a significantly greater reduction in the risk factors for child maltreatment at postintervention (i.e., parental expression of anger; parental maladaptive cognitions; and potential for child abuse), significant improvements at postintervention on observed and parent-reported indicators of parental adjustment, including similar outcomes for observed and parent-reported child negative behaviors and significantly greater levels of consumer satisfaction associated with the EBFI condition at postintervention. We predicted that these outcomes would be maintained at 6-month follow-up and there would be reduced levels of subsequent

notifications for EBFI families compared with SBFI families at 6-month follow-up and fewer relapses in the postintervention period.

Method

Participants

Participants were 98 families with a child aged 2 to 7 years. Recruitment of participants for the intervention occurred through the referral of clients from Families, Youth and Community Care Queensland (FYCCQ; the mandated child protection authority in the State of Queensland), family doctors, community child health services, and from self-referrals following media outreach about the project (including newspaper articles and radio interviews). The outreach strategy specifically targeted parents who were concerned about their anger or that they would harm their child rather than concerns specifically about child behavioral problems.

Parents had to meet the following selection criteria: (a) parent had received at least one notification to the FYCCQ for potential abuse or neglect of their children (the case need not be substantiated); and/or (b) parent expressed concerns regarding difficulty in controlling their anger in relation to their child's behavior, and scored within an elevated range on three selected subscales of the State-Trait Anger Expression Inventory (STAXI; Spielberger, 1996); Anger Expression (indication of the frequency of expressed anger); Trait Anger (the tendency to express anger without provocation); and Anger-Out (the frequency of anger expressed toward others or objects in the environment). Families that were, at time of screening, receiving intensive ongoing family therapy or psychotherapeutic intervention targeting parenting or child behavior were excluded from participation, as were families who had a child or parent with a significant intellectual impairment. No families had to be excluded on these grounds. Families who did not meet eligibility criteria were referred when appropriate to other services in the community.

Participating parents were predominantly female and married with at least two children. The participants' mean age was 34 years. Approximately half of the sample of participants had completed their secondary education. The mean age of children selected as the target for intervention was 4.4 years, with equal representation of male and females (see Tables 1 and 2).

Measures

Family background interview. Families meeting inclusion criteria underwent a semistructured standardized interview (Sanders, Markie-Dadds, & Turner, 2000) that elicited information about their presenting problems and concerns about their child's behavior; characteristics of personal and family situations (e.g., level of education, financial difficulties, history of illness, drug use, and criminal activity); and characteristics of family of origin (e.g., psychiatric illness, drug use, family violence, and discipline styles).

Observation of child behavior. Child disruptive behavior was assessed using

TABLE 1
DEMOGRAPHIC CHARACTERISTICS OF SAMPLES (DESCRIPTIVES)

Variable	SBFI (<i>n</i> = 48)		EBFI (<i>n</i> = 50)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Child's age (months)	53.71	19.32	52.84	17.85
Mother's age (years)	33.29	5.35	33.68	5.58
Father's age (years)	35.32	6.34	36.45	7.14
Age of participating parent (years)	33.33	5.37	34.18	6.34
Number of children in family	1.92	0.87	2.38	1.31
Years together as a couple	7.78	3.93	9.38	4.91

Note. SBFI = Standard group parent training; EBFI = Enhanced behavioral family intervention.

a 30-minute video-recorded home observation. The observation was divided into two 15-minute tasks recorded consecutively: (a) *Free play task*: The parent and child were asked to remain in the same room and "do as they would normally do" in that part of the house. Once an observation commenced, observers did not interact with families and placed themselves in an unobtrusive position within the home to reduce any reactivity effects; and (b) *Parent busy task*: A research assistant discussed with the parent a number of issues relating to the parents' participation in the program with the target child in

TABLE 2
DEMOGRAPHIC CHARACTERISTICS OF SAMPLES (CATEGORICAL VARIABLES)

Variable	SBFI (%)	EBFI (%)
Female parent participant	92	94
Married couple	73	66
Target child is female	52	48
Participant did not complete secondary education	44	60
Participant's primary occupation is home duties	58	55
Annual family income is less than \$25,000 (AUD)	25	31
Family is experiencing financial difficulties	34	25
Contact with statutory authority for suspected abuse or neglect	4	6
Participant currently uses illicit drugs	6	6
Participant currently abuses alcohol (>40g/day)	6	0
Family of origin issues for participant		
Psychiatric illness in family	71	66
Arguing between parents	53	68
Physical harm between parents	11	29
Participant received "belting" as discipline	45	50
Participant received harsh discipline "often"	19	22

Note. SBFI = Standard group parent training; EBFI = Enhanced behavioral family intervention.

the room. Topics of discussion included current concerns about the family and goals for change.

Observation sessions were coded in consecutive 10-second time intervals, using the Revised Family Observation Schedule (FOS-R; Sanders, Waugh, Tully, & Hynes, 1996). The FOS contains 12 categories for child behaviors and observed affect (e.g., noncompliance, aggression). The FOS-R can reliably discriminate between behaviorally disturbed and nondisturbed families; has shown reliability and discriminant validity; and is sensitive to the effects of behavioral interventions on children with behavior problems (Sanders & Christensen, 1985; Sanders, Markie-Dadds, Tully, et al., 2000).

Two trained observers coded the interactions. Each rater coded a selection of interactions from each of the three assessment phases (i.e., pre-, post-, and 6-month follow-up). All coders were blind to the intervention conditions of participants, stage of assessment, interactions used for reliability checks, and the specific hypotheses being tested. Interrater agreement was assessed showing a satisfactory level of reliability (.73).

Measures of Risk of Maltreatment

Parent's Attributions for Child's Behavior (PACBM; Pidgeon & Sanders, 2002). The PACBM assesses parents' attributions for children's behavior. The Blame and Intentionality subscale was employed to assess parents' tendencies to attribute blame and mal-intent to their children's actions. After reading a written scenario parents were asked to imagine their own child in the situation and to indicate how strongly they believed that their child's actions would result from different causes (1 = *strongly disagree*; 5 = *strongly agree*). This subscale has an adequate internal consistency reliability ($\alpha = .83$).

State-Trait Anger Expression Inventory (STAXI; Spielberger, 1996). The STAXI provides a concise measure of the experience and expression of anger. The STAXI contains six scales and two subscales (State-Anger, Trait-Anger, Angry Temperament, Angry Reaction, Anger-In, Anger-Out, Anger Control, and Anger Expression). The measure has demonstrated satisfactory psychometric properties, with test-retest reliability ranging from .58 to .75.

Parental Anger Inventory (PAI; Hansen & Sedlar, 1998). The PAI assesses anger experienced by parents in response to child-related situations. It yields a problem score and an intensity score (parent asked to rate how much a situation makes them feel angry). The PAI has moderate reliability for the Problem and Intensity scales ($r = .84$ and $r = .91$), internal consistency, and correlates moderately with other measures of anger and child behavior (e.g., Eyberg Child Behavior Inventory).

Child Abuse Potential Inventory (CAPI; Milner, 1986). The CAPI assesses the respondent's attitudes, feelings, and beliefs about parenting and is used to provide a measure of high-risk behavior for child abuse. The abuse subscale of the CAPI was used to assess the extent of physical abuse to children.

Reported accuracy of the CAPI in classifying abusing parents is 80% to 90% of referred cases.

Parent Opinion Questionnaire (POQ; Azar & Rohrbeck, 1986). An 80-item instrument designed to measure parents' unrealistic expectations of children's behavior, the POQ contains six subscales: Self-Care; Family Responsibility and Care of Siblings; Help and Affection to Parents; Leaving Children Alone; Proper Behavior and Feelings; and Punishment. The POQ has test-retest reliability of .85 on the total score and distinguishes between maltreating and nonmaltreating parents.

Parenting Measures

Parenting Scale (PS; Arnold, O'Leary, Wolff, & Acker, 1993). The PS measures three dysfunctional discipline styles in parents: laxness (permissive discipline); overreactivity (authoritarian discipline, displays of anger, meanness, and irritability); and verbosity (overly long reprimands or reliance on talking). The PS demonstrates adequate internal consistency for the total score ($\alpha = .84$), Laxness ($\alpha = .83$), Overreactivity ($\alpha = .82$), and Verbosity ($\alpha = .63$) scales, and has good test-retest reliability ($r = .84, .83, .82, \text{ and } .79$, respectively).

Parent Sense of Competence (PSOC; Gibaud-Wallston & Wandersman, 1978). This measure assesses parental feelings of competence across two dimensions: satisfaction with their parental role and feelings of efficacy as a parent. The total score, Satisfaction factor, and the Efficacy factor show a satisfactory level of internal consistency ($\alpha = .79, .75, \text{ and } .76$, respectively).

Parental Adjustment Measures

Depression-Anxiety-Stress Scales (DASS; Lovibond & Lovibond, 1995). Assesses symptoms of depression, anxiety, and stress in adults. It contains high internal consistency reliability for the Depression ($\alpha = .91$), Anxiety ($\alpha = .81$), and Stress ($\alpha = .89$) scales, and good discriminant and concurrent validity.

Parent Problem Checklist (PPC; Dadds & Powell, 1991). The PPC rates parents' ability to cooperate and work together in family management. It explores the extent to which parents disagree over rules and discipline for child misbehavior, the amount of open conflict over child-rearing issues, and the extent to which parents undermine each other's relationship with their children. It has moderately high internal consistency ($\alpha = .70$) and high test-retest reliability ($r = .90$).

Measures of Child Behavior

Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999). A measure of parental perceptions of disruptive behavior in children aged 2 to 16 years, including a measure of intensity of behavior and the number of behaviors that are a problem for parents, the ECBI has high internal consistency for both the Intensity ($r = .95$) and Problem ($r = .94$) scales and good test-retest reliability.

Parent Daily Report Checklist (PDRC; Chamberlain & Reid, 1987). The

PDRC is a checklist of 45 problem child behaviors used as a home monitoring form where parents record whether the behaviors occur each day over a 7-day period. Two scores are generated: the Total Behavior score (sum of all occurrences of problem behaviors) and the Target Behavior score (sum of all behaviors identified by parents as problematic). The target behavior score in particular shows strong interparent reliability ($r = .89$) and validity ($r = .48$).

Measures of Parenting Contexts for Child Behavior Problems

Home and Community Problem Checklist (HCPC; Sanders & Dadds, 1993). The HCPC is a 29-item checklist of 15 specific situations in the home (e.g., bedtime, getting dressed) and 14 situations in the community (e.g., visiting friends or relatives, going shopping) in which the parents experience difficulty in managing their child's behavior. The measure derived from the scale used in the present study was the total number of problem settings the parent reported their child to be difficult. The measure has adequate internal consistency ($\alpha = .91$) and is change sensitive to the effects of parenting interventions.

Client Satisfaction Questionnaire (CSQ). The questionnaire evaluates the quality of service provided by the program, the meeting of family needs, and allows parents to comment on any aspect of the program. The CSQ has high internal consistency ($\alpha = .96$), an item total correlation of .66 and inter-item correlations of .30 to .87 (Sanders, Markie-Dadds, Tully, et al., 2000).

Design

A 2×3 repeated-measures randomized group comparison design was employed. Experimental factors were two different intervention conditions: an enhanced group behavioral family intervention (EBFI) versus a standard group behavioral family intervention (SBFI). Families were assessed at three time periods: preintervention, postintervention, and 6-month follow-up.

Procedure

Immediately following screening, and prior to randomization, families completed a set of parent-report measures; a 90-minute semistructured interview; and a home observation of parent-child interaction. Families completed parent-report measures and participated in a home observation immediately following treatment cessation and at 6-month follow-up. A brief standardized interview was also conducted at follow-up to re-assess the family situation, eliciting information about recent child behavior, contact with the Queensland Department of Families and Community Care, contact with medical and health practitioners, school behavior, and parent health issues.

Intervention Conditions

SBFI. Families assigned to the SBFI intervention received four group sessions of parent training (2 hours' duration each). Upon completion of the group sessions, parents participated in four individual telephone consultations (15 to 30 minutes' duration each). Parents also received a copy of

Every Parent's Group Workbook (Markie-Dadds, Turner, & Sanders, 1997), which contains the key learning principles of the program and exercises to be completed in and between sessions. The program involved teaching parents 17 core child-management strategies. Ten of the strategies are designed to promote children's competence and development (e.g., praise; engaging activities; incidental teaching) and 7 strategies are designed to help parents manage misbehavior (e.g., setting rules; logical consequences; quiet time; time-out). In addition, parents were taught a planned activities routine to enhance the generalization and maintenance of parenting skills. Planned Activities Training involved teaching parents how to anticipate and prepare for high-risk situations — for example, when children are tired or bored — and to plan age-appropriate activities for these situations along the lines described by Sanders and Dadds (1982). Consequently, parents were taught to apply parenting skills to a broad range of target behaviors in both home and community settings with the target child and all relevant siblings. Parents learned to set and monitor goals for behavior change and to enhance their skills in observing their child's and their own behavior. Active training methods such as modeling, rehearsal, practice, feedback and goal setting were used to teach specific parenting skills throughout the program within a self-regulatory framework (as described by Sanders, 1999). The SBFI intervention typically takes 8 weeks to complete.

EBFI. The EBFI consisted of the aforementioned SBFI strategies plus the addition of four sessions addressing risk factors associated with child abuse and neglect. The families in this condition received four group sessions of parent training (2 hours' duration each); four sessions targeting the additional risk factors (2 hours' duration each); and four subsequent individual telephone consultations (15 to 30 minutes' duration each). As with the SBFI condition, parents received a copy of the *Every Parent's Group Workbook* (Markie-Dadds et al., 1997). In addition, parents received a workbook that outlines the principles taught in the additional modules (focusing on attributions and anger management).

In these additional sessions, parents were taught a variety of skills aiming to challenge the beliefs they hold regarding their own behavior and the behavior of their child, and to change any negative practices they currently use in line with these beliefs. Parents were also introduced to a variety of physical, cognitive, and planning strategies to manage their anger. As with the standard parent training component, the concept of planning ahead in high-risk situations was addressed and parents developed their own coping plans for these events. The EBFI typically took 12 weeks to complete.

Session 1B (understanding causes of parent behavior) provided the first of the adjunctive interventions examining negative parental attributions. The session was designed to help parents identify the effect of negative or harsh discipline practices on children, to identify the causes of their own negative behavior toward the child, and how to prevent anger escalation and negative parenting practices through challenging and disputing irrational thoughts

and replacing them with more rational thoughts. Session 5 introduced parents to the emotion of anger, its physical effects, and provided parents with a variety of techniques and strategies for becoming physically and mentally relaxed. Session 6 introduced cognitive therapy as it applies to anger management and included catching unhelpful thoughts, developing alternative coping statements in arousing situations, and challenging thoughts that lead to aggressive responses. Session 7 completed the anger management intervention by providing a review of the previous anger management sessions, identifying high-risk anger situations, and developing coping plans to manage anger in these situations. As with the SBFI intervention, the program concluded with the four individual telephone consultations with one of the group facilitators.

Treatment Integrity

Fourteen practitioners (12 female and 2 male) were trained and supervised in the delivery of the interventions (1 clinical psychologist; 8 psychologists completing postgraduate training in psychology; 2 psychologists; 2 social workers; and 1 teacher). Practitioners were not aware of the intervention groups to which families had been assigned prior to completion of the pre-intervention assessment phase. Each group was allocated one facilitator and one co-facilitator. Facilitators led the group through the majority of treatment sessions, while the role of the co-facilitator was to check protocol adherence, videotape each session, assist with group exercises and activities, and lead selected sections of the treatment plan under the guidance of the facilitator.

Detailed written protocols specifying the content of each session, in-session exercises to complete, and homework tasks were developed for both the SBFI and EBFI conditions. Analysis of protocol adherence checklists in each condition occurred to ensure that practitioners covered all the content material specified. Interrater reliability checks were conducted with a high level of agreement between the coder and the practitioners on content covered in each session ($r = .94$, $p = .001$). As a further check on protocol adherence, a research assistant viewed 15 randomly drawn videotapes of group sessions in each condition and coded the presence or absence of curriculum content item specified in the protocol for that condition. This revealed a high mean level of adherence to the protocol steps specified in the manuals for each condition (EBFI, $M = 98.73$, $SD = 2.68$; SBFI, $M = 98.75$, $SD = 2.29$).

Results

Preliminary Analyses

To examine the comparability of the samples of families in each condition, a series of Univariate Analysis of Variance (ANOVA) was used on parent-report and observational data. There were no significant differences between conditions on any measure at pre-intervention, indicating that randomization had produced two groups that were well matched prior to intervention on all

key outcome measures used to evaluate the effects of intervention. Furthermore, the two samples selected were well matched on all demographic and family background variables.

Attrition

Of the 98 families commencing the trial, 86 (88%) completed their respective interventions. Eight of the families that dropped out of the study were from the EBFI condition; 4 of the families were from the SBFI condition. Two (2%) of the 86 completers were uncontactable at the postintervention assessment, and a further 2 (2%) families were uncontactable at 6-month follow-up.

Statistical Analyses

Analyses of intervention effects consisted of 2 (condition: SBFI vs. EBFI) \times 3 (time: preintervention, postintervention, and follow-up) repeated measures MANOVAs. Where significant omnibus effects or interactions were found, subsequent univariate repeated measures ANOVAs and pairwise comparisons were used to locate the source of significant differences between conditions and across time. As we wished to examine the extent of clinically reliable improvement over time associated with each condition, main effects for time were followed up even where interaction effects were nonsignificant using the clinically reliable change index as described by Jacobson and Truax (1991).

In view of the large number of statistical comparisons conducted, we have adopted a conservative alpha level of .01 across all analyses to control for the potential inflation of Type 1 error.

Short-Term Intervention Effects

It was hypothesized that, when compared with SBFI, the EBFI condition would result in significant improvements across a variety of areas of family functioning. These areas included risk factors associated with child maltreatment (parental blame and intentional attributions and parental unrealistic expectations, behavior, and affect); parenting practices, parental adjustment and child behavior. Findings appear in Table 3.

In both the SBFI and EBFI treatment conditions, parents showed significant improvements from preintervention to postintervention across all of the indicators of risk potential for child abuse (e.g., global anger and parental expression of anger, parental blame and intentional attributions, parental unrealistic expectations and potential for child abuse). Furthermore, at postintervention families in the EBFI condition showed significant additional improvements compared to SBFI families on parental potential for child abuse (as measured by the CAPI), parental blame and intentional attributions for child aversive behavior (as measured by the PACBM) and parental unrealistic expectations regarding child behavior (as measured by the POQ). No group differences were observed at postintervention on the measures of parental and global anger.

Across all measures of parenting (e.g., parenting style, parental satisfaction,

TABLE 3
INTERVENTION EFFECTS: HOME OBSERVATION AND PARENT REPORT OF KEY RISK FACTORS FOR CHILD MALTREATMENT, PARENTAL
ADJUSTMENT, PARENTING PRACTICES, AND CHILD BEHAVIOR AT PRE-, POST-, AND 6-MONTH FOLLOW-UP

	SBFI (<i>n</i> = 39)			EBFI (<i>n</i> = 35)			Cond.	Time	Interact
	Pre <i>M</i> (<i>SD</i>)	Post <i>M</i> (<i>SD</i>)	6MFU <i>M</i> (<i>SD</i>)	Pre <i>M</i> (<i>SD</i>)	Post <i>M</i> (<i>SD</i>)	6MFU <i>M</i> (<i>SD</i>)			
Blame and Intentionality									
Attributions									
Ambiguous situations	3.89 (0.86)	3.57 (0.81)	3.64 (0.94)	3.99 (0.77)	3.21 (1.22)	2.85 (0.82)	4.27	15.89***	6.42**
Intentional situations	4.48 (0.82)	4.12 (0.89)	4.24 (0.77)	4.29 (0.80)	3.53 (1.07)	3.28 (0.96)	11.19***	24.57***	7.72***
Potential for Abuse							0.57	41.73***	4.41**
POQ	4.26 (3.06)	3.47 (2.65)	2.79 (1.92)	4.79 (3.16)	2.26 (2.40)	2.35 (1.61)	0.54	29.63***	5.06**
CAPI	187.61 (83.33)	132.24 (87.36)	110.76 (93.04)	231.21 (96.19)	122.15 (89.87)	118.76 (95.58)	0.53	68.32***	4.82**
Global Anger							0.56	25.42***	0.85
STAXI									
Angry temperament	91.03 (9.22)	72.51 (22.07)	72.95 (18.66)	93.64 (7.44)	73.61 (17.63)	67.75 (20.97)	0.02	67.55***	2.02
Anger out	91.23 (8.48)	58.21 (25.28)	59.23 (24.38)	92.08 (6.00)	54.17 (24.49)	53.47 (21.33)	0.69	131.03***	0.92
Anger control	8.51 (6.15)	42.00 (29.69)	42.95 (30.85)	12.86 (15.18)	50.86 (29.99)	42.95 (30.85)	1.91	86.10***	0.27
Angry expression	95.56 (5.74)	59.13 (29.91)	58.92 (28.74)	93.72 (11.09)	50.92 (32.56)	49.25 (30.94)	2.20	95.87***	2.20
Parental Anger							0.73	25.72***	0.76
PAI									
Problem	25.53 (7.55)	16.95 (9.98)	16.66 (10.08)	27.39 (9.62)	18.94 (10.89)	15.67 (11.50)	0.24	49.03***	1.15
Intensity	130.79 (38.00)	99.53 (31.16)	101.08 (33.18)	130.22 (27.42)	96.97 (26.68)	93.17 (28.83)	0.42	46.34***	0.46
Parental Adjustment							0.82	13.93***	0.43
PPC	6.70 (4.12)	4.81 (3.10)	4.70 (3.74)	7.14 (4.48)	5.34 (4.13)	4.41 (3.59)	0.07	12.34***	0.40
DASS	32.37 (18.01)	18.78 (16.18)	19.11 (15.68)	39.66 (23.17)	23.38 (13.89)	22.76 (21.48)	1.66	24.58***	0.29
Parenting							1.87	26.30***	1.87
PS	3.73 (0.63)	2.58 (0.73)	2.87 (0.75)	3.71 (0.62)	2.55 (0.80)	2.69 (0.69)	0.22	128.63***	0.64

PSOC									
Satisfaction	30.00 (6.39)	37.00 (7.46)	37.06 (7.74)	28.32 (6.32)	38.14 (7.30)	38.36 (6.33)	0.03	82.69***	2.42
Efficacy	22.79 (6.51)	28.44 (6.73)	28.26 (7.15)	22.18 (7.02)	30.57 (6.02)	30.21 (5.42)	0.65	58.15***	2.17
Child Behavior							1.93	12.90***	1.05
ECBI									
Intensity	136.15 (25.70)	108.88 (27.97)	110.53 (26.10)	137.30 (31.32)	109.65 (25.71)	105.00 (23.50)	0.01	47.57***	0.63
Problem	18.18 (6.85)	11.35 (7.57)	10.82 (7.70)	18.39 (8.61)	8.65 (7.83)	8.43 (6.90)	0.23	49.79***	1.33
PDR	9.11 (5.33)	5.24 (4.15)	4.79 (3.92)	10.97 (5.72)	5.78 (3.41)	5.83 (4.36)		36.84***	0.57
Observed positive child behavior (%)	75.82 (16.06)	83.55 (11.40)	83.33 (17.01)	76.24 (16.63)	85.16 (10.89)	84.16 (9.69)	0.37	7.68**	0.32
Observed negative child behavior (%)	24.18 (16.06)	16.45 (11.40)	16.67 (17.01)	23.75 (16.63)	14.84 (10.89)	15.83 (9.69)	0.37	7.68**	0.32
Child Behavior Settings							0.44	27.22***	0.47
HCPC									
Home Problems	6.53 (2.66)	3.34 (2.86)	3.05 (2.38)	7.14 (2.67)	3.64 (2.64)	3.36 (2.98)	0.72	64.70***	0.13
Community Problems	3.11 (2.20)	1.71 (2.12)	1.47 (1.96)	3.67 (2.72)	2.11 (1.69)	1.47 (1.61)	0.65	34.59***	0.72

Note. SBFI = Standard group parent training; EBFI = Enhanced behavioral family intervention; ANCOVA = Analysis of Variance; MANOVA = Multivariate Analysis of Variance; Pre = preintervention; Post = postintervention; 6MFU = 6-month follow-up; ECBI = Eyberg Child Behavior Inventory; PDR = Parent Daily Record (Mean Problem Score); PS = Parenting Scale (Total); PSOC = Parenting Sense of Competency; STAXI = State-trait Anger Expression Inventory (selected subscales listed); PAI = Parental Anger Inventory; POQ = Parent Opinion Questionnaire (total score); CAPI = Child Abuse Potential Inventory (abuse score); PPC = Parent Problem Checklist; DASS = Depression Stress and Anxiety Scale (total score); HCPC = Home and Community Problem Checklist.

** $p < .01$; *** $p < .001$.

and efficacy) families in both conditions displayed significant improvements from pre- to postintervention. There were no significant group or interaction effects on these measures.

From pre- to postintervention parents in both conditions showed a significant decrease in parental distress and parental conflict, but there were no condition or interaction effects.

On all measures of child behavior (ECBI, PDR, observed negative child behavior, and observed positive child behavior) both groups displayed significant improvement from pre- to postintervention; however, no significant condition or interaction effects were obtained.

Parents in both groups reported a significant decrease in the number of parenting and child care situations in which they experienced problem behavior both in the home and in the community. There were no condition or interaction effects.

It was hypothesized that EBFI participants would display greater levels of satisfaction with the intervention they received. A univariate ANOVA revealed that participants in both the SBFI ($M = 86.87$, $SD = 17.08$) and EBFI ($M = 89.44$, $SD = 15.74$) conditions reported similarly high levels of consumer satisfaction, $F(1, 77) = 0.48$.

Long-Term Intervention Effects

Findings from the 6-month follow-up appear in Table 3. The results indicated that families in both conditions maintained all observed postintervention gains. In addition to this outcome, significant effects were found on three outcome measures.

A significant interaction and a main effect for time were observed for parental blame and intentional attributions in both ambiguous and intentional situations (measured by the PACBM) and parental unrealistic expectations regarding child behavior (measured by the POQ). Despite there being a significantly greater improvement made by the EBFI participants at postintervention on the POQ measure, SBFI participants had caught up to their EBFI counterparts so that there was no significant difference observed between the conditions at follow-up.

A main effect for time was observed for parents' angry temperament (measured by the STAXI). Here, the general trend was for EBFI participants to continue to improve from postintervention to follow-up compared with the SBFI participants. However, pair-wise comparisons undertaken to inspect this main effect were nonsignificant.

Clinically Reliable Change

Three separate criteria were used to assess the clinical significance of change in children's behavior: the Reliable Change Index (RCI: Jacobson & Truax, 1991), a 30% reduction in observed child disruptive behavior (Webster-Stratton, Hollinsworth, & Kolpacoff, 1989), and a normative comparison approach which involved calculating the proportion of children whose behavior

TABLE 4
 FREQUENCY AND PERCENTAGE OF CLINICALLY RELIABLE CHANGE FOR CHILDREN'S
 PROBLEM BEHAVIOR FROM PRE- TO POSTINTERVENTION

	<i>N</i> (%) for each condition		Contrasts (χ^2) SBFI vs EBFI
	SBFI	EBFI	
RCI > 1.96			
ECBI	38.46	34.20	0.223
RCI > 1.96			
PDR	39.47	54.84	1.620
30% reduction			
Observed negative child behavior (%)	44.19	54.28	0.788
Moved below clinical cutoff (<131)			
ECBI	75.00	59.26	
Moved beyond clinical cutoff (<8.43)			
PDR	61.11	69.56	

Note. SBFI = Standard group parent training; EBFI = Enhanced behavioral family intervention; RCI = Reliable Change Index; ECBI = Eyberg Child Behavior Inventory; PDR = Parent Daily Report Checklist.

was normalized following intervention (Barkley, Edwards, Laneri, Fletcher, & Metevia, 2001).

Short-term changes. Using the three different criteria to calculate reliable change at postintervention, overall there was a similar proportion of children whose behavior had reliably improved in each condition (EBFI = 47.7%; SBFI = 41.55%) (see Table 4).

Using the normative comparison approach there was a similar proportion of children whose behavior had moved from the clinic to the nonclinic range in the EBFI and SBFI.

Long-term changes. At follow-up, there were no significant differences in reliable change across conditions when mothers' ECBI or PDR scores were used to compute RCI or when the 30% reduction criterion was used (see Table 5). Using the normative comparison method, there were no significant differences between conditions in the proportion of children in the nonclinic range at 6-month follow-up.

Subsequent notifications. It was hypothesized that the EBFI families would have significantly fewer notifications for child maltreatment at follow-up. In fact, only one family had contact with FYCCQ in the 6 months between the postintervention and follow-up periods.

Discussion

Despite the evidence showing a relationship between attributions, parental anger, and child maltreatment, this is the first study to our knowledge to have

TABLE 5
 FREQUENCY AND PERCENTAGE OF CLINICALLY RELIABLE CHANGE FOR CHILDREN'S
 PROBLEM BEHAVIOR FROM PREINTERVENTION TO 6-MONTH FOLLOW-UP

	<i>N</i> (%) for each condition		Contrasts (χ^2) SBFI vs EBFI
	SBFI	EBFI	
RCI > 1.96			
ECBI	33.3	37.0	0.190
RCI > 1.96			
PDR	56.41	48.27	0.442
30% reduction			
Observed child negative behavior (%)	46.15	52.94	0.335
Moved beyond clinical cutoff			
ECBI	57.00	72.00	
Moved beyond clinical cutoff (%)			
PDR	60.00	63.64	

Note. SBFI = Standard group parent training; EBFI = Enhanced behavioral family intervention; RCI = Reliable Change Index; ECBI = Eyberg Child Behavior Inventory; PDR = Parent Daily Report Checklist.

examined whether specific targeting parental attributions and anger enhances clinical outcomes for either parent or child in parents at risk of child maltreatment because of significant anger-management problems. In general, the findings attest to the clinical utility of behavioral family intervention with this population. Parents participating in both variants of Triple P interventions showed significant improvements in a wide range of indices of family functioning, with families receiving the enhanced version showing greater improvement on two key indicators of abuse potential in the short term.

Parents in both SBFI and EBFI conditions showed a reduction in dysfunctional attributions, with EBFI participants showing a significantly greater reduction in their potential for child abuse (CAPI scores) and unrealistic expectations (POQ scores). However, on measures of anger experience or expression, parents in both interventions showed similar reductions. Both SBFI and EBFI participants performed equally well on parent and child measures of behavior and adjustment and reported comparably high levels of consumer satisfaction with their respective interventions.

Families in both conditions maintained all treatment gains at 6-month follow-up. EBFI participants did perform significantly better than the SBFI participants on one outcome measure, the PACBM. EBFI participants showed a significantly greater reduction in negative attributions than parents in SBFI. The specific targeting of parents' attributions was successful in reducing parents' tendencies to blame and attribute mal-intent to their children both in situations that were ambiguous with respect to the child motives and in situations

where children's behavior was more apparently deliberate. This generalized shift in both parenting situations toward more benign explanations of their children's actions showed that the cognitive mechanism hypothesized to shift in angry parents did indeed change in the predicted direction.

Only one family in the study received contact with any child protection services for child maltreatment in the follow-up period.

Previous research into interventions for maltreating or at-risk families have indicated that standard parenting interventions might not be enough to meet the complex needs of these families. The results of the present study support this assertion to some degree. Although the EBFI condition was associated with significantly greater improvements on measures of negative parental attribution compared with standard parent training, at postintervention SBFI families had also improved significantly on many measures. The differences between conditions on the attributional measure maintained from postintervention to follow-up.

However, we failed to find superior longer-term benefits for children. It is possible that both the standard and enhanced parenting interventions incorporated elements that shifted parental attributions, albeit with different degrees of specificity. While the enhanced condition systematically trained parents to modify negative attributions for their own and their child's negative behaviors (training which was absent from the standard comparison condition), parents in the standard condition may have had some incidental exposure to attributional training as well. For example, in a standard group Triple P, once a supportive environment is established within-group socialization processes may lead parents to prompt and reinforce each other for generating constructive alternative explanations for a child's actions (e.g., escalation traps) and attributions of blame or mal-intent are not modeled or reinforced by group leaders. Over time parents may be incidentally shaped by the group process to report fewer destructive blame-oriented attributions and to focus more positively on actions the parent can take to prevent problem behaviors.

The present study extends the limited empirical base of BFI as an intervention for child maltreatment (James, 1994b; Wekerle & Wolfe, 1993) by showing that the two variants of BFI were both associated with a range of positive changes in parental risk factors linked to child maltreatment. The main finding that the enhanced Triple P intervention produced more consistent changes across the full range of child measures, parent's cognitive, affective, and parenting measures and family outcome variables was encouraging. However, these additional effects need to be interpreted with some caution as our decision not to use a no-treatment control condition reduced our capacity to rule out maturational effects or regression to the mean as an explanation of improvements. On the other hand, using a high-strength, standard-care comparison condition was a strength. Our rationale in using such a comparison condition was to provide a fairly tough test of the additive benefits of the enhanced intervention. Further, we believed it was necessary to use an existing empirically supported comparison condition and to deliver it as close as

possible to how it is delivered in health services in the community. This seemed a better approach to testing the hypothesized benefits of enhancements to existing BFI intervention strategies. Furthermore, to withhold treatment from an at-risk-of-abuse sample is ethically questionable. A similar strategy was used in other studies testing adjunctive treatments for clinically depressed parents (e.g., Sanders & McFarland, 2000). It is possible that the enhanced intervention might be even more effective with nonresponders after an initial trial of a standard parent training intervention.

The results of the present study need to be interpreted with some caution. Although all participating families were assessed to be at risk of child maltreatment on the basis of anger-management concerns and coercive parenting practices, the majority of the sample had not been formally notified for child maltreatment. Although formal notification to child protective services is a very crude index of abusive parenting, the nature of our recruitment strategy means the present results cannot be simply generalized to abuse populations recruited through other means (e.g., clinical referral from child protection agencies). Nevertheless, as a preventive strategy for high-risk parents, the findings are more directly relevant. Furthermore, within the multilevel system of parenting and family support services advocated in the Triple P population model, active outreach to the community is seen as essential to normalizing participation in parenting programs. Each family received individual telephone consultations after participating in groups. While such an approach is readily accepted by parents and allows for tailoring of session content, for families without access to telephones (a small minority of people in Australia), these telephone consultations could be conducted as face-to-face interviews either at home or in a clinic session. Also, the amount of therapist contact necessarily differed across the two conditions, introducing a potential confound; that is, the EBFI had four extra sessions of therapist contact. However, it is not possible to add adjunctive interventions without increasing either session length or the number of sessions. We chose not to artificially extend the amount of parenting skills training in the SBFI condition to match the amount of extra therapist contact in the EBFI condition as this would have introduced another confound, namely, differing amounts of time devoted to basic parenting skills training.

The present findings have several implications for early-intervention programs for families at risk of child maltreatment. Rather than trying to design more complex parenting interventions addressing parental attributions and anger management, families can be provided with a less intensive intervention in the first instance (e.g., the SBFI intervention delivered to families in this trial). During this initial phase of intervention, particular attention needs to be paid to engaging parents and maintaining their involvement as such parents have been shown to be at increased risk of dropping out of treatment. Subsequent to families receiving this standard parenting intervention, reassessment could occur to gauge any shift in the risk factors for maltreatment (e.g., coercive parenting practices, negative attributions, excessive anger, and unreasonable

expectations). Based on this assessment, practitioners can identify the risk factors that are still evident and provide a customized adjunctive intervention(s) that specifically targets the risk factor. This conclusion is consistent with the findings of other trials evaluating adjunctive interventions combined with individually administered versions of Triple P with parents of children with conduct problems (e.g., Sanders et al., 2000).

References

- Arnold, D. S., O'Leary, S. G., Wolff, L. S., & Acker, M. M. (1993). The Parenting Scale: A measure of dysfunctional parenting in discipline situations. *Psychological Assessment, 5*, 137-144.
- Australian Institute of Health and Welfare. (2000). *Child protection Australia: 1998-99*. Canberra: Author.
- Azar, S. T. (1997). A cognitive behavioral approach to understanding and treating parents who physically abuse their children. In D. A. Wolfe, R. J. McMahon, & R. DeV. Peters (Eds.), *Child abuse: New directions in prevention and treatment across the lifespan* (pp. 79-101). Thousand Oaks, CA: Sage Publications.
- Azar, S. T., & Rohrbeck, C. A. (1986). Child abuse and unrealistic expectations: Further validation of the Parent Opinion Questionnaire. *Journal of Consulting and Clinical Psychology, 54*, 867-868.
- Barkley, R. A., Edwards, G., Laneri, M., Fletcher, K., & Metevia, L. (2001). The efficacy of problem-solving communication training alone, behavior management training alone, and their combination for parent-adolescent conflict in teenagers with ADHD and ODD. *Journal of Consulting and Clinical Psychology, 69*, 926-941.
- Black, D. A., Heyman, R. E., & Slep, A. M. (2001). Risk factors for child physical abuse. *Aggression and Violent Behavior, 6*, 121-188.
- Brestan, E. V., & Eyberg, S. M. (1998). Effective psychosocial treatments of conduct-disordered children and adolescents: 29 years, 82 studies, 5,272 kids. *Journal of Clinical Child Psychology, 27*, 180-189.
- Bugental, D. B. (2000). Parental and child cognitions in the context of the family. *Annual Review of Psychology, 51*, 315-344.
- Chalk, R., & King, P. A. (Eds.). (1998). *Violence in families: Assessing prevention and treatment programs*. Washington, DC: National Academy Press.
- Chamberlain, P., & Reid, J. B. (1987). Parent observation and report of child symptoms. *Behavioral Assessment, 9*, 97-109.
- Connell, S., Sanders, M. R., & Markie-Dadds, C. (1997). Self-directed behavioral family intervention for parents of oppositional children in rural and remote areas. *Behavior Modification, 21*, 379-408.
- Dadds, M. R., & Powell, M. B. (1991). The relationship of interparental conflict and global marital adjustment to aggression, anxiety, and immaturity in aggressive nonclinic children. *Journal of Abnormal Child Psychology, 19*, 553-567.
- Egan, K. J. (1983). Stress management and child management with abusive parents. *Journal of Clinical Child Psychology, 12*, 292-299.
- Eyberg, S. M., & Pincus, D. (1999). *Eyberg Child Behavior Inventory and Sutter-Eyberg Student Behavior Inventory-Revised: Professional manual*. Odessa, FL: Psychological Assessment Resources.
- Forehand, R. L., & McMahon, (1981). *Helping the noncompliant child: A clinician's guide to parent training*. New York: The Guilford Press.
- Gibaud-Wallston, J., & Wandersman, L. P. (1978). *Development and utility of the Parenting Sense of Competence Scale*. Paper presented at the meeting of the American Psychological Association, Toronto.

- Hansen, D. J., & Sedlar, G. (1998). *Manual for the PAI: The Parental Anger Inventory*. Lincoln, NE: CSBFIP.
- Haugaard, J. J., Reppucci, N. D., & Feerick, M. M. (1997). Children's coping with maltreatment. In S. A. Wolchik & I. N. Sandler (Eds.), *Handbook of children's coping: Linking theory and intervention* (pp. 73–100). New York: Plenum Press.
- Jacobson, N. S., & Truax, P. (1991). Clinical significance: A statistical approach to defining meaningful change in psychopathology research. *Journal of Consulting and Clinical Psychology, 59*, 12–19.
- James, M. (1994a). Child abuse and neglect: Incidence and prevention. *Issues in Child Abuse Prevention* (Number 1). Melbourne: Australian Institute of Family Studies.
- James, M. (1994b). Child abuse prevention: A perspective on parent enhancement programs from the United States. *Issues in Child Abuse Prevention* (Number 3). Melbourne: Australian Institute of Family Studies.
- Kolko, D. J. (1996). Clinical monitoring of treatment course in child physical abuse: Psychometric characteristics and treatment comparisons. *Child Abuse and Neglect, 20*, 23–43.
- Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the Depression Anxiety Stress Scales* (2nd ed.). Sydney: Psychology Foundation of Australia.
- Markie-Dadds, C., & Sanders, M. R. (2002). *Effectiveness of a self-directed program for parents of children at high and low risk of developing conduct disorder*. Unpublished manuscript, University of Queensland, St. Lucia.
- Markie-Dadds, C., Turner, K. M. T., & Sanders, M. R. (1997). *Every parent's group workbook*. Brisbane: Families International Publishing.
- Milner, J. S. (1986). *The Child Abuse Potential Inventory: Manual* (2nd ed.). DeKalb, IL: Psytec Inc.
- National Research Council. (1993). *Understanding child abuse and neglect*. Washington, DC: National Academy Press.
- Pidgeon, A., & Sanders, M. R. (2002). *Parent's Attributions of Child Behavior Measure*. Unpublished manuscript, The University of Queensland.
- Renk, K., Phares, V., & Epps, J. (1999). The relationship between parental anger and behavior problems in children and adolescents. *Journal of Family Psychology, 13*, 209–227.
- Reppucci, N. D., Britner, P. A., & Woolard, J. L. (1997). *Preventing child abuse and neglect through parent education*. Baltimore: Paul H. Brooks.
- Sanders, M. R. (1999). The Triple P-Positive Parenting Program: Towards an empirically validated multilevel parenting and family support strategy for the prevention of behavior and emotional problems in children. *Clinical Child and Family Psychology Review, 2*, 71–90.
- Sanders, M. R., & Christensen, A. P. (1985). A comparison of the effects of child management and planned activities training across five parenting environments. *Journal of Abnormal Child Psychology, 13*, 101–117.
- Sanders, M. R. & Dadds, M. R. (1982). The effects of planned activities and child management procedures in parent training: An analysis of setting generality. *Behavior Therapy, 13*, 452–461.
- Sanders, M. R., & Dadds, M. R. (1993). *Behavioral family intervention*. Needham Heights, MA: Allyn and Bacon.
- Sanders, M. R., Markie-Dadds, C., Tully, L., & Bor, W. (2000). The Triple P-Positive Parenting Program: A comparison of enhanced, standard, and self directed behavioral family intervention. *Journal of Consulting and Clinical Psychology, 68*, 624–640.
- Sanders, M. R., Markie-Dadds, C., & Turner, K. M. T. (2000). *Practitioner's manual for Standard Triple P*. Brisbane: Parenting and Family Support Centre.
- Sanders, M. R., & McFarland, M. (2000). The treatment of depressed mothers with disruptive children: A comparison of parent training and cognitive behavioral family intervention. *Behavior Therapy, 31*, 89–112.

- Sanders, M. R., Waugh, L., Tully, L., & Hynes, K. (1996). *The Revised Family Observation Schedule* (3rd ed.). Brisbane: Parenting and Family Support Centre, The University of Queensland.
- Silverman, A. B., Reinherz, H. Z., & Giaconia, R. M. (1996). The long-term sequelae of child and adolescent abuse: A longitudinal community study. *Child Abuse and Neglect, 20*, 709–723.
- Slep, A. M. S., & O'Leary, S. G. (1998). The effects of maternal attributions on parenting: An experimental analysis. *Journal of Family Psychology, 12*, 234–243.
- Spielberger, C. D. (1996). *State-trait anger expression inventory (professional manual)*. Lutz, FL: Psychological Assessment Resources.
- Stern, S. B., & Azar, S. T. (1998). Integrating cognitive strategies into behavioral treatment for abusive parents and families with aggressive adolescents. *Clinical Child Psychology and Psychiatry, 3*, 387–403.
- Thompson, R. A., Christiansen, E. H., Jackson, S., Wyatt, J. M., Colman, R. A., Peterson, R. L., Wilcox, B. L., & Buckendahl, C. W. (1999). Parent attitudes and discipline practices: Profiles and correlates in a nationally representative sample. *Child Maltreatment, 4*, 316–330.
- Webster-Stratton, C. (1990). Enhancing the effectiveness of self-administered videotape parent training for families with conduct-problem children. *Journal of Abnormal Child Psychology, 18*, 479–492.
- Webster-Stratton, C., Hollinsworth, T., & Kolpacoff, M. (1989). The long-term effectiveness and clinical significance of three cost-effective training programs for families with conduct-problem children. *Journal of Consulting and Clinical Psychology, 57*, 550–553.
- Wekerle, C., & Wolfe, D. A. (1993). Prevention of child physical abuse and neglect: Promising new directions. *Clinical Psychology Review, 13*, 501–540.
- Wekerle, C., & Wolfe, D. A. (1996). Child maltreatment. In E. J. Mash & R. A. Barkley (Eds.), *Child psychopathology* (pp. 492–537). New York: The Guilford Press.
- Whiteman, M., Fanshel, D., & Grundy, J. F. (1987). Cognitive-behavioral interventions aimed at anger of parents at risk of child abuse. *Social Work, 32*, 469–474.
- Zubrick, S. R., Northey, K., Silburn, S. R., Williams, A. A., Blair, E., Robertson, D., & Sanders, M. R. (in press). Prevention of child behaviour problems via universal implementation of a group behavioural family intervention. *Prevention Science*.

RECEIVED: January 27, 2003

ACCEPTED: August 14, 2003