



Early intervention for preschoolers with behaviour problems: Preliminary findings for the Exploring Together Preschool Program

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Abstract

There is increasing recognition of the need for early intervention into behavioural problems in preschool aged children (3-6 years) to prevent long-term adverse outcomes. This paper reports on the *Exploring Together Preschool Program* (ETPP), an innovative, developmental theory based, early intervention program, aimed at preschoolers referred with behaviour problems who are at risk of developing ongoing mental health problems. ETPP is a multifaceted group program comprising parent behaviour management training, parent-child interaction therapy, and children's social problem-solving training. Seven groups comprising 37 preschoolers and one of their parents referred from clinical and community settings participated in the 10-week program. Results indicate that children's behaviour problems reduced clinically and significantly from pre- to post-program whilst social skills improved significantly. Parenting practices and parents' satisfaction with their role also improved significantly. Improvements were mostly maintained at 6-month follow-up. Developmental theory suggests that these changes will help prevent behaviour problems from developing into long-term, enduring mental health problems. The study provides preliminary evidence that ETPP is a theoretically and developmentally sound, comprehensive intervention for Australian families with preschool aged children who show early signs of mental health problems.

Keywords

early intervention, behavioural problems, emotional problems, children, preschool, parents, parenting, evaluation, program evaluation

Introduction

The promotion of mental health is critical in early childhood. Behavioural and relationship problems cause significant impairment for many preschool aged children and can be precursors for long-term antisocial behaviours and mental health problems (Campbell, 2002; Campbell & Ewing, 1990; Gagnon, Craig, Tremblay et al., 1995; White, Moffitt, Earls et al., 1990). Behaviours such as temper tantrums, yelling, fighting, and refusal to comply with instructions

can interfere with the child's functioning at home and with their peers (Kazdin, 1995). Problems such as aggressive, oppositional, defiant, and disruptive behaviours can be severe, persistent, and frequent enough to warrant clinical attention or diagnoses (Dadds, 1997; Keenan & Wakschlag, 2004; Lavigne, Cicchetti, Gibbons et al., 2001; McMahon & Wells, 1998).

Some preschool aged children also exhibit internalising problems such as anxiety (Dadds, Spence, Holland et al., 1997) and shyness and

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withdrawal from peers (Spence & Donovan, 1998). Children may also have interpersonal relationship problems including deficits in core social and problem-solving skills (Shure, 2001; Spivack & Shure, 1989) as well as attachment difficulties with parents (Bowlby, 1998; Greenberg, Speltz & DeKlyen, 1993).

Without intervention, all of these problems may become more serious and more entrenched (Campbell, 2002; Fergusson, Horwood & Lynskey, 1995; Richman, Stevenson & Graham, 1982; Speltz, McClellan, DeKlyen & Jones, 1999). Given that children at risk of developing long-term problems can be identified at preschool age (Mesman & Koot, 2001; Pierce, Ewing & Campbell, 1999; Shaw, Owens, Giovannelli & Winslow, 2001) and that the developmental pathways for these problems in childhood and adolescence are well known (Loeber, 1990; Mesman, Bongers & Koot, 2001) it is imperative to intervene as early as possible. Research has shown that if treated early, problems at preschool age can be prevented from developing into full-scale, severe, long-term mental health problems (Brestan & Eyberg, 1998; Kazdin, 1998; Smart, Richardson, Sanson et al., 2005).

Across the range of interventions for mental health problems, early intervention programs for individuals with early signs of disorder have been highlighted as crucial and effective strategies to prevent full-scale mental health problems from developing (Mrazek & Haggerty, 1994 cited in Commonwealth Department of Health and Aged Care, 2000). The period around the transition to school has been identified as a particularly effective time to intervene (Vassallo, Smart, Sanson et al., 2002). Overseas prevention and intervention programs targeting preschoolers and their parents are being developed and are increasingly available (e.g., Brotman, Klein, Kamboukos et al., 2003; Kamps, Tankersley & Ellis, 2000; Reid, Webster-Stratton & Hammond, 2003, 2007). However, Australian programs (e.g., Havighurst, Harley & Prior, 2004; Markie-Dadds & Sanders, 2006) are generally aimed at parents only, without the opportunity for children to directly learn and develop new skills. The greatest emphasis of current research is placed on universal prevention programs targeting all parents

(McTaggart & Sanders, 2003; Sanders, 2003; Turner & Sanders, 2006; Zubrick, Ward, Silburn et al., 2005). It is appropriate for the field to develop universal, preventative programs as well as more targeted interventions. Sanders and colleagues (e.g., Turner & Sanders, 2006) provide evidence for a stepped approach to prevention and early intervention and have generated several well-established parenting interventions for various populations (e.g., Bor, Sanders & Markie-Dadds, 2002; Roberts, Mazzucchelli, Studman & Sanders, 2006; Rogers, Cann, Cameron et al., 2003; Sanders, Pidgeon, Gravestock et al., 2004). A comprehensive step beyond Sanders' 5-Step model would include children's skills-based components and/or parent-child direct interaction components within a family intervention program. In Australia, there are few comprehensive parent and child intervention programs for preschool children who are already showing signs of behavioural disturbance. A recent Victorian government initiative targets children in early primary school years and includes separate parent and child groups but no interactive component (Corboy & McDonald, 2007).

Research has shown that the most effective interventions are based on developmental models of behaviour and social relationships (Kazdin, 1997; McMahon & Wells, 1998; Offord & Bennett, 1994; Prinz & Connell, 1997; Reid, 1993), implemented at critical developmental periods such as preschool age (LeMarquand, Tremblay & Vitaro, 2001; Loeber, 1990; McMahon, 1994; Smart et al., 2005; Taylor, Eddy & Biglan, 1999), and have multiple components to address the broad range of problems in the lives of these children (Kazdin, 1997; McFadyen-Ketchum & Dodge, 1998; Taylor et al., 1999).

The most effective forms of intervention for children's behavioural and relationship problems involve developing children's skills, teaching parents to manage their children's behaviour, and addressing parents' own wellbeing and relationship issues. Effective interventions include parent behaviour management training programs such as those described by Forehand and McMahon (1981), Webster-Stratton (1987) and Sanders (2003). Some programs include

adjuncts to address parents' emotional wellbeing (e.g., Webster-Stratton, 1996; Sanders et al., 2004). Other interventions with good empirical support include parent-child interaction therapy such as that described by Eyberg and colleagues (e.g., Eyberg & Boggs, 1998; Schuhmann, Foote, Eyberg et al., 1998). Programs that directly address children's behaviour and cognitions include children's social skills and problem-solving training (e.g., Hune & Nelson, 2002; Shure, 2001; Spivack & Shure, 1989; Webster-Stratton & Reid, 2003, 2004). The best programs for children with emotional and behavioural problems and their families combine all of these components (e.g., Hemphill & Littlefield, 2001; Kazdin, Siegel & Bass, 1992; Tremblay, Pagani-Kurtz, Masse et al., 1995; Webster-Stratton & Hammond, 1997; Webster-Stratton, Reid & Hammond, 2004).

As Webster-Stratton and Taylor (2001) stated in their comprehensive review of this field, programs are more likely to be effective and to generalise and maintain long-term behavioural change if they are: multimodal (addressing children's behavioural, cognitive, emotional and social skills); applied across different contexts (clinic, home, and preschool); include important figures in the child's life (parents and teachers); and are implemented as early as possible.

The Exploring Together Program

An Australian program, the *Exploring Together Program* (ETP) (Hemphill & Littlefield, 2001) was originally designed for primary school aged children. It meets many of the above criteria in that it is a theory-driven, short-term, multimodal intervention. ETP comprises parent behaviour management training (also addressing parent wellbeing and relationship issues), children's social problem-solving and emotion management training, and parent-child interaction therapy. It addresses children's behavioural, cognitive, emotional and social issues across clinic, home and school settings and involves parents, teachers, and the children themselves.

ETP has been reported as successful in reducing children's behaviour problems and improving their social skills (Hemphill & Littlefield, 2001) and meets most of the criteria for a 'probably

efficacious treatment' (Chambless & Hollon, 1998; Chambless & Ollendick, 2001).

During the period that ETP was first implemented with clinically referred children in middle-primary school years, the ETP team frequently received requests from clinicians for a similar program for younger children with behavioural and emotional disturbance and their families. In recognising the need for earlier intervention the team adapted ETP to target the crucial preschool age and developed the *Exploring Together Preschool Program* (ETPP). A comprehensive evaluation designed around action research principles and incorporating single sample time series design as well as quantitative and qualitative evaluation was conducted. This paper describes the development of ETPP and one aspect of the evaluation: the quantitative group analysis.

The Exploring Together Preschool Program

Structure

ETPP is a short term, community based, multifaceted group treatment program. It was designed for children in their preschool and early primary school years (3-6 years old) with disruptive behaviour problems, internalising problems, and/or peer or family relationship difficulties, and for their parents and preschool teachers. ETPP groups are held for 2 hours per week over 10 weeks (1 hour for parents and 1 hour for children concurrently, and 1 hour combined). There are two additional meetings for partners or support persons and two additional meetings for preschool staff over this time period (see Figure 1). Changes to the program structure from ETP include that groups are shorter, activities are changed more frequently, and the parent-child interactive group is presented twice, to both begin and end the sessions, which allows time for separation and reunion. Each program involves 5-6 parent-child dyads and four group leaders (two each for the children's and parents' components).

Children's component

Developmental considerations that informed the adaptation of ETPP included changing the structure and content of ETP to fit the cognitive, language, psychological, and social developmental level of preschoolers. Strategies include using concrete tasks with visual cues

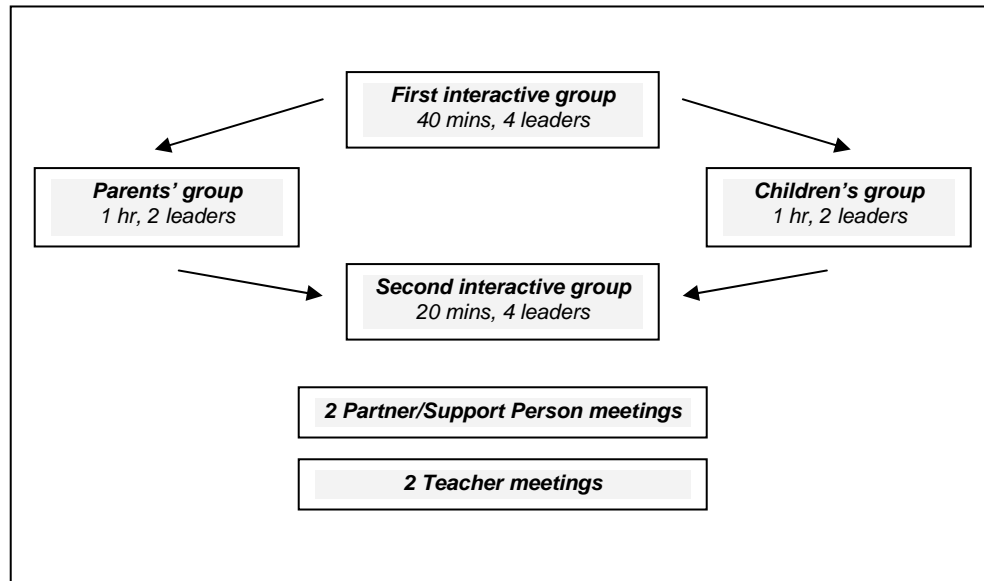


Figure 1. Outline of *Exploring Together Preschool Program* structure

(e.g., making a Stop sign) instead of reading and writing tasks; showing children through *in vivo* modelling and rehearsal how to apply concepts to activities they are engaged in; and teaching children to use simple language to express their feelings, make requests, and have their needs met.

The children's component of ETPP aims to reduce children's aggressive and withdrawn behaviour problems while at the same time developing their emotion regulation and problem-solving skills, and improving their peer interactions. Children are taught affect recognition and expression, social perception, perspective taking, anger management, decision-making, and problem-solving skills. Children are helped to negotiate friendships and given opportunities to share and take turns. These sessions help children learn to cope with frustration and to manage strong emotions. Activities such as games, stories, craft, and role-play provide graded opportunities for social interaction with peers, with the aim that by the end of the program the children will be able to work together in groups, thus preparing them for some of the demands of school. This aspect of the program was informed by Spivack and Shure's seminal work in this area (Shure, 1993, 2001; Spivack & Shure, 1989).

Parent-child interaction component

A strong emphasis of ETPP is to address attachment issues between parents and children, and to enhance parent-child interactions. Researchers in this field (e.g., Eisenstadt, Eyberg, McNeil et al., 1993) have found that coaching parents how to interact more positively with their children *in vivo* helps both children and parents to learn skills and change their behaviour and interactions, and to generalise these skills to other settings (McNeil, Eyberg, Eisenstadt et al., 1991; Rayfield, Monaco & Eyberg, 1999). Parents are the key influences on children of this age and a warm, empathic, positive bond has been shown to have beneficial effects on children's emotional and behavioural outcomes (Rayfield et al., 1999). Activities, and indeed the program structure, were developed around these concepts.

The parent-child interactive components use direct dyad work to help parents and children develop age-appropriate expectations of children's behaviour, enhance communication, develop emotion regulation skills, and manage separation issues. These sessions also aim to help parents and children develop strategies to deal with difficult behaviours, facilitate cooperative relationships, improve problem-

solving, experience play and mutual enjoyment, and address relationship problems.

Parents' component

The parents' component of ETPP uses discussion and modelling to help parents develop knowledge and skills regarding child development, behaviour management, and parental wellbeing. The broad structure of the parent component is the same as ETP, helping parents understand factors underlying their children's behaviour, challenging parents' irrational beliefs about their children's behaviour, and teaching behaviour management principles and strategies. In addition, it helps parents address relationship and family of origin issues, learn to manage their own feelings, and challenge distorted perceptions of their children or themselves. These aims are achieved through discussion, role-play, and homework tasks. The ETPP parent component differs from ETP in that the focus and examples are based around issues relevant to parents of preschoolers (e.g., tantrums, aggression, non-compliance) and the developmental information provided is about the normal development of 3-6 year old children.

Partner and teacher components

Partner and teacher meetings aim to provide family members and teachers with information about the program and the techniques used to help children change their behaviour. These meetings facilitate collaboration among teachers, clinicians and family members. They provide opportunities for important people in the children's lives to express their concerns about the children, use consistent management strategies, and generalise gains to other settings.

Development and evaluation of ETPP

ETPP was developed and trialled using an action research approach. This involved seeking feedback after each trial from parents, teachers, and clinicians. This feedback was then used to fine-tune the manual. This process was repeated across three implementations and was incorporated into the final ETPP treatment manual (Littlefield, Story, Woolcock et al., 2000).

The program was evaluated through quantitative and qualitative methodologies. It was hypothesised that participation in ETPP would reduce children's behaviour problems, improve

their social skills and peer interactions, improve parents' parenting practices and psychosocial wellbeing, enhance parents' satisfaction with parenting, and improve overall family functioning.

Method

Design

This project was part of a larger study that included both group and single case design and qualitative and quantitative data. This paper reports on the quantitative data collected through the completion of standardised questionnaires by parents and preschool teachers at pre-program, post-program, and follow-up.

Participants

All families referred to ETPP were invited to participate in the research. Seven programs were conducted, each with four to seven participant families (parent and child). A total of 40 families began the program and 37 families completed the program, an attrition rate of 7.5%. Of the 37 families who attended the program, the average attendance rate was 91%, or nine of the ten sessions. At pre-program, quantitative data was available for 35 of the 37 participants and from 33 preschool teachers. However due to missing data, full sets of pre-post quantitative data were only available for 26 parents and 22 teachers, and follow-up data for 11 parents and 12 teachers.

The children ($n = 37$) were aged between 3 and 6 years with a mean age of 4.48 years ($SD = 0.61$). The majority of children (91%) were boys. Most children (75%) participated in a formal 'preschool' or kindergarten program. In some cases the child attended an early development or childcare program (22%), and one child was in his first year of school (3%). Usually, the child's mother attended ETPP (94%). Most parents were the children's biological parents (94%) and most were married (86 %).

Children were referred to the program because they displayed significant behavioural and/or relationship problems at home or preschool and because their parents and preschool teachers had difficulty managing their behaviours. Children presented with internalising and/or externalising behavioural problems such as aggression and defiance, and many had difficulties relating to

peers, parents and siblings. Referrals to ETPP were received from both clinical settings such as mental health services and community settings (via preschool teachers and preschool field officers).

Referrals to ETPP were assessed through clinical family interviews conducted by the group leaders as well as communication with referrers. Children were accepted into the program unless they were markedly different from the rest of the group in some domain (for example a 6 year old with a group of 3-4 year olds). Groups had an age/development range of approximately 18 months. Exclusion criteria included cognitive or speech/language functioning outside this range, and Autistic Disorder. Parents were also required to have cognitive, language, and mental health functioning at a level that allowed them to participate in the group program.

Measures

The variables examined in this paper include children's behaviour problems and social skills, rated by both parents and teachers. Parents also reported on their own well-being, parenting practices, satisfaction with parenting, and overall family functioning. All measures are widely used in program outcome research and are generally seen to have satisfactory internal consistency, test-retest reliability and concurrent validity.

Children's externalising behaviour problems

The Eyberg Child Behaviour Inventory (ECBI) and Sutter-Eyberg Student Behaviour Inventory - Revised (SESBI-R) (Eyberg & Pincus, 1999) measure disruptive behaviour problems in children aged 2-16 years. The two parallel forms are the parent-report ECBI (36 items) and the teacher-report SESBI-R (38 items). They measure a range of externalising behaviours (e.g., aggression, noncompliance) on a 7-point scale which is summed to provide an Intensity Scale score. Parent- and teacher-ratings of the problem behaviours are measured on a dichotomous Yes/No scale. 'Yes' responses are summed to provide the Problem Scale score. The ECBI and SESBI-R were standardised on a sample of 2-16 year olds (Eyberg & Pincus, 1999). The measures were reported to have satisfactory internal consistency and good test-retest reliability. These authors also provided evidence for the concurrent and discriminant validity of the ECBI and SESBI-R.

Children's social skills and problem behaviours

The Social Skills Rating System (SSRS) is a broad, multi-informant measure of children's social skills and problem behaviours (Gresham & Elliott, 1990). The preschool forms comprise a Social Skills scale (39-item Parent form and 30-item Teacher form) and a Problem Behaviours scale (10 items covering both externalising and internalising behaviour problems, for both Parent and Teacher forms) for children aged 3-5 years. Concurrent validity between the SSRS scales and other measures of preschool children's behaviour problems has been shown by Elliot, Barnard and Gresham (1989) and Merrell (1995).

Parental wellbeing

The Depression Anxiety Stress Scales (DASS) are a 42-item questionnaire with a short form of 21 items (Lovibond & Lovibond, 1995) that measure symptoms of depression, anxiety and stress in adults. The 21-item measure used in this study is a self-report inventory comprising three scales of seven items. High internal consistencies have been reported (Lovibond & Lovibond, 1995) and concurrent validity with other depression, anxiety and stress inventories has been shown (Antony, Bieling, Cox et al., 1998; Lovibond & Lovibond, 1995).

Parenting style

The Parenting Scale (Arnold, O'Leary, Wolff & Acker, 1993) measures dysfunctional discipline practices of parents of children aged 18 months to 4 years (Arnold et al., 1993). It is a 30-item questionnaire that measures three dysfunctional parenting styles: laxness (permissive discipline), over-reactivity (authoritarian discipline, physical punishment, and power assertion), and verbosity (lengthy verbal responses). Arnold et al. (1993) reported psychometric data including good test-retest reliability and high internal consistency. Scores on all three factors were positively correlated with other measures of dysfunctional discipline and child misbehaviour.

Parental satisfaction

The Kansas Parental Satisfaction Scale (KPS) (James, Schumm, Kennedy et al., 1985) is a 3-item instrument designed to measure parents' satisfaction with the behaviour of their children, satisfaction with themselves as parents, and satisfaction with their relationship with their children. The scale is reported to have good

internal consistency (Chang, Schumm, Coulson et al., 1994; James et al., 1985; Rho & Schumm, 1989) and good concurrent validity with a marital satisfaction scale and a self-esteem scale (James et al., 1985).

Family functioning

The McMaster Family Assessment Device (FAD) (Epstein, Baldwin & Bishop, 1983) was used to evaluate family functioning. The questionnaire comprises seven subscales, six measuring dimensions of family functioning (problem-solving, communication, roles, affective responses, affective involvement, and behaviour control) and a General Functioning scale. The 12-item General Functioning scale can be used as a short form of the total questionnaire and was used in the current study. The General Functioning Scale has been reported to have good internal consistency and concurrent validity with a marital satisfaction scale (Epstein et al., 1983) and other measures of family functioning (e.g., Hayden, Schiller, Dickstein et al., 1998; Miller, Epstein, Bishop & Keitner, 1985) as well as good test-retest reliability (Miller et al., 1985).

Procedure

Parents and teachers were given information letters, consent forms and a pre-program questionnaire package approximately one week before ETPP groups began. All questionnaires received by Week 3 were accepted. Parents and

preschool teachers were given a post-program questionnaire package during the last week of the group and one cohort was mailed a follow-up questionnaire package six months after program completion.

To achieve a range of clinical and community settings, programs were conducted in a child and adolescent mental health service, two non-government family-based services, a university psychology clinic, a parent resource service, and a community health centre.

To ensure consistent implementation of ETPP across the different settings, the majority of the groups were conducted by ETPP staff. Treatment integrity was maintained by providing all group leaders with a 2-day training workshop, the detailed program manual (Littlefield et al., 2000) and supervision as required.

Results

The sample

Based on clinical cut-off scores for each measure, at pre-program the sample children showed a significant degree of behavioural problems and social skill deficits, especially as rated by parents (see Table 1). Parents were less effective in their parenting as compared with the scale's normative sample. Although families were presenting in distress, overall family functioning and parental depression, anxiety and stress were within normal limits.

Table 1. Change in ECBI, SESBI-R, and SSRS parent- and teacher-rated scores from pre- to post-program

Variable	n	Pre-program		Post-program		df	F	p	Cohen's d
		Mean	SD	Mean	SD				
Externalising behaviour problems									
ECBI IS	26	148.69	31.86	121.02	28.49	1, 25	18.93	.000	0.92
ECBI PS	26	19.85	7.21	12.04	7.20	1, 25	32.48	.000	1.08
SESBI-R IS	14	161.93	37.14	137.07	31.29	1, 13	16.93	.001	0.73
SESBI-R PS	14	2.43	1.09	2.32	0.78	1, 13	0.29	.600	0.12
Social skills and problem behaviours									
SSRS SS-P	25	116.28	13.96	105.68	15.51	1, 24	13.50	.001	0.72
SSRS PB-P	25	121.44	16.14	112.68	14.87	1, 24	8.14	.009	0.56
SSRS SS-T	22	113.77	16.56	103.36	10.12	1, 21	12.08	.002	0.78
SSRS PB-T	22	114.55	13.15	109.36	8.83	1, 21	4.65	.040	0.47

Note: Intensity Scale (IS); Problem Scale (PS); Social Skills-Parent (SS-P); Problem Behaviour-Parent (PB-P); Social Skills-Teacher (SS-T); Problem Behaviour-Teacher (PB-T).

Intervention effects on children's externalising behaviour problems

Within subjects MANOVA comparing pre- and post-program ECBI Intensity and Problem scores found a significant overall effect (Wilks' lambda = .43, $F[2, 24] = 16.14$, $p < .001$). Post hoc univariate analyses showed a significant decrease from pre- to post-program in parent reported intensity of behaviour problems and number of behaviours that were problematic to parents (See Table 1). Analysis of the individual effects using Cohen's d indicated a meaningful change in each aspect of problem behaviour ($d = 0.92$ and 1.08 respectively).

Within subjects MANOVA comparing pre- and post-program teacher-rated SESBI-R Intensity and Problem scores found a significant overall effect (Wilks' lambda = .29, $F[2, 12] = 14.69$, $p < .01$). Post hoc univariate analyses found a significant decrease in the teacher-rated intensity of problem behaviours at post-program but no significant changes in the number of behaviours perceived as problematic by teachers (see Table 1). Effect size analyses supported these findings in that the change in intensity of problem behaviours was relatively large ($d = 0.73$).

Intervention effects on children's social skills and problem behaviours

Within subjects MANOVA comparing pre- and post-program parent-rated SSRS Social Skills

Scale and Problem Behaviour Scale scores found a significant overall effect (Wilks' lambda = .63, $F[2, 23] = 6.71$, $p < .01$). Post hoc univariate analyses found the children's social skills and problem behaviours to be significantly improved at post-program (See Table 1). Analysis of the change in each variable using Cohen's d indicated a relatively large effect for change in social skills ($d = 0.72$) and a moderate effect for change in problem behaviours ($d = 0.56$).

Within subjects MANOVA comparing pre- and post-program teacher-rated SSRS Social Skills and Problem Behaviour scores found a significant overall effect (Wilks' lambda = .62, $F[2, 20] = 6.21$, $p < .01$). Post hoc univariate analyses indicated significant improvement in social skills and problem behaviours at post-program (Table 1). Cohen's d indicated a large effect for social skills ($d = 0.78$) and a moderate effect for problem behaviours ($d = 0.47$).

In addition, a subset of 18 families completed follow-up questionnaires. T-tests indicated that these families did not differ substantially from the overall sample on key demographic variables ($p > .05$). This suggests that the follow-up sample was representative of the whole group. Due to the small sample, the power of statistical tests was limited and statistical analyses of follow-up data were therefore exploratory. The pre- and post-program and follow-up means and effect sizes are summarised in Table 2.

Table 2. Change in ECBI, SESBI-R, and SSRS parent- and teacher-rated scores from pre- to post-program and follow-up

Variable	n	Pre-program		Post-program		Follow-up		df	F	p	Cohen's d
		Mean	SD	Mean	SD	Mean	SD				
<i>Externalising behaviour problems</i>											
ECBI IS	11	140.27	34.74	115.45	33.22	125.91	27.29	2, 20	4.42	.030	0.46
ECBI PS	10	17.60	8.57	10.80	7.00	12.40	8.34	2, 18	5.08	.020	0.62
SESBI-R IS	12	155.75	44.44	130.92	42.78	130.58	46.08	2, 22	2.75	.090	0.56
SESBI-R PS	7	2.85	0.84	2.72	0.69	2.38	1.24	2, 12	1.24	.320	0.45
<i>Social skills and problem behaviours</i>											
SSRS SS-P	10	119.80	14.68	109.00	14.90	108.30	11.29	2, 18	4.72	.020	0.89
SSRS PB-P	10	118.00	15.83	106.50	13.48	111.10	17.93	2, 18	3.02	.070	0.41
SSRS SS-T	12	120.08	19.26	105.58	9.73	105.92	10.68	2, 22	7.69	.003	0.95
SSRS PB-T	13	113.54	13.99	108.08	11.67	109.77	12.83	2, 24	1.42	.260	0.28

Note: Intensity Scale (IS); Problem Scale (PS); Social Skills-Parent (SS-P); Problem Behaviour-Parent (PB-P); Social Skills-Teacher (SS-T); Problem Behaviour-Teacher (PB-T).

Within subjects ANOVAs comparing pre- and post-program and follow-up scores for parent-rated externalising behaviour problems (ECBI) were significant for both intensity of problem behaviours, $F(2, 20) = 4.42, p < .05$, and number of behaviours rated as problematic to parents, $F(2, 18) = 5.08, p < .05$. The effect sizes between the pre-program and follow-up scores were moderate ($d = 0.46$ and 0.62 respectively). These results indicate that the decreases in problem behaviours reported by parents at the end of the program were maintained at follow-up.

Within subjects ANOVA comparing pre- and post-program and follow-up teacher-rated SESBI-R Intensity and Problem scores on a subsample of participants were non-significant for both scales ($F[2, 22] = 2.75, p > .05$ and $F[2, 12] = 1.24, p > .05$), suggesting that the teacher-reported decreases in the frequency of problematic behaviours at the end of the program were no longer statistically significant at follow-up. However, Cohen's d comparing pre-program and follow-up scores indicated moderate effect sizes from pre-program to follow-up ($d = 0.56$ and 0.45 respectively), which suggests that teachers continued to find children's behaviour at follow-up different from their pre-program behaviour.

Within subjects ANOVA comparing pre, post and follow-up parent-rated Social Skills Scale scores showed that the significant improvement in children's social skills over the period of the program was maintained at follow-up, $F(2, 18) = 4.72, p < .05$. Analyses of the Problem Behaviour Scale scores approached significance, $F(2, 18) = 3.02, p = .07$. Cohen's d indicated large and moderate effects for children's social skills (0.89) and problem behaviours (0.41) from pre-program to follow-up respectively (see Table 2). These results suggest that parents perceived both increased social skills and decreased problem behaviours over the period of the program that were mostly maintained through to follow-up.

Within subjects ANOVA comparing pre, post and follow-up teacher-rated Social Skills and Problem Behaviour Scale scores found a significant improvement in social skills, $F[2, 22] = 7.69, p < .01$. There was no significant decrease in problem behaviours ($F[2, 24] = 1.42, p > .05$). Effect sizes comparing pre-program and follow-

up scores showed a similar pattern with Cohen's d indicating a large, meaningful change in social skills (0.95) and a small change in problem behaviours (0.28 ; see Table 2). These results suggest that according to teachers, the improvement in children's social skills over the period of the program was maintained through to follow-up for the small sample, while the improvement in children's problem behaviours may not have been.

Intervention effects on parent and family variables

Parenting skills

Within subjects ANOVA comparing the Parenting Scale scores ($n = 28$) indicated that the post-program mean ($M = 2.98, SD = 0.60$) was significantly lower than the pre-program mean ($M = 3.38, SD = 0.57$), $F(1, 27) = 19.93, p < .001$. Analysis of the pre-post program difference using Cohen's d indicated a moderate to large effect size ($d = 0.68$) indicating that parenting skills improved over the period of the program.

Within subjects ANOVA comparing the Parenting Scale scores at all three time-points showed a significant overall effect, $F(2, 22) = 4.00, p < .05$, with a large effect size (Cohen's $d = 0.91$) for the pre-program to follow-up difference ($M = 3.47, 3.09, 3.01$, respectively). These results indicate that changes in parenting practices were maintained through to the follow-up period.

Parental satisfaction

Within subjects ANOVA comparing pre- and post-program scores on the Kansas Parental Satisfaction Scale ($n = 28$) indicated that the post-program mean ($M = 15.32, SD = 3.07$) was significantly higher than the pre-program mean ($M = 12.13, SD = 2.91$), $F(1, 27) = 24.09, p < .001$. Analysis of the pre-post program difference using Cohen's d indicated a very large effect size ($d = 1.07$), which shows that parents' satisfaction with their parenting role improved over the period of the program.

Within subjects ANOVA comparing the parental satisfaction scores at all three time-points showed significantly increased satisfaction with the parenting role, $F(2, 22) = 7.24, p < .01$ ($M = 11.42, 15.33, 13.96$, respectively). Cohen's d for the pre-program to follow-up difference

indicated a large effect size ($d = 0.91$). Hence, improvements in parents' satisfaction with their role were maintained through until the follow-up period.

Family functioning

Within subjects ANOVA comparing the Family Assessment Device (FAD) ($n = 28$) scores at pre-program ($M = 2.03$, $SD = 0.46$) and post-program ($M = 1.88$, $SD = 0.39$) found no significant difference between the scores, $F(1, 27) = 2.78$, $p > .05$. Cohen's d indicated a low to moderate effect size ($d = 0.35$). Changes at follow-up were not significant either ($M = 1.99$, 1.89 , 1.92 , respectively).

Parental wellbeing

Within subjects ANOVAs comparing pre- and post-program depression, anxiety and stress scores found no significant differences within depression or anxiety scores but showed a significant decrease from pre to post-program on the stress scale, $F(1, 28) = 5.09$, $p < .05$, after correcting for Type 1 error ($p < .035$; $M = 3.81$, 3.23 respectively). Analysis of the change in each variable using Cohen's d indicated similar results, with the change in depression and anxiety resulting in small to moderate effect sizes ($d = 0.37$ and 0.13 respectively). The pre- to post-program change in the stress variable indicated a moderate effect ($d = 0.48$). Changes in parental depression, anxiety and stress at follow-up were not significant.

Discussion

Program effectiveness

These results are consistent with the hypothesis that children's behaviour problems as rated by parents would decrease significantly over the period of the program and that these improvements would be maintained at follow-up. As hypothesised, results were less consistent according to teacher reports, but children's behaviour was reported to improve significantly according to many of the teacher measures.

The only teacher measure not significant at post-program was the SESBI-R Problem Score, which indicated that the teachers did not observe many of these types of problems pre-program and that this did not change post-program. The results may therefore indicate a floor effect or inadequate sensitivity or specificity of this measure for this population. Other explanations

might be that the children displayed fewer behaviour problems at preschool than at home or that children's behaviour problems might be intrinsically linked with the parent-child interactions. Another explanation could be that the teacher component of the intervention was not intensive enough to enable the teachers to alter their behaviour and the behaviour of the children in their settings. The teacher component involved two voluntary meetings across the course of the program, whereas other programs such as Webster-Stratton's involve more intensive teacher training (Webster-Stratton, Reid & Hammond, 2001).

Children's social skills and peer interactions were shown to improve significantly over the course of the program according to both teachers and parents. These gains were maintained through to follow-up. Thus, the children learnt many skills that they were observed to generalise and display in other settings. These were core skills that the program aimed to teach in the children's component and this adds to the body of evidence that child-oriented programs can be effective in teaching children pro-social skills.

Parental depression, anxiety and stress were not in the clinical range prior to the program, suggesting that parents were reasonably well-adjusted. As such, one would not expect much change due to ETPP participation, but moderate improvements were shown in depression and stress levels. Family functioning was also in the non-clinical range prior to the program and did not change significantly, suggesting adequate problem-solving and communication among the sample of families.

A specific aim of the program was to improve parenting practices and to help parents change the way they interacted with their children. It was hypothesised that these interactions contributed to children's behaviour problems and it appears that the program was successful at improving parenting practices for many parents and that these gains were maintained over time. Results also supported the hypothesis that improvements in parenting practices and parent-child interactions, as well as improved child behaviours, would be associated with parents feeling more satisfied and competent in their roles as parents. This research provides support for multifaceted interventions addressing

parenting, child behaviour, teacher-child interactions, and importantly, the relationship and interactions between parents and children.

Implications of this research

We can have some confidence that ETPP might be the causal agent for the changes identified because there is evidence of a similar pattern for multiple children, changes were identified immediately post-program, and the magnitudes of the changes were large, as indicated by the effect sizes. However, further research is needed with a control/comparison group and larger sample sizes to be sure that changes do not merely indicate maturation or some other causal factor. The current data provides important preliminary evidence for a new, comprehensive and theoretically based program that is worthy of further research.

This intervention was briefer than many in the established literature. ETPP provided 20 hours of intervention over 10 weeks, which incorporated child, parent, and parent-child interactive components as well as teacher and partner meetings. The programs described in the literature generally range from 10 to 20 sessions or more and usually only provide a parent (e.g., Forehand & McMahon, 1981) or child (e.g., Spivack & Shure, 1989) component. Early indicators for ETPP show that it could possibly achieve effects comparable with other longer and more intensive programs.

These results add to the body of evidence that suggests that it is possible to arrest the development of behavioural and relationship problems. Children were selected into the program because they were showing a serious degree of problematic behaviour. The aim was to prevent such behaviours from developing into more enduring mental health problems. Given that so many of these behaviours improved for so many children over the course of the program, with such large effect sizes, and that many of these improvements were maintained over a 6-month follow-up, it is possible that the development of long-term behavioural and relationship problems was halted for many of these children.

Limitations and future directions

The current sample was small for a group design. Future research into the efficacy of ETPP would

be able to attribute change more confidently to this program if it incorporated larger studies with more families to enable further generalisation of results; used a comparison or control group to compare outcomes of the program to no intervention; and used observation as an objective measure of change in children's and parents' behaviour. Also, given that the behavioural problems of some preschool children will naturally resolve without intervention (Campbell, 2002; Pierce et al., 1999), longitudinal studies are needed to assess the preventative effects of programs such as this over the course of children's development. Further research needs to be conducted with this program to build on the preliminary evidence provided here.

Given that the results of this evaluation and previous evaluations of ETP (Hemphill & Littlefield, 2001) are based on the total program and incorporate all components (parent, child, and parent-child interactive interventions) it is difficult to tell whether any one component is more effective than the others. It is possible that all three components are vital to the success of the programs, or that the addition of the parent-child interactive component, which is rare in these types of interventions, is what makes ETP successful. Both theory and practice suggest that a core component of this intervention is the opportunity for *in vivo* modelling and rehearsal provided by the interactive parent-child group. Further research exploring differential effects of the program components is necessary. Comparisons between the parent, child, interactive, and teacher components, and different combinations of these, are needed to assess whether some components are associated with more effective outcomes, and whether indeed all components are necessary.

Conclusion

Overall, this research provides preliminary evidence that ETPP is a theoretically and developmentally sound, multifaceted intervention that is associated with reductions in preschool children's problem behaviours, improvements in children's peer and family relationships, and improved parenting practices and satisfaction. These changes are expected to halt the development of long-term mental health problems in at-risk preschoolers. This is a

comprehensive intervention for Australian children of preschool age with behavioural and relationship problems and their families.

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References

- Arnold, D., O'Leary, S., Wolff, L., & Acker, M. (1993). The Parenting Scale: A measure of dysfunctional parenting in discipline situations. *Psychological Assessment*, 3, 137-144.
- Antony, M., Bieling, P., Cox, B., Enns, M., & Swinson, R. (1998). Psychometric properties of the 42-item and 21-item versions of the Depression Anxiety Stress Scales in clinical groups and a community sample. *Psychological Assessment*, 10, 176-181.
- Bor, W., Sanders, M.R., & Markie-Dadds, C. (2002). The effects of Triple-P – Positive Parenting Program on preschool children with co-occurring disruptive behaviour and attentional/hyperactive difficulties. *Journal of Abnormal Child Psychology*, 30(6), 571-587.
- Bowlby, J. (1998). *A Secure Base: Clinical Applications of Attachment Theory*. London: Routledge.
- Brotman, L.M., Klein, R.G., Kamboukos, D., Brown, E.J., Coard, S.I., & Sosinsky, L.S. (2003). Preventive intervention for urban, low-income preschoolers at familial risk for conduct problems: A randomized pilot study. *Journal of Clinical Child and Adolescent Psychology*, 32(2), 246-257.
- Brestan, E. & Eyberg, S. (1998). Effective psychosocial treatments of conduct-disordered children and adolescents: 29 years, 82 studies, and 5,272 kids. *Journal of Clinical Child Psychology*, 27, 180-189.
- Campbell, S.B. 2002. *Behavior Problems in Preschool Children: Clinical and Developmental Issues* (2nd ed.). New York: Guilford Press.
- Campbell, S.B. & Ewing, L.J. (1990). Follow-up of hard-to-manage preschoolers: Adjustment at age 9 and predictors of continuing symptoms. *Journal of Child Psychology and Psychiatry*, 31, 871-889.
- Chambless, D.L. & Hollon, S.D. (1998). Defining empirically supported therapies. *Journal of Consulting and Clinical Psychology*, 66, 7-18.
- Chambless, D.L. & Ollendick, T.H. (2001). Empirically supported psychological interventions: Controversies and evidence. *Annual Review of Psychology*, 52, 685-716.
- Chang, L., Schumm, W., Coulson, L., Bollman, S., & Jurich, A. (1994). Dimensionality of brief family interaction and satisfaction scales among couples from eight western and midwestern states. *Psychological Reports*, 74, 131-144.
- Commonwealth Department of Health and Aged Care. (2000). *Promotion, Prevention, and Early Intervention for Mental Health – A Monograph*. Canberra: Mental Health and Special Programs Branch, Commonwealth Department of Health and Aged Care.
- Corboy, D. & McDonald, J. (2007). An evaluation of the CAST program using a conceptual model of school-based implementation. *Australian e-Journal for the Advancement of Mental Health*, 6(1), www.auseinet.com/journal/vol6iss1/corboy.pdf
- Dadds, M. (1997). Conduct disorder. In R.T. Ammerman & M. Hersen (Eds.), *Handbook of Prevention and Treatment with Children and Adolescents: Intervention in the Real World Context* (pp. 521-550). New York: John Wiley & Sons.
- Dadds, M.R., Spence, S.H., Holland, D.E., Barrett, P.M., & Laurens, K.R. (1997). Prevention and early intervention for anxiety disorders: A controlled trial. *Journal of Consulting & Clinical Psychology*, 65(4), 627-635.
- Eisenstadt, T.H., Eyberg, S., McNeil, C.B., Newcomb, K., & Funderburk, B. (1993). Parent-child interaction therapy with behavior problem children: Relative effectiveness of two stages and overall treatment outcome. *Journal of Clinical Child Psychology*, 22, 42-51.
- Elliott, S., Barnard, J., & Gresham, F. (1989). Preschoolers' social behavior: Teachers' and parents' assessments. *Journal of Psychoeducational Assessment*, 7, 223-234.
- Epstein, N., Baldwin, L., & Bishop, D. (1983). The McMaster Family Assessment Device. *Journal of Marital and Family Therapy*, 9, 171-180.
- Eyberg, S. & Boggs, S.R. (1998). Parent-child interaction therapy: A psychosocial intervention for the treatment of young conduct-disordered children. In J. Briesmeister & C. Schaefer (Eds.), *Handbook of*

- Parent Training: Parents as Co-therapists for Children's Behavior Problems* (2nd ed.) (pp. 61-97). New York: John Wiley & Sons.
- Eyberg, S. & Pincus, D. (1999). *Eyberg Child Behavior Inventory and Sutter-Eyberg Student Behavior Inventory-Revised: Professional Manual*. Odessa, FL: Psychological Assessment Resources.
- Fergusson, D.M., Horwood, L.J., & Lynskey, M.T. (1995). The stability of disruptive childhood behaviours. *Journal of Abnormal Child Psychology*, 23(3), 379-396.
- Forehand, R.L. & McMahon, R.J. (1981). *Helping the Non-compliant Child: A Clinician's Guide to Effective Parent Training*. New York: Guilford Press.
- Gagnon, C., Craig, W., Tremblay, R.E., Zhou, R., & Vitaro, F. (1995). Kindergarten predictors of boys' stable behavior problems at the end of elementary school. *Journal of Abnormal Child Psychology*, 23, 751-766.
- Greenberg, M.T., Speltz, M.L., & DeKlyen, M. (1993). The role of attachment in the early development of disruptive behavior problems. *Development and Psychopathology*, 5, 191-213.
- Gresham, F. & Elliott, S. (1990). *Social Skills Rating System*. Circle Pines, MN: American Guidance Service.
- Havighurst, S., Harley, A., & Prior, M. (2004). Building preschool children's emotional competence: a parenting program. *Early Education and Development*, 15(4), 421-447.
- Hayden, L.C., Schiller, M., Dickstein, S., Seifer, R., Sameroff, A.J., Miller, I., Keitner, G., & Rasmussen, S. (1998). Levels of family assessment: I. Family, marital, and parent-child interaction. *Journal of Family Psychology*, 12, 7-22.
- Hemphill, S.A. & Littlefield, L. (2001). Evaluation of a short-term group therapy program for children with behaviour problems and their parents. *Behaviour Research and Therapy*, 39, 823-841.
- Hune, J.B. & Nelson, C.M. (2002). Effects of teaching a problem-solving strategy on preschool children with problem behaviour. *Behavioral Disorders*, 27(3), 185-208.
- James, D., Schumm, W., Kennedy, C., Grigsby, C., Shectman, K., & Nichols, C. (1985). Characteristics of the Kansas Parental Satisfaction Scale among two samples of married parents. *Psychological Reports*, 57, 163-169.
- Kamps, D.M., Tankersley, M., & Ellis, C. (2000). Social skills interventions for young at-risk students: A 2-year follow-up study. *Behavioral Disorders*, 25(4), 310-325.
- Kazdin, A.E. (1995). *Conduct Disorders in Childhood and Adolescence*. (2nd ed.) Newbury Park, CA: Sage.
- Kazdin, A.E. (1997). Practitioner review: Psychosocial treatments for conduct disorder in children. *Journal of Child Psychology and Psychiatry*, 38, 161-178.
- Kazdin, A.E. (1998). Psychosocial treatments for conduct disorder in children. In P.E. Nathan & J.M. Gorman (Eds.), *A Guide to Treatments That Work* (pp. 65-89). New York: Oxford University Press.
- Kazdin, A.E., Siegal, T., & Bass, D. (1992). Cognitive problem-solving skills training and parent management training in the treatment of antisocial behavior in children. *Journal of Consulting and Clinical Psychology*, 60, 733-747.
- Keenan, K. & Wakschlag, L. (2004). Are oppositional defiant and conduct disorder symptoms normative behaviors in preschoolers? A comparison of referred and nonreferred children. *American Journal of Psychiatry*, 161(2), 356-358.
- Lavigne, J., Cicchetti, C., Gibbons, R., Binns, H., Larsen, L., & DeVito, C. (2001). Oppositional Defiant Disorder with onset in preschool years: Longitudinal stability and pathways to other disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*, 40, 1393-1400.
- LeMarquand, D., Tremblay, R.E., & Vitaro, F. (2001). The prevention of conduct disorder: A review of successful and unsuccessful experiments. In J. Hill (Ed.), *Conduct Disorders in Childhood and Adolescence* (pp. 449-477). Cambridge: Cambridge University Press.
- Littlefield, L., Story, K., Woolcock, C., Trinder, M., Burke, S., & Reid, K. (2000). *Exploring Together Preschool Program Manual*. Melbourne: Victorian Parenting Centre.
- Loeber, R. (1990). Development and risk factors of juvenile antisocial behavior and delinquency. *Clinical Psychology Review*, 10, 1-41.
- Lovibond, S.H. & Lovibond, P.F. (1995). *Manual for the Depression Anxiety Stress Scales*. Sydney: Psychology Foundation Monograph.
- Markie-Dadds, C. & Sanders, M.R. (2006). A controlled evaluation of an enhanced self-directed behavioural family intervention for parents of children with conduct problems in rural and remote areas. *Behaviour Change*, 23(1), 55-72.
- McFadyen-Ketchum, S. & Dodge, K.A. (1998). Problems in social relationships. In E.J. Mash & R.A. Barkley (Eds.), *Treatment of Childhood Disorders* (2nd ed.) (pp. 338-365). New York: Guildford Press.

- McMahon, R.J. (1994). Diagnosis, assessment, and treatment of externalizing problems in children: The role of longitudinal data. *Journal of Consulting and Clinical Psychology*, 62, 901-917.
- McMahon, R.J. & Wells, K.C. (1998). Conduct problems. In E.J. Mash & R.A. Barkley (Eds.), *Treatment of Childhood Disorders* (2nd ed.) (pp. 111-207). New York: Guilford Press.
- McNeil, C.B., Eyberg, S., Eisenstadt, T.H., Newcomb, K., & Funderburk, B. (1991). Parent-child interaction therapy with behavior problem children: Generalization of treatment effects to the school setting. *Journal of Clinical Child Psychology*, 20, 140-151.
- McTaggart, P. & Sanders, M.R. (2003). The Transition to School Project: Results from the classroom. *Australian e-Journal for the Advancement of Mental Health*, 2(3), www.auseinet.com/journal/vol2iss3/mctaggart.pdf
- Merrell, K.W. (1995). Relationships among early childhood behavior rating scales: Convergent and discriminant construct validity of the Preschool and Kindergarten Behavior Scales. *Early Education and Development*, 6, 253-264.
- Mesman, J., Bongers, I., & Koot, H.M. (2001). Preschool developmental pathways to pre-adolescent internalizing and externalizing problems. *Journal of Child Psychology and Psychiatry*, 42, 679-689.
- Mesman, J. & Koot, H.M. (2001). Early preschool predictors of preadolescent internalizing and externalizing DSM-IV diagnoses. *Journal of the American Academy of Child and Adolescent Psychiatry*, 40, 1029-1036.
- Miller, I., Epstein, N., Bishop, D., & Keitner, G. (1985). The McMaster Family Assessment Device: Reliability and validity. *Journal of Marital and Family Therapy*, 11, 345-356.
- Offord, D.R. & Bennett, K. (1994). Conduct disorder: Long-term outcomes and intervention effectiveness. *Journal of the American Academy of Child and Adolescent Psychiatry*, 33, 1069-1078.
- Pierce, E., Ewing, L.J., & Campbell, S.B. (1999). Diagnostic status and symptomatic behavior of hard-to-manage preschool children in middle childhood and early adolescence. *Journal of Clinical Child Psychology*, 28, 44-57.
- Prinz, R.J. & Connell, C.M. (1997). Conduct disorders and antisocial behavior. In R.T. Ammerman & M. Hersen (Eds.), *Handbook of Prevention and Treatment with Children and Adolescents: Intervention in the Real World Context*. (pp. 238-258). New York: John Wiley & Sons.
- Rayfield, A., Monaco, L., & Eyberg, S. (1999). Parent-child interaction therapy with oppositional children: Review and clinical strategies. In S. Russ & T.H. Ollendick (Eds.), *Handbook of Psychotherapies with Children and Families: Issues in Clinical Psychology*. (pp. 327-343). New York: Kluwer Academic/Plenum Publishers.
- Reid, J.B. (1993). Prevention of conduct disorder before and after school entry: Relating interventions to developmental findings. *Development and Psychopathology*, 5, 243-262.
- Reid, M.J., Webster-Stratton, C., & Hammond, M. (2003). Follow-up of children who received the Incredible Years intervention for oppositional-defiant disorder: Maintenance and prediction of 2-year outcome. *Behavior Therapy*, 34, 471-491.
- Reid, M.J., Webster-Stratton, C., & Hammond, M. (2007). Enhancing a classroom social competence and problem-solving curriculum by offering parent training to families of moderate- to high-risk elementary school children. *Journal of Clinical Child and Adolescent Psychology*, 36(4), 605-620.
- Rho, J. & Schumm, W. (1989). The factorial validity of brief satisfaction scales in a survey of 58 Korean-American interracial couples. *Psychological Reports*, 65, 1347-1350.
- Richman, N., Stevenson, J., & Graham, P.J. (1982). *Pre-School to School: A Behavioural Study*. London: Academic Press.
- Roberts, C., Mazzucchelli, T., Studman, L., & Sanders, M.R. (2006). Behavioral family intervention for children with developmental disabilities and behavioral problems. *Journal of Clinical Child and Adolescent Psychology*, 35(2), 180-193.
- Rogers, H., Cann, W., Cameron, D., Littlefield, L., & Lagioia, V. (2003). Evaluation of the Family Intervention Service for children presenting with characteristics associated with Attention Deficit Hyperactivity Disorder. *Australian e-Journal for the Advancement of Mental Health*, 2(3), www.auseinet.com/journal/vol2iss3/rogers.pdf
- Sanders, M.R. (2003). Triple-P – Positive Parenting Program: A population approach to promoting competent parenting. *Australian e-Journal for the Advancement of Mental Health*, 2(3), www.auseinet.com/journal/vol2iss3/sanders.pdf
- Sanders, M.R., Pidgeon, A.M., Gravestock, F., Connors, M.D., Brown, S., & Young, R.W. (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? *Behavior Therapy*, 35, 513-535.
- Schuhmann, E., Foote, R., Eyberg, S., Boggs, S.R., & Algina, J. (1998). Efficacy of parent-child interaction therapy: Interim report of a randomized trial with short-term maintenance. *Journal of Clinical Child Psychology*, 27, 34-45.

- Shaw, D., Owens, E., Giovannelli, J., & Winslow, E. (2001). Infant and toddler pathways leading to early externalizing disorders. *Journal of the American Academy of Child & Adolescent Psychiatry*, 40(1), 36-43.
- Shure, M.B. (1993). I can problem solve (ICPS): Interpersonal cognitive problem solving for young children. *Early Child Development and Care*, 96, 49-64.
- Shure, M. (2001). I can problem solve (ICPS): An interpersonal cognitive problem solving program for children. *Residential Treatment for Children and Youth*, 18(3), 3-14.
- Smart, D., Richardson, N., Sanson, A., Dussuyer, I., Marshall, B., Toumbourou, J., Prior, M., & Oberklaid, F. (2005). *Patterns and Precursors of Adolescent Antisocial Behaviour: Outcomes and Connections*. Third report, Crime Prevention Victoria, Department of Justice and Australian Institute of Family Studies.
- Speltz, M.L., McClellan, J., DeKlyen, M., & Jones, K. (1999). Preschool boys with Oppositional Defiant Disorder: Clinical presentation and diagnostic change. *Journal of the American Academy of Child and Adolescent Psychiatry*, 38, 838-845.
- Spence, S.H. & Donovan, C. (1998). Interpersonal Problems. In P. Graham (Ed.), *Cognitive-Behaviour Therapy for Children and Families* (pp. 217-245). Cambridge: Cambridge University Press.
- Spivack, G. & Shure, M.B. (1989). Interpersonal Cognitive Problem Solving (ICPS): A competence-building primary prevention program. *Prevention in Human Services*, 6, 151-178.
- Taylor, T.K., Eddy, J.M., & Biglan, A. (1999). Interpersonal skills training to reduce aggressive and delinquent behavior: Limited evidence and the need for an evidence-based system of care. *Clinical Child and Family Psychology Review*, 2, 169-182.
- Tremblay, R.E., Pagani-Kurtz, L., Masse, L.C., Vitaro, F., & Pihl, R.O. (1995). A bimodal preventive intervention for disruptive kindergarten boys: Its impact through mid-adolescence. *Journal of Consulting and Clinical Psychology*, 63, 560-568.
- Turner, K.M.T., & Sanders, M.R. (2006). Dissemination of evidence-based parenting and family support strategies: Learning from the Triple P – Positive Parenting Program system approach. *Aggression and Violent Behavior*, 11, 176-193.
- Vassallo, S., Smart, D., Sanson, A., Dussuyer, I., McKendry, B., Toumbourou, J., Prior, M., & Oberklaid, F. (2002). *Patterns and Precursors of Adolescent Antisocial Behaviour*. First report, Crime Prevention Victoria, Department of Justice and Australian Institute of Family Studies.
- Webster-Stratton, C. (1987). *Parents and Children: A 10 Program Videotape Parent Training Series with Manuals*. Eugene, OR: Castalia Press.
- Webster-Stratton, C. (1996). Early intervention with videotape modelling: Programs for families of children with oppositional defiant disorder or conduct disorder. In E.D. Hibbs & P. Jensen (Eds.), *Psychosocial Treatment for Child and Adolescent Disorders: Empirically Based Strategies for Clinical Practice* (pp. 435-474). Washington DC: American Psychological Association.
- Webster-Stratton, C. & Hammond, M. (1997). Treating children with early-onset conduct problems: A comparison of child and parent training interventions. *Journal of Consulting and Clinical Psychology*, 65, 93-109.
- Webster-Stratton, C. & Reid, M.J. (2003). Treating conduct problems and strengthening social and emotional competence in young children: The Dina Dinosaur treatment program. *Journal of Emotional and Behavioral Disorders*, 11(3), 130-143.
- Webster-Stratton, C. & Reid, M.J. (2004). Strengthening social and emotional competence in young children – the foundation for early school readiness and success: Incredible Years classroom social skills and problem-solving curriculum. *Infants and Young Children*, 17(2), 96-113.
- Webster-Stratton, C., Reid, M.J., & Hammond, M. (2001). Preventing conduct problems, promoting social competence: A parent and teacher training partnership in Head Start. *Journal of Clinical Child Psychology*, 30, 283-302.
- Webster-Stratton, C., Reid, M.J., & Hammond, M. (2004). Treating children with early-onset conduct problems: Intervention outcomes for parent, child, and teacher training. *Journal of Clinical Child and Adolescent Psychology*, 33(1), 105-124.
- Webster-Stratton, C. & Taylor, T. (2001). Nipping early risk factors in the bud: Preventing substance abuse, delinquency, and violence in adolescence through interventions targeted at young children (0-8 years). *Prevention Science*, 2(3), 165-192.
- White, J., Moffit, T., Earls, F., Robins, L., & Silva, P. (1990). How early can we tell?: Predictors of childhood conduct disorder and adolescent delinquency. *Criminology*, 28, 507-527.
- Zubrick, S.R., Ward, K.A., Silburn, S.R., Lawrence, D., Williams, A.A., Blair, E., Robertson, D., & Sanders, M.R. (2005). Prevention of child behaviour problems through universal implementation of a group behavioural family intervention. *Prevention Science*, 6(4), 287-304.