

Self-administered behavioural family intervention for parents of toddlers: Effectiveness and dissemination

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Abstract

This study examined the effectiveness of a self-administered behavioural family intervention (BFI) for parents of toddlers, within the context of a regular telephone counselling service provider. Telephone counsellors were trained in the delivery of BFI, and 110 mothers of toddlers completed the intervention. There were significant short-term effects of intervention in terms of child behaviour problems and parenting style, parenting confidence and anger. In addition, there were improvements in mother's personal adjustment, and lower levels of parenting conflict. The intervention effects were maintained at 3-month follow-up. The results provide support for the effectiveness of self-administered BFI, and have implications for the population level delivery of behavioural family interventions.

Keywords: Telephone counselling; Effectiveness; Child behaviour problems

Introduction

Behavioural family intervention (BFI) is an efficacious treatment for child behaviour problems (Serketich & Dumas, 1996), however, there is a gap between research and practice (Sanders & Turner, 2002). In general, families presenting for treatment do not receive empirically supported interventions (Taylor & Biglan, 1998) and considerable differences in intervention outcomes have been shown between research (Weisz, Weiss, Han, Granger, & Morton, 1995) and clinic settings (Weisz, Donenberg, Han, & Weiss, 1995).

To progress from innovation to practice, new treatments need to be seen as clinically relevant, empirically validated, meet prioritised needs and be taught in ways that are accessible (Tarrier, Barrowclough, Haddock, & McGovern, 1999). Turner and Sanders (2005) have recently demonstrated that factors such as training, supervision and broader organisational variables are critical for successful intervention dissemination to practitioners.

There has been a dramatic expansion of telephone counselling services in the past few decades (Lester, 1995), as well as widespread belief in their preventive and therapeutic value (Hornblow, 1986). Telephone counselling services are an integral part of community mental health care, as a result of their non-institutional orientation, easy accessibility and anonymity (Coman, Burrows, & Evans, 2001; Hornblow, 1986). Despite their wide acceptability, empirical evidence for the effectiveness of telephone counselling services is lacking (Coman et al., 2001; Hornblow, 1986; Lester, 1995). Older studies focused largely on crisis intervention and measures of effectiveness focused on service rather than client outcomes (Hornblow, 1986). Currently, common ways of assessing telephone counselling services are through the use of simulated caller paradigms (e.g., Bryant & Harvey, 2000) or on the basis of client satisfaction with the service offered (e.g., Reese, Conoley, & Brossart, 2002). Existing telephone services are supported by little empirical research, the vast majority of which suffers from a range of methodological problems, as well as a focus on service versus client outcomes.

The current study aimed to extend an efficacious self-administered BFI (Triple P—Positive Parenting Program) described extensively by Sanders, Markie-Dadds, Tully, and Bor (2000) into a

regular service delivery setting. The effectiveness of telephone-assisted self-directed BFI was assessed within Parentline, an existing telephone counselling and support service for parents. Consistent with the theoretical model espoused by the BFI, the training employed a self-regulatory approach, focused on ensuring practitioners' ongoing skills and confidence in using the intervention in their day-to-day practice. Practitioners were encouraged to use the training and resources provided to monitor and evaluate their own performance and to seek to problem solve using the acquired skills, to ensure maintenance and generalisation of these competencies. The self-regulatory approach to training is employed in a similar manner by practitioners when working with parents, and is seen as critical to ensuring the long-term success of training of practitioners and parents alike.

It was predicted that: (1) post-intervention telephone assisted self-directed BFI (TASD-BFI) would achieve statistically significant and clinical improvements in parent-reported child disruptive behaviour, (2) TASD-BFI would result in statistically significant and clinical improvements on measures of dysfunctional parenting style, parenting efficacy and parenting competence, (3) TASD-BFI would result in statistically significant and clinical improvements in parental adjustment, as measured by reduced maternal stress and depression, and in two-parent families, fewer conflicts over parenting and improved marital satisfaction and (4) The effects of TASD-BFI on child behaviour, parenting and parental adjustment would be maintained at follow-up.

Method

Setting

Parentline is a confidential telephone counselling service for parents. The majority of calls made to Parentline involve child management issues and parenting strategies. Recognising the need for additional skills and information about dealing with such issues, Parentline counsellors were trained and accredited in the use of Triple P. An internal survey conducted by Parentline in mid-2003, indicated that most (75%) counsellors were satisfied or very satisfied with the training they had received and that most (70%) felt they had an adequate or high level of understanding of the materials. Furthermore, most (80%) counsellors felt confident about using Triple P in their work.

Participants

The criterion for eligibility was the presence in the family of a toddler between the ages of 18 and 36 months. Parents also had to report significant concerns about their child's behavior. Families were excluded if the child had a disability and/or chronic illness; parents were currently seeing a professional for the child's behavior; parents were currently receiving psychological help or counseling; or parents were intellectually disabled and/or hearing impaired. Parents were recruited through a promotional campaign, as well as individually when calling Parentline for assistance with their child's behavior. Overall, of 213 parents who contacted Parentline to express their interest in participation, 208 (97.7%) were eligible to participate following screening. One hundred and ten families (52.9%) returned the initial assessment package by mail and subsequently completed the intervention. On the basis of information collected in the screening interview (e.g. child age, maternal age, marital status) there were no significant differences between those who returned and did not return questionnaires.

There were higher numbers of boys (62.7%) than girls (37.3%) in the sample, with a mean age of 26.63 months ($SD=5.42$), ranging from 18 to 36 months. Mother's mean age was 31.90 ($SD=3.94$), with fathers slightly older, $M (SD)=34.72 (4.99)$. Most children lived with parents who were married (71.8%), in their original families (78.2%). A large proportion of both parents had a university education (44.5% of mothers and 22.7% of fathers). Nearly 98% of fathers were employed for an average of 41.98 h/week ($SD=10.31$). Fifty-three percent of mothers were employed, working an average of 20.78 h/week ($SD=11.33$). Twelve percent of families had an annual income of less than

\$25 000, 31.8% between \$25 000 and \$50 000 annually, 27.3% between \$50 000 and \$70 000, and 29.1% had annual income of more than \$70 000.

The Accessibility/Remoteness Index of Australia (ARIA) was used to assess participants' relative access to services. ARIA calculates remoteness as accessibility to service centers based on road distances. The average ARIA score for this sample was 2.15, indicating that most participants had some restrictions in accessing services. Fifty-four participants lived in highly (1) accessible areas (49.1%), 35 in accessible, (2) areas (31.8%), 16 in moderately, (3) accessible areas (14.5%), 2 in remote, (4) areas (1.8%), and 3 in very remote and (5) areas (2.7%). High accessibility is defined as relatively unrestricted accessibility to a wide range of goods and services and opportunities for social interaction; moderate accessibility is defined as significantly restricted accessibility of goods, services and opportunities for social interaction, and; very remote is defined as very little accessibility of goods, services and opportunities for social interaction.

Measures

Child behavior: Toddler behavior was assessed using the Eyberg child behavior inventory (ECBI; Eyberg & Pincus, 1999), a 36-item measure of parental perceptions of disruptive behavior in children between the ages of 2 and 16. It consists of a measure of the frequency of disruptive behaviors (Intensity) rated on a 7-point scale, ranging from *never* (1) to *always* (7) and a measure of the number of behaviors that are a problem for parents (Problem), using a *yes-no* format. In this sample there was good internal consistency ($\alpha=.91$ and $.87$, respectively).

Parenting style: The parenting scale (PS; Arnold, O'Leary, Wolff, & Acher, 1993) is a 30-item questionnaire measuring three dysfunctional discipline styles. It yields three factors: laxness (permissive discipline), over-reactivity (authoritarian discipline, displays of anger) and verbosity (overly long reprimands). Each scale and the total score had adequate internal consistency in this sample ($\alpha=.85$, $.81$, $.64$ and $.86$, respectively) and the scale has good test-retest reliability ($r=.83$, $.82$, $.79$ and $.84$, respectively).

Parenting confidence: Parents completed the toddler care questionnaire (TCQ; Gross & Rocissano, 1988) a 37-item questionnaire rating their confidence in their ability to perform parenting tasks specific to their toddlers. The TCQ had good internal consistency ($\alpha=.94$) in this sample.

Parental anger: The parental anger inventory (PAI; Hansen & Sedlar, 1998) assesses anger experienced by parents in response to child-related situations. It yields a Problem score and an Intensity score. The scale in this sample had good internal consistency for the Problem and Intensity scales ($r=.92$ and $.95$, respectively) and is moderately correlated with other measures of anger and child behavior.

Parent conflict: The parent problem checklist (PPC; Dadds & Powell, 1991) is a 16-item questionnaire that measures inter-parental conflict over child-rearing and rates parents' ability to cooperate and work together in family management. It provides an index of the number of disagreements as well as the frequency of occurrence of such disagreements. The problem scale had adequate internal consistency ($\alpha=.79$) in this sample, good test-retest reliability ($r=.90$).

Marital relationship: The relationship quality index (RQI; Norton, 1983) is a 6-item index of relationship quality and satisfaction. Five items assess various aspects of marital relationships on 7-point scales, and one global item assesses the happiness of the relationship. Scores can range from a minimum of 6 to a maximum of 45. The measure had good internal consistency ($\alpha=.95$) in this sample.

Parental adjustment: The depression anxiety stress scale (DASS; Lovibond & Lovibond, 1995b) is a 42-item questionnaire that assesses symptoms of depression, anxiety and stress in adults, with good

internal consistency for each scale ($\alpha=.95$, .92 and .93, respectively) in this sample. The DASS also has good convergent and discriminant validity (Lovibond & Lovibond, 1995a) and test-retest reliability ($r=.71-.81$ for each scale). Scores on each scale can range from 0 to 42.

Client satisfaction: Parents completed a client satisfaction questionnaire (CSQ; Sanders, Markie-Dadds, & Turner, 2001) following the intervention. The CSQ addresses the quality of the service provided; how well the program met the parent's needs and decreased the child's problem behaviors. Scores range from 13 to 91, with higher scores indicating greater satisfaction with the program.

Design

The design of the study was a repeated measures design employing a comparison across three time periods (pre-, post- and 3-month follow-up).

Procedure

Intervention

Triple P is based on behavioral principles and includes strategies such as general responsiveness, instruction-giving skills, differential social reinforcement, and time outs. The materials included *Every Parent's Self-Help Workbook* (Markie-Dadds, Sanders, & Turner, 1999), as well as tip sheets on various toddler behaviors (Turner, Markie-Dadds, & Sanders, 1996), and the video *Every Parent's Survival Guide* (Sanders, Markie-Dadds, & Turner, 1996). Each week for a period of 10 weeks, mothers were expected to read material and complete a series of workbook tasks, and received weekly telephone consultations.

The first 4 weeks of the self-directed program introduce parents to the causes of problem behaviors, strategies for promoting children's social competence and strategies for dealing with difficult behavior. During the next four weeks parents practice implementing the strategies with the aid of parenting checklists. The final 2 weeks consist of troubleshooting, revision and maintenance.

The weekly telephone consultations are initiated by the clinician and aim to encourage parents' own problem solving skills, employing a self-regulatory model. Parents are prompted to return to the written material, rather than rely on the counselor for solutions. Participants completed an average of 4.01 (SD=2.82) telephone consultations, with an average of 18.07 min per consultation (SD=11.79).

Parentline counsellors were trained using a nationally coordinated system of training and accreditation, designed to promote program use, program fidelity and to support practitioners' use of the program through a national practitioner network. In addition to their regular supervision through Parentline, counsellors also had access to the project coordinator.

Statistical analyses

Statistical analyses involved a series of one-way repeated-measures ANOVAs (at pre- and post-intervention and at follow-up) to assess intervention effects. The level of significance for these analyses was established by using a family wise Bonferroni correction, in which a p -value of .05 is divided by the number of measures in the group of measures. The impact of the interventions was assessed using a number of criteria, starting with statistical significance. The second criterion is of clinical significance, that is whether the statistically significant effects have practical meaning (Kendall, Marrs-Garcia, Nath, & Sheldrick, 1999). The results were also analyzed in terms of a reliable change index, assessing whether the effects of the intervention were reliable and stable (Jacobson & Truax, 1991). In order to control for the effects of attrition, a secondary set of analyses was based upon an intent-to-treat approach whereby outcome analyses include all clients present at the time of randomization, regardless of intervention completion, or intervention refusal (Kendall, Butcher, & Holmbeck, 1999).

Results

Attrition

Overall, a good retention rate at post-intervention was accomplished, with 81 of the original 110 (73.62%) families completing post assessment. There were no significant differences between the groups on any of the dependent or sociodemographic variables for assessment completers versus non-completers. At 3-month follow-up 78 of the original 110 (70.91%) families returned their assessment questionnaires, and there were no significant differences between assessment completers and non-completers.

Short-term intervention effects

Effects on child behaviour

A significant intervention effect was found for child behaviour problems for both mothers' and fathers' report. Table 1 demonstrates significant intervention effects for both intensity and number of child behaviour problems. Following the intervention, both parents reported significantly fewer problem behaviours in their children and rated problems as less intense.

Table 1
Short-term intervention effects for parental reports of intensity and number of child behaviour problems

Measure	Pre	Post	ANOVA	η^2	<i>p</i>
	<i>M</i> (SD)	<i>M</i> (SD)			
<i>Mother report</i>	(<i>N</i> = 77)		<i>F</i> (1, 76)		
ECBI intensity	122.55 (24.45)	106.32 (24.89)	39.07	.34	< .001
ECBI problem	12.87 (6.07)	7.23 (6.18)	72.01	.49	< .001
<i>Father report</i>	(<i>N</i> = 34)		<i>F</i> (1, 33)		
ECBI intensity	122.47 (34.06)	108.63 (28.85)	8.83	.21	.005
ECBI problem	11.35 (7.97)	6.62 (5.92)	18.49	.36	< .001

Effects on parenting variables

A significant intervention effect was found for parenting style, parental confidence and parental anger for mothers' report. Significant intervention effects were also demonstrated for father's confidence and anger. Table 2 provides the results for all parenting variables for both parents. As can be seen from the table, both parents reported statistically significant increases in their confidence as parents, and decreases in the intensity of their anger in relation to a range of child behaviours, and mothers reported significant decreases in dysfunctional parenting.

Table 2
Short-term intervention effects for parental reports of parenting style, parental confidence and parental anger

Measure	Pre	Post	ANOVA	η^2	<i>p</i>
	<i>M</i> (SD)	<i>M</i> (SD)			
<i>Mother report</i>	(<i>N</i> = 80)		<i>F</i> (1, 79)		
TCQ	137.25 (20.19)	156.79 (19.50)	86.34	.52	< .001
PS total	3.14 (.64)	2.60 (.70)	78.84	.50	< .001
PAI intensity	97.11 (25.11)	81.53 (20.82)	29.04	.27	< .001
<i>Father report</i>	(<i>N</i> = 35)		<i>F</i> (1, 34)		
TCQ	128.50 (18.19)	142.29 (21.32)	21.12	.38	< .001
PS Total	3.09 (.56)	2.88 (.81)	3.69	.10	.063
PAI intensity	97.12 (34.22)	81.89 (27.15)	12.23	.27	.001

Table 3
Short-term intervention effects for parental reports of personal adjustment, parental conflict and marital relationship

Measure	Pre	Post	ANOVA	η^2	<i>p</i>
	<i>M</i> (SD)	<i>M</i> (SD)			
<i>Mother report</i>	(<i>N</i> = 61)		<i>F</i> (1, 60)		
PPC problem	5.23 (3.62)	3.46 (3.25)	16.56	.22	<.001
PPC extent	31.28 (12.64)	26.61 (11.77)	10.71	.15	.002
RQI	37.52 (6.28)	36.61 (8.26)	1.77	.03	.188
Depression	5.07 (6.02)	3.62 (6.65)	7.66	.11	.008
Anxiety	2.47 (4.66)	2.15 (6.06)	.389	.01	.535
Stress	10.59 (7.13)	6.95 (6.82)	22.78	.28	<.001
<i>Father report</i>	(<i>N</i> = 34)		<i>F</i> (1, 33)		
PPC problem	4.29 (2.91)	3.12 (2.83)	5.41	.14	.026
PPC extent	31.51 (10.21)	27.32 (11.86)	5.78	.15	.022
RQI	38.26 (6.23)	37.59 (5.99)	.921	.03	.344
Depression	2.09 (2.56)	2.57 (3.48)	.829	.02	.369
Anxiety	.79 (1.20)	1.06 (1.91)	.887	.03	.353
Stress	6.74 (5.52)	6.15 (6.61)	.271	.01	.606

Effects on personal and marital adjustment

Significant intervention effects were found for maternal, but not paternal reports of personal and marital adjustment. Table 3 provides details of the means and standard deviations, as well as univariate ANOVAs for the DASS subscales, PPC Problem and Extent and RQI. Mothers reported fewer areas of conflict with their partners and lower intensity of conflict, as well as lower levels of stress. There was a trend for mothers to report lower levels of depression. Fathers reported no changes in their personal or marital adjustment. It is important to note that all scores, with the exception of PPC Problem pre-intervention scores for mothers, are well within the normal range.

Clinical significance of change

Table 4 provides details of the clinical levels for outcome variables at pre-, post- and follow-up. As can be seen from the table, there was a significant shift in the sample norm for child behaviour problems, with significantly fewer children reported in the clinical range following the intervention, by both parents. Significant levels of clinical change were also achieved across parenting variables, with approximately half as many parents scoring in the clinical range at post-intervention compared to pre-intervention.

The results for the personal and marital adjustment variables are weaker, however, this is due to the low numbers of parents in the clinical range on these variables at pre-intervention. This is particularly the case for fathers, and indeed no statistically significant effects were found, thus making it unlikely that any clinical effects would be evident.

Reliable change

As can be seen in Table 4 good levels of reliable change were obtained across a number of the variables, especially for mothers. In particular, levels of child behaviour problems and parental confidence showed high levels of reliable change. Similarly, for mothers there was also a high level of reliable change for measures of dysfunctional parenting. Fathers' rates of reliable change were lower than those for mothers, which is not surprising given that fathers were not directly involved with the implementation of the program.

Intent-to-treat analyses

Intent-to-treat analyses were conducted on all participants who completed the pre-intervention assessment, substituting pre-intervention scores, where post-intervention scores were not available. ANOVAs were conducted only for significant results in the main analyses. The main results were

confirmed by the more conservative intent-to-treat analyses. Across all significant intervention effects from the main analyses, the intent-to-treat analyses demonstrated an identical effect.

Table 4
Clinical and reliable change at pre- and post-intervention and follow-up

Measure	Parent	% Clinic range (n/n)			% Reliable change (n/n)	
		Pre	Post	Follow-up	Post	Follow-up
ECBI intensity	Mother	37.27 (41/110)	20.99 (17/81)	14.43 (11/77)	30.86 (25/81)	31.17 (24/77)
	Father	31.08 (23/74)	26.47 (9/34)	12.90 (4/31)	20.59 (7/34)	19.35 (6/31)
ECBI problem	Mother	37.27 (41/110)	14.29 (11/77)	11.84 (9/76)	42.86 (33/77)	43.42 (33/76)
	Father	20.55 (15/73)	11.76 (4/34)	10.34 (3/29)	23.53 (8/34)	31.03 (9/29)
TCQ	Mother	—	—	—	48.15 (39/81)	47.44 (37/78)
	Father	—	—	—	38.89 (14/36)	61.29 (19/31)
PS total	Mother	47.27 (52/110)	24.69 (20/81)	33.78 (25/74)	38.27 (31/81)	40.54 (30/74)
	Father	46.75 (36/77)	38.89 (14/36)	31.03 (9/29)	22.22 (8/36)	20.68 (6/29)
PAI extent	Mother	4.55 (5/110)	0.00 (0/80)	0.00 (0/72)	25.00 (20/80)	23.61 (17/72)
	Father	7.79 (6/77)	2.86 (1/35)	6.90 (2/29)	17.14 (6/35)	24.14 (7/29)
PPC problem	Mother	49.43 (43/87)	33.87 (21/62)	27.27 (15/55)	38.71 (24/62)	38.18 (21/55)
	Father	37.66 (29/77)	20.00 (7/35)	37.93 (11/29)	25.71 (9/35)	24.14 (7/29)
Depression	Mother	16.36 (18/110)	10.00 (8/80)	8.33 (6/72)	6.25 (5/80)	9.72 (7/72)
	Father	11.69 (9/77)	8.33 (3/36)	23.33 (7/30)	0.0 (0/36)	3.33 (1/30)
Stress	Mother	27.27 (30/110)	12.50 (10/80)	11.11 (8/72)	18.75 (15/80)	25.00 (18/72)
	Father	11.69 (9/77)	8.33 (3/36)	20.00 (6/30)	11.11 (4/36)	10.00 (3/30)

Intervention acceptability

A total satisfaction score was obtained by summing all Likert-type items. The maximum reported score was 84, while the minimum was 33, with a mean satisfaction of 63.66 (SD=12.61). In general, parents who completed more telephone consultations and spent more time overall in consultation with counsellors, were more satisfied with the program ($r=.506$ and $r=.420$, $p<.01$).

Follow-up intervention effects

As can be seen from Table 5 there were no significant effects of time, 3 months following the intervention, indicating that intervention effects had been maintained over time. The only exception was a significant increase in parenting confidence for fathers, with fathers reporting feeling more confidence in parenting at follow-up compared to post-intervention.

Discussion

The results indicate that a BFI based on a self-regulatory model, delivered by trained telephone counsellors can have significant effects across a range of measures of family functioning. The first hypothesis, relating to effects of the intervention on children's behaviour, was supported by reductions in parental reports of child behaviour problems. This was the case for both parents, even though mothers only participated in the telephone consultations. Similarly, the second hypothesis was supported, with significant reductions in dysfunctional parenting for mothers and increases in parenting confidence for both parents. There was also some evidence to support the third hypothesis, with reductions in parental conflict over parenting and maternal stress. These effects were evident not only in statistical terms, but also in clinical terms with a shift in the sample norm towards lower levels of risk. These effects were maintained at follow-up, indicating that benefits continue over time.

Table 5
Follow-up intervention effects

Measure	Post	Follow-up	ANOVA	η^2	<i>p</i>
	<i>M</i> (SD)	<i>M</i> (SD)			
<i>Maternal report</i>					
	(<i>N</i> = 64)		<i>F</i> (1, 63)		
ECBI intensity	104.76 (24.50)	105.48 (29.54)	.088	.001	.768
ECBI problem	6.98 (6.16)	6.58 (7.08)	.430	.007	.514
<i>(N = 62)</i>					
TCQ	157.23 (20.76)	152.76 (20.25)	3.82	.059	.055
PS total	2.56 (.68)	2.61 (.66)	.497	.008	.484
PAI extent	79.90 (19.36)	80.74 (24.07)	.150	.002	.700
<i>(N = 50)</i>					
PPC problem	3.56 (3.22)	2.88 (3.06)	2.78	.054	.102
PPC extent	26.46 (11.07)	25.80 (11.26)	.156	.003	.694
RQI	36.70 (7.27)	36.96 (6.40)	.079	.002	.780
Depression	3.86 (7.15)	3.10 (5.44)	.865	.017	.357
Anxiety	2.48 (6.64)	2.18 (5.21)	.145	.003	.705
Stress	7.18 (6.87)	5.90 (7.02)	2.01	.039	.163
<i>Paternal report</i>					
	(<i>N</i> = 23)		<i>F</i> (1, 22)		
ECBI intensity	105.07 (28.86)	105.99 (23.16)	.047	.002	.831
ECBI problem	5.74 (6.42)	7.65 (6.72)	1.75	.074	.199
<i>(N = 22)</i>					
TCQ	142.50 (23.14)	150.36 (27.09)	4.72	.183	.041
PS total	2.79 (.93)	2.65 (.78)	2.83	.119	.107
PAI	78.86 (28.74)	80.86 (33.54)	.130	.006	.722
<i>(N = 24)</i>					
PPC problem	2.88 (2.49)	3.33 (3.66)	.29	.013	.594
PPC extent	25.13 (10.80)	26.92 (14.11)	.46	.020	.503
RQI	38.38 (4.40)	37.54 (7.83)	.32	.014	.575
Depression	2.21 (2.83)	4.92 (6.37)	5.07	.181	.034
Anxiety	.71 (1.16)	1.92 (4.36)	2.07	.082	.164
Stress	5.38 (5.43)	7.33 (6.36)	3.26	.124	.084

This study extends Triple P research in demonstrating effectiveness within a regular service setting. It is interesting to note that the effects evident in this study are stronger than those in a concurrent study (Morawska & Sanders, 2006). In this study, both parents reported improvements in their children's behaviour (cf. mothers only in Morawska and Sanders). Similarly, mothers in this study reported decreases in parental conflict regarding parenting issues, and in their own level of stress (cf. Morawska and Sanders). It may be that parents in this study had less previous exposure to parenting (or other) interventions, given their relative remoteness from major centres. This is an important idea to consider, given that participants in this study were more remote and had less access to services, and were therefore in greater need of such services.

The findings presented here are consistent with previous research, which has demonstrated that self-directed interventions can indeed have widespread effects. Previous research has provided some support for the efficacy of self-directed BFI in impacting on children's behaviour, as well as parental discipline (for review see Elgar & McGrath, 2003). There is also limited evidence to suggest that BFIs can have a broader impact on parental personal and marital adjustment (e.g., Connell, Sanders, & Markie-Dadds, 1997; Sanders et al., 2000). This study has provided evidence for the effectiveness of BFI implemented in a regular service delivery context. Not only did the intervention lead to improvements in children's behaviour, but also had more wide-ranging effects on the family environment, which is particularly important in terms of maintenance and generalisation of effects.

While the effects of the intervention are clear, it is also important to recognise the success in implementing the intervention within an organisational context. There are increasingly calls in the literature to ensure that efficacious interventions are more widely disseminated and available to practitioners (Cowan, Powell, & Cowan, 1998), and many guidelines have been proposed for ensuring successful dissemination (e.g., Mrazek & Haggerty, 1994). However, the gap between research and

practice remains significant, and this is particularly the case in the BFI field (Sanders & Turner, 2002; Taylor & Biglan, 1998) and especially relevant for prevention and early intervention (Turner & Sanders, 2005). The research was guided by the needs of the organisation to deliver empirically validated interventions within the context of their model of service delivery. Training of counsellors employed a self-regulatory model to ensure adequate maintenance and generalisation of new competencies and the subsequent general implementation of the intervention as part of the empirical research, provided for ongoing support and feedback in relation to the intervention.

A limitation of this study was the absence of a control group to account for effects of time and maturation. Within the context of a regular service-provider, it was impossible to deny families services when they were requested, and counsellors were already implementing Triple P in their service delivery, making a treatment-as-usual comparison impractical. While this limits the conclusions that can be drawn on the basis of this study, in the context of Morawska and Sanders (2006), the results found here are encouraging. In Morawska and Sanders (2006), there was little evidence for time and maturational effects, as observed in the outcomes for the control group. The two studies were conducted during the course of about one year, which makes any cohort effects unlikely. In addition, the results would be strengthened by independent assessments of family functioning, such as family observations or clinician ratings. Given the organisational context of the research, as well as the remoteness of many families, it was impractical to conduct additional assessments. A further limitation of the study is the lack of measures relating to the organisational implementation of the intervention. While the results demonstrate that the intervention can be successfully implemented within an organisation, it would be useful to have additional measures of implementation, such as taping telephone consultations and independently rating adherence.

Given the paucity of research in the area of self-administered interventions, and particularly in regular service delivery contexts, the results of this study provide a significant contribution to the literature. This research extends the available literature in the field of telephone counselling, an increasingly available and policy-supported service in the community. It was demonstrated that not only can an intervention be successfully implemented within a telephone counselling organisational setting, but that the implementation of the intervention can lead to considerable improvements in family functioning. However, given the limitations of the study, it would be important to replicate these outcomes using a controlled design.

A key aspect of the success in disseminating the intervention within Parentline, relates to the specificity of the program. The intervention is clearly defined, with comprehensive and understandable protocols. In contrast, regular training often consists of a focus on generic counselling skills, with added components related to the specific population serviced by the organisation. However, counsellors are generally not trained in delivery of specific interventions, to address particular problems that their clients may encounter. The BFI used in this study was developed to specifically address parents' concerns about their children's behaviour and emotional wellbeing, and fits particularly well with the aims and goals of Parentline. An interesting question to consider for future research is that of what other specific interventions could counsellors, both within Parentline and in other services, be trained in.

In this context, it is important to consider the role of telephone counselling services and how they may be shaped to most effectively benefit the community. These types of services are increasingly popular, and often provide the only support available to remote communities. Telephone counselling services are accepted by the community, are in high demand and governments often rely on such services. Despite this there is a considerable paucity of research evaluating such services, and the findings presented here contribute to filling this gap in knowledge. The emphasis, needs to be on intervention evaluation within real-world settings, as well as the factors involved in long-term implementation of interventions within such contexts, beyond the duration of specific research efforts. In this context it is also important for future research to consider quantitative implementation measures, such as describing practitioners' backgrounds; number of practitioners completing training; pre-post training knowledge and skill assessments; the frequency, duration, and quality of

supervision; the frequency and type of performance feedback; the extent and quality of administrative supports. Such measures would enhance the ability to disseminate and implement interventions in a variety of organisational contexts.

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