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ORIGINAL PAPER

Every Family: A Population Approach to Reducing Behavioral and Emotional Problems in Children Making the Transition to School

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Abstract A large-scale population trial using the Triple P-Positive Parenting Program (TPS) was evaluated. The target population was all parents of 4- to 7-year-old children residing in ten geographical catchment areas in Brisbane (intervention communities) and ten sociodemographically matched catchment areas from Sydney (5) and Melbourne (5), care as usual (CAU) comparison communities. All five levels of the Triple P multilevel system of intervention were employed; including a local mass media strategy, a primary care strategy, and three more intensive levels of parenting intervention delivered by a range of service providers (e.g., health, education, and welfare sectors). Program outcomes were assessed through a computer-assisted telephone interview of a random sample of households ($N = 3000$) in each community at pre-intervention and again at two years post-intervention. At post-intervention there were significantly greater reductions in the TPS communities in the number of children with clinically elevated and borderline behavioral and emotional problems compared to the CAU communities. Similarly parents reported a greater reduction in the prevalence of depression, stress and coercive parenting. Findings show the feasibility of targeting dysfunctional parenting practices in a cost-effective manner and the public acceptance of an approach that blends universal and targeted program elements. *Editors' Strategic Implications:* This is the first positive parenting program to demonstrate longitudinal, population-level effects for parents and children. The authors provide an excellent example of multilevel prevention planning, coordination, execution, and evaluation.

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Introduction

There is justifiable professional and community concern about the high rates of mental health problems in children. Behavioral and emotional problems are common in children, with about 15% of boys and 14% of girls aged 4–12 years having a clinically significant emotional or behavioral problem (Sawyer et al. 2000). Rather than occurring in isolation, these problems are often associated with a range of other difficulties (Costello et al. 2006; Egger and Angold 2006; Hinshaw and Lee 2003), including low self-esteem, poor peer relationships, and academic difficulties (Hinshaw and Lee 2003; Sawyer et al. 2000). Early behavioral and emotional difficulties increase the risk of severe adjustment difficulties and significant psychopathology in adolescence and adulthood (Costello et al. 2006; Egger and Angold 2006).

Parenting and Child Mental Health

A substantial body of research shows that the quality of parenting children receive has a major effect on their development (Chamberlain and Patterson 1995; Patterson 1982) and high quality parenting is critical for children to develop into self-sufficient, resourceful adults (e.g., Vimpani et al. 2002). Family risk factors such as poor parenting, family conflict, and marriage breakdown strongly influence children's risk of developing various forms of psychopathology. Specifically, the lack of a warm positive relationship with parents, insecure attachment, harsh, inflexible or inconsistent discipline practices, inadequate supervision of and involvement with children, marital conflict and breakdown, and parental psychopathology (particularly maternal depression) increase the risk that children will develop major behavioral and emotional problems (Coie 1996; Loeber and Farrington 1998). There is increasing evidence of a link between internalizing and externalizing disorders. Particularly, when children develop conduct problems in association with internalizing disorders, their risk of developing significant psychopathology such as conduct disorder, anxiety, depression and suicidal behavior in adolescence and young adulthood is increased (Atzaba-Poria et al. 2004; Kovacs et al. 1988; Sofronoff et al. 2005; Tremblay et al. 1994).

Other support for a link between parenting factors and children's anxiety and depression comes from the child abuse literature (Black et al. 2001; Cohen et al. 2006). Higher levels of depression, conduct disorder, social deficits, and other internalizing and externalizing disorders occur in adolescents who have been physically abused as young children. A wide range of serious adolescent risk behaviors are associated with abuse including early sexual activity, pregnancy, eating disorders, emotional disorders such as anxiety and depression, suicide attempts, and drug and alcohol abuse (Coie 1996; Loeber and Farrington 1998).

Parents of children who are at risk of developing emotional or behavioral problems are often less confident in their parenting role, find parenting to be stressful, demanding and depressing, and experience more conflict with relationship partners over parenting issues (Sanders et al. 2007).

Evidence from household surveys of Australian parents shows that parenting challenges are common. For example, Sanders et al. (2007) found that a large number of parents from diverse socioeconomic backgrounds reported that their children had significant behavioral and emotional problems. Parents reported that 29% of 2- to 12-year-old children had significant conduct problems and 9% of children met diagnostic criteria for oppositional defiant disorder. More concerning was the high prevalence of coercive or ineffective parenting practices; over half of parents reported using practices such as smacking, and 70% reported shouting and becoming angry with their children.

Population Approach to Parenting Intervention

In an effort to forestall the development of mental health problems in children, an initiative known as *Every Family* was implemented as a population level intervention. *Every Family* is a preventive intervention designed to promote better mental health outcomes in children during the transition to school period. It is based on the Triple P-Positive Parenting Program developed by Sanders and colleagues (Sanders 1999), which is one of the few evidence-based parenting interventions designed as a public health strategy to promote better parenting.

Positive parenting programs that are based on social learning principles (Patterson 1982) and teach parents positive parenting skills and consistent discipline methods hold particular promise in reducing behavioral and emotional problems. They have been repeatedly demonstrated to be effective in managing children with early-onset conduct problems (McMahon 1999; Prinz and Dumas 2004; Taylor and Biglan 1998; Sanders 1999). Despite their demonstrated effectiveness, relatively few parents access evidence-based programs (Turner and Sanders 2006). More socially disadvantaged parents are less likely than other parents to be aware of or participate in such programs (Sanders et al. 2007), even though there is evidence showing that low income families benefit from such programs (Heinrichs 2006; Leung et al. 2006).

The high prevalence rates of both child problems and ineffective or inadequate parenting, coupled with growing community concerns about children's behavioral and emotional problems in schools, points to the need to develop, implement and evaluate parenting interventions that can be disseminated on a large scale in a cost-effective manner. For such an effort to be effective a public health approach is needed (Biglan 1995). The Triple P-Positive Parenting Program is one of the few public health models of parenting with sufficient evidence to justify large-scale application.

Triple P-Positive Parenting Program

The Triple P system (TPS) was adopted as the parenting program in *Every Family* because it met essential criteria considered important for a public health approach to

parenting to be effective. First, it includes a clearly articulated public health theoretical framework (Sanders 1999). The TPS comprises five levels of intervention of increasing intensity and narrowing population reach including a media and communication strategy, a large group positive parenting seminar series, brief primary care interventions, more intensive small group and individual programs, and enhanced family intervention for parents who require more intensive intervention services. Second, a substantial evidence base exists concerning the efficacy and effectiveness of the parenting advice used and the different levels and delivery modalities used in the program (see Sanders in press).

Third, the use of a self-regulation framework for working with parents (Karoly 1993) encourages parents themselves, in consultation with service providers, to determine their own goals and the kinds of behaviors, skills and values they desire to promote in their children. The self-regulation approach is particularly relevant to population level applications in culturally diverse communities, as these goals are informed by parents' cultural beliefs. Parents differ in their self-regulatory capabilities due to many factors such as mental health problems, drug and alcohol problems, and relationship conflict. However, an empowerment model that promotes parental self-regulation encourages all parents to take responsibility for their own parenting decisions and has the advantage of being able to be used in universal as well as more tailored and targeted interventions.

Fourth, the use of an existing multidisciplinary workforce and established networks and referral pathways to deliver the program (e.g., GPs, psychologists, nurses, social workers, guidance officers, counselors, and teachers) as well as different delivery formats (e.g., media, groups, seminars, and individual face to face or phone consultation) ensures that sufficient numbers of local service providers are trained and able to deliver the program. Fifth, a variety of service delivery contexts, including GP practices, schools, preschools, childcare centers and mental health services are used. The rationale for using many different settings to deliver parenting advice is that parents often report that the advice they receive from different services is confusing and sometime contradictory.

Finally, there is evidence concerning the cross-cultural acceptability and effectiveness of Triple P. Several trials have documented the beneficial effects of Triple P with culturally and linguistically diverse parents including indigenous parents (Turner et al. 2007), Chinese parents (e.g. Leung et al. 2003; Matzumoto et al. 2007), and African American parents and service providers (Prinz et al. under review).

Prior research concerning the effectiveness of Triple P has focused on the efficacy of the different levels and delivery modalities employed in the TPS. A large number of randomized clinical trials have established that Triple P reduces behavioral and emotional problems in children (Sanders et al. 2007), increases parental self-efficacy (Sanders et al. 2000), reduces dysfunctional discipline (Markie-Dadds and Sanders 2006), reduces parental distress including depression, stress and anger (Sanders et al. 2004; Sanders and McFarland 2000), reduces couple conflict over parenting (Dadds et al. 1987), and improves work performance in working parents (Martin and Sanders 2003; Sanders et al. under review). Triple P has been successfully delivered as a universal group program to parents of preschool

aged children and produced population level reductions in conduct problems (Zubrick et al. 2005). Zubrick et al. (2005) found that there was a significant reduction in child conduct problems that were maintained two years following the intervention.

However, when all five levels of the intervention are delivered concurrently within regular services, the population level effects of the TPS are less clear. The aim of this study was to examine whether the TPS, when implemented in a defined catchement area over a two-year period through a variety of regular service delivery settings and providers, could achieve a reduction in prevalence rates of key child mental health problems, parental adjustment difficulties and dysfunctional parenting.

We chose to target the transition to school, as parents are more accessible to universal intervention at this time because all children attend school during the period. Although a case can certainly be made for earlier intervention, the transition to school period is important for several reasons. First, parents have increased receptivity to participating in parenting programs at points of normative developmental transition. Second, most parents want their children to do well at school and are therefore more motivated to attend early in their child's schooling. Finally, Triple P parenting interventions targeting children of this age have been shown to be effective in reducing behavior problems in children (Sanders et al. 2003).

Every Family Initiative

Several aspects of the present evaluation should be noted. First, this study was part of a national initiative in Australia known as *beyondblue: The National Depression Initiative*. As the trial funders, the *Beyondblue* organization as a whole were interested in determining the "real world" effects of a public health approach to mental health promotion and prevention using evidence-based interventions delivered through regular services. This meant utilizing and upskilling the existing workforce and building upon existing referral networks and delivery mechanisms. Second, a pragmatic evaluation plan was required to track population level outcomes. As a result we did not track clinical outcomes at an individual child or family level to determine population level effects (Many prior studies have assessed the individual level effects of Triple P). Instead, we used population level auditing or monitoring of parents in a defined catchment area to gauge program effects; this is the approach as recommended by the Society for Prevention Research (2004). As we were primarily interested in the population level change, the design involved repeated assessment of randomly drawn samples of parents from the catchment areas, rather than attempting to follow individual parents over time. Although this made it harder to detect intervention effects, as we sampled from the population of parents rather than those who had participated in Triple P, this design had the advantage of assessing change in a population of parents over time. Third, it was not possible to randomize geographic catchment areas receiving Triple P within the same city to different conditions, as the implementation of a comprehensive media

strategy would have meant substantial local across condition leakage. This was less likely when parents lived in another state.

Hence, the evaluation approach involved 10 intervention communities in southern Brisbane that implemented all five levels of the TPS. These communities were compared to 10 non-randomly assigned care as usual (CAU) communities; five in Melbourne, and five in Sydney. We hypothesized that compared to CAU communities, communities receiving the TPS would experience significantly greater reductions in levels of behavioral and emotional problems with their children, rates of parental depression and stress, and rates of coercive or inappropriate parenting.

Method

Participants

Based on the 2001 Australian Bureau of Statistics (ABS) Census data, there were 12,874 children aged 4, 5, 6, and 7 years in the 10 Brisbane catchment areas. This comprised the total population of children whose parents were eligible to participate in the intervention and provided the pool from which the Brisbane survey sample was drawn. Participants were primary caregivers living in Brisbane, Sydney or Melbourne, with at least one child aged between 4 and 7 years at the Time 1 survey. As almost all caregivers were parents, the term "caregiver" will be replaced with "parent" in this paper. Parents were ineligible to participate if they were <18 years of age, did not speak English sufficiently well, had a mental or physical impairment that prevented them from being able to take part in a telephone interview, were staying in the contacted dwelling but did not usually live there, or did not have a child aged 4–7 years.

Survey Method

Household survey interviews were conducted using a computer-assisted telephone interviewing (CATI) system based upon the procedures described by Sanders et al. (2007), and was developed by the University of Queensland Social Research Centre. Trained telephone interviewers and a supervisor were employed to conduct the interviews. A total of 6003 surveys were conducted; 2999 at Time 1 (1499 with parents in the intervention city and 1500 with parents in the CAU cities), and 3004 at Time 2 (1504 in the intervention city and 1500 in the CAU cities). Time 1 surveys took place in July 2003. The follow-up surveys at Time 2 were conducted in April 2006.

Surveys were conducted at pre-intervention and then again at post-intervention two years later. Both times, a randomly drawn sample of parents in the selected catchment areas was asked to participate in the survey and to report on their own and their children's behavior. The survey was pilot-tested and the questionnaire modified to accommodate areas of operational need and phrasing of questions. To ensure integrity of data and quality control, 10% of interviews were monitored.

As schools and preschools were the major focal points for the children whose parents were to be surveyed, these settings were used to generate the units of analysis. Schools were ranked on the Index of Relative Socio Economic Disadvantage (IRSED). The IRSED was constructed from 20 variables collected at the 1996 Census of Population and Housing and describes the population of each Census Collection District in terms of employment/unemployment, income, education, family structure, housing characteristics, Aboriginality and English language fluency. A school's score is an average of the index weighted by enrollments taking into account the geographical location of the student population. Schools were plotted on a map of the catchment area and placed into clusters on the basis of geographical proximity, similar IRSED scores, and number of students. Attention was also given to major geographical boundaries such as major highways, rivers, railway lines and industrial areas. To maximize geographical separation, clusters were arranged so that a buffer region was between them wherever possible. Ten clusters were developed, with the mean number of target children estimated to be 385 (range 171–688) in each cluster. To achieve 1500 completed surveys, the minimum number in each cluster was 150. Clusters were then ordered on the basis of school's IRSED scores to represent broad socioeconomic variability.

Ten catchment areas in suburban Melbourne and Sydney were identified to provide the CAU comparison samples. Australian Bureau of Statistics criteria were used to identify suburban catchments with a similar range of sociodemographic diversity in order to match the Queensland clusters as closely as possible. Catchments were constructed to ensure similar numbers of children of the target age resided there. In order to obtain telephone numbers for the CATI, school catchment areas were estimated based on geographical and transportation criteria (e.g., school bus routes). A list of telephone numbers was then obtained based on relevant suburban postcodes and census districts, and numbers were dialed at random within these catchment areas. When a household had at least one 4- to 7-year-old child, CATI survey staff asked to interview the primary caregiver who was able to understand basic English. A household was considered unreachable after 15 attempts. Mean interview time was 25 min (range 22–30 min). In the baseline CATI, 39% of eligible calls resulted in a completed interview; this yielded 2,999 parents. In the post assessment CATI, 35% of eligible calls resulted in a completed interview with a total of 3,004 parents. In the second CATI, 22% of respondents were identified as having been interviewed previously in the baseline survey.

Measures

The measurement plan consisted of a mix of well-validated parent report measures and specific individual questions assessing known risk and protective factors using Likert-type rating scales. All of these items had previously been used in large-scale epidemiological surveys of Australian parents and children for whom population level information is available (e.g., Sanders et al. 2007).

Sociodemographic Variables

A range of sociodemographic information was collected which included the age and sex of children and parents, respondent's employment status, education level, marital status, annual household income and ethnic background. These sociodemographic items are based on a standard set of sociodemographic questions used by the ABS.

Child Outcome Variables

The Strengths and Difficulties Questionnaire (SDQ) (Goodman 1997) was used as the primary outcome variable to assess the nature and extent of children's emotional and behavioral problems as reported by parents. There are 25 items in the SDQ, with each subscale consisting of five items. The SDQ provides a total problem score that is generated by summing the scores from all scales except the prosocial scale. The SDQ also yields a score on the emotional subscale, the conduct subscale, the hyperactivity subscale, peer problems subscale and the prosocial subscale. Scores on the SDQ can be classified as normal, borderline and abnormal. The SDQ is a widely used measure of children's mental health problems, and various psychometric studies have shown it to have good internal consistency and test retest reliability (Goodman 1997).

Parents were also asked whether they considered their child to have had any emotional or behavioral problems over the past 6 months (yes, no). This global measure of child functioning was used in the Western Australia Child Health Survey (Zubrick et al. 1995) and has been shown to be related to independent reports of behavior difficulties in children by teachers.

Assessment of Parent Outcome Factors

Parental Adjustment

As parental depression and high levels of parenting stress have been shown to be related to behavioral and emotional problems in children, parental adjustment was assessed. Parents rated how stressed and depressed they had felt over the two-week period prior to the survey on a 5-point Likert scale (1 = not at all, 2 = slightly, 3 = moderately, 4 = very, 5 = extremely).

Parenting Practice Variables

To assess the presence of parental risk and protective factors, parents were asked about their use of specific parenting strategies for encouraging positive behavior and dealing with misbehavior. Parents were also asked about their use of parenting strategies when their child became anxious or distressed. The parenting strategies for encouraging positive behavior included: praising the child by describing what was pleasing; giving a treat, reward or fun activity; or giving attention such as a hug or wink when the child engaged in positive behavior. Strategies for dealing with

misbehavior were divided into two groups. The first set of five strategies has been shown to be effective in managing misbehavior and included ignoring the problem behavior, telling the child to stop misbehaving, using a consequence that fits the situation, sending the child to quiet time or time-out, and calling a family meeting to work out a solution. The second set of strategies has been associated with coercive or ineffective discipline and included a single smack with hand, smacking more than once with hand or with an object other than hand, shouting or becoming angry, and threatening to do something the child would not like but not necessarily follow through with it. The strategies for dealing with anxious or distressed behaviors included ignoring the distress by not giving attention; holding, cuddling or using physical contact to settle or calm the child; telling the child to stop being so silly; talking to the child in a soothing way until the fear has passed; allowing the child to avoid the thing he/she is scared of; and encouraging the child to be brave. For each of the parenting strategies, parents were asked to consider how likely they were to use each strategy. A 4-point Likert scale was used for each strategy (1 = very unlikely to 4 = very likely).

Parental Consistency

Consistency in managing misbehavior has been shown to have a significant effect on whether problem behavior continues. Parents were asked to consider how consistent they were in dealing with their child's behavior. A 5-point Likert scale was used for this question (1 = not at all consistent to 5 = always consistent).

Parental Self-Efficacy

Parental self-efficacy was measured as it is highlighted in the developmental psychology literature as a mediator of developmental outcomes in children (Bandura 1995; Sanders and Woolley 2005). Parents were asked how confident they had felt in the last 6 months to undertake their responsibilities as a parent to their child aged 4–7 years. A 5-point Likert scale was used (1 = not at all, 2 = slightly, 3 = moderately, 4 = very, 5 = extremely).

Parental Social Support

To assess the availability of practical and emotional support for parents, respondents were asked to rate how much they had felt supported in parenting by family, friends or neighbors over the past 6 months. A 5-point Likert scale was used (1 = not at all supported, 2 = slightly supported, 3 = moderately supported, 4 = very supported, 5 = extremely supported).

Parental Awareness and Participation in Triple P

Parents were read a list of five commonly used parenting programs and asked if they had heard of each of them (yes, no). To assess potential false positive recognition of parenting programs, one of the program options was a fictional program called the

Bricks and Mortar Parenting Program. Parental awareness of Triple P was assessed by asking parents whether they had heard or seen anything about Triple P in the past 12 months (yes, no) and if yes, where they had heard about it from a range of options including: friend, relative, neighbor; radio; television; newspaper; school newsletter and so on. If a parent indicated that they had been involved in a Triple P intervention, they were asked how they were involved (1 = attended brief seminar, 2 = 1–4 brief meetings with a professional, 3 = group sessions with other parents, 4 = individual sessions of about an hour each, 5 = telephone contact only, 6 = other).

Description of Intervention Conditions

Triple P System Condition (TPS)

Triple P was implemented as a whole population approach that blended universal and indicated program elements. Figure 1 depicts the ecological or systems-contextual model of intervention for the delivery of Triple P within *Every Family*.

Media and Communication Strategy

A coordinated media and community education campaign involving social marketing and health promotion strategies was used to: promote the use of positive parenting practices in the community; increase the receptivity of parents towards participating in Triple P and other family/child interventions; de-stigmatize and normalize the process of seeking help for children with behavioral and emotional problems; increase the visibility and reach of the various interventions; and counter the often alarmist, sensational or parent-blaming messages in the media. The target communities were provided with information about common behavioral, developmental and mental health problems in children and their families, the value of positive parenting in preventing and reducing these problems, and ways to obtain

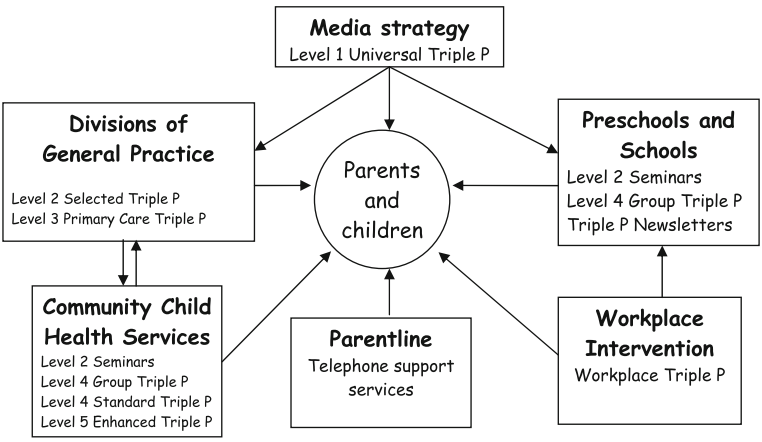

Fig. 1 An ecological model for the delivery of parenting and family support services

further information, advice and support. They received access to low-cost, high-quality written resources through a range of venues in the community (e.g., preschools, schools, childcare centers and libraries) and access to a telephone support service with Triple P-trained counselors through Parentline, a Queensland statewide telephone counseling service for parents.

Existing partnerships with local media outlets and new partnerships with community-based media outlets were used to support the media campaign. A cross-promotional media strategy comprising both print and electronic media was employed. Media activities included a positive parenting newspaper column in local newspapers, a positive parenting segment on national and local radio, positive parenting messages for broadcast on radio, and a series of positive parenting community service announcements on a major local television channel. Most media activities were delivered free of charge to the *Every Family* project.

Triple P Seminar Series

Parents could participate in a Triple P Seminar Series conducted in local preschools, schools and community facilities by accredited Triple P providers. Parents were invited to attend up to three 90-min seminars on topics related to the prevention of emotional and behavioral problems in children. The introductory seminar (*The Power of Positive Parenting*) was followed by two seminars dealing with common emotional and behavior problems in young children (*Raising Confident, Competent Children* and *Raising Resilient Children*). The second and third seminars in the series were designed to build on the foundations of the introductory seminar and show parents how to apply positive parenting principles in practical ways. Tip sheets were provided to parents and included information related to formulating individual solutions to the issues or problems addressed. Topics included promoting self-esteem in children, helping children confront their fears, partner support, coping with stress, helping children do well at school, helping children make friends, dealing with bullying, and dealing with disobedience.

Triple P Newsletter

Parents whose children attended school received six Triple P Newsletters throughout the intervention period. This newsletter included tips and suggestions about positive parenting strategies designed to support their child's education, social competence, coping skills and development of self-esteem. It also provided information on how and where to access other levels of parenting advice and assistance.

Group Triple P

Parents could also enroll in a more intensive program that provided active skills training in a group format. Group Triple P is an eight hour program completed in either four weekly two hour sessions or a condensed one day program. It employed an active skills training process to help parents acquire new knowledge and skills across a wide range of child management topics via observation, discussion, practice and feedback.

Positive parenting skills were demonstrated with videotapes and, as appropriate, modeled by service providers. These skills were then practiced in small groups and parents received constructive feedback in an emotionally supportive context. The program also offered three optional weekly follow-up individual telephone consultations of up to 30 minutes to promote transfer and generalization of learning.

Workplace Triple P

Schools were invited to participate in a professional development program for teachers based on Workplace Triple P, a variant of Triple P aimed at assisting teachers in dealing with life stressors and difficult situations in the school environment. Participation also provided teachers with an opportunity to become familiar with the Triple P principles and strategies that were introduced to parents attending the school. Such an approach was designed to encourage a collaborative approach between home and schools so that teachers and parents would develop a more consistent approach in managing children.

Triple P School Briefings

School staff (e.g., Principals, teachers, and guidance counselors) also received briefings about *Every Family* from project managers and project officers. These 30-min briefings were designed to provide an overview of *Every Family* and a snapshot of what was involved in Workplace Triple P for teachers.

Primary Care Triple P Interventions

Primary care practitioners (e.g. GPs, child health nurses, school nurses) offered indicated intervention programs requiring participation in three to four sessions. Primary Care Triple P is a brief 4-session intervention specifically tailored to the primary care environment. Typically the sessions, each 20–30 minutes long, are delivered over a 4- to 6-week period. The program employs an active skills training process to help parents acquire new knowledge and skills about a specific child management issue or problem via discussion, practice and feedback. Positive parenting skills are demonstrated on videotape and modeled by practitioners. Information and advice about developing a specific parenting plan are provided to parents by health professionals (e.g., GPs, nurses) selecting from a series of 46 tip sheets covering different developmental and behavioral topics. Parents then practice implementing the plan at home between sessions. Practitioners were offered training and accreditation in Primary Care Triple P, as well as support and supervision, as part of this project.

Existing referral pathways were also reviewed and streamlined to facilitate communication and timely access to the appropriate level of care. Existing staff from the educational and health sector played a crucial role in consulting and liaising with local stakeholders and in promoting collaboration among them, in order to optimize communication and referral pathways and strengthen linkages across the community. *Enhanced Triple P interventions.* Local mental health service

and family intervention specialists' providers from Queensland Health serving the catchment areas were offered training in an advanced level Triple P training (Stepping Stones Triple P for parents of children with developmental disabilities; Enhanced Triple P for parents with marital conflict, depression, or difficulties coping with stress). This was to ensure they were familiar with Triple P and were in a position to provide consultative backup and receive appropriate referrals of parents and children requiring the most intensive levels of intervention.

Provider Training to Deliver Triple P

A total 375 practitioners were trained as part of *Every Family*, with 73% becoming fully accredited by the training organization, across different levels of Triple P: Selected Triple P, Primary Care Triple P, Group Triple P, Stepping Stones Triple P, and Enhanced Triple P. All participants underwent a standardized training process consisting of 2–5 days training and a further 1–2 days accreditation. The training program employed active skills training procedures, detailed participant notes, practitioner manuals, part workbooks and videotape training material as described by Sanders et al. (2003).

Care as Usual Condition (CAU)

Parents residing in CAU communities could access usual mental health, primary health care, welfare, and school-based services, and participate in any parenting programs available in their community. Although no specific integrated multilevel Triple P intervention was provided by the project team, some existing services may have exposed parents to Triple P if those services had service providers who had been previously trained in the program.

Statistical Analyses

Logistic regression was used to examine the differences between the conditions at Time 1 for each of the key child outcome variables, parent outcome variables, and parenting strategy variables. For each of the variables, change from Time 1 to Time 2 was then assessed by calculating odds ratios and 95% confidence intervals separately for each condition. Tarone's (Paul and Donner 1989) statistics were calculated to test for the equality of odds ratios between the TPS and CAU conditions. This test allowed for statistical comparison of the odds ratios representing change over time when significant change was observed in at least one of the conditions.

Results

Demographic Characteristics of Sample

The demographic characteristics of the household survey respondents appear in Table 1. The TPS and CAU caregivers were similar in terms of the relationship of

Table 1 Demographic characteristics of sample at Time 1

	Triple P system condition (Brisbane)	Care as usual condition (Sydney/Melbourne)	Difference between conditions at pre-test	
	Frequency (%)	Frequency (%)	Tarone's χ^2	Sig.
Relationship to child				
Mother	1186 (79.1)	1087 (72.5)	29.95	.000***
Father	265 (17.7)	383 (25.5)		
Other	48 (3.2)	30 (2.0)		
Age				
Under 31	296 (19.7)	175 (11.7)	43.49	.000***
31–40	918 (61.2)	952 (63.5)		
41–50	255 (17.0)	335 (22.3)		
Over 51	30 (2.0)	38 (2.5)		
Child gender				
Male	824 (55.0)	771 (51.4)	3.84	.05
Female	675 (45.0)	729 (48.6)		
Child age				
Four	369 (24.6)	370 (24.7)	.161	.984
Five	394 (26.3)	388 (25.9)		
Six	398 (26.6)	407 (27.1)		
Seven	338 (22.5)	335 (22.3)		
Eight	–	–		
School status				
Preschool	682 (45.5)	637 (42.5)	2.79	.09
Primary school	817 (54.5)	863 (57.5)		
Marital status				
Single	124 (8.3)	79 (5.3)	61.47	.000***
Married	1088 (72.6)	1260 (84.1)		
Divorced	144 (9.6)	91 (6.1)		
Widowed	10 (0.7)	8 (0.5)		
De Facto	133 (8.9)	61 (4.1)		
Unanswered	0 (0.0)	0 (0.0)		
Income				
Less than $20 000	146 (10.4)	111 (8.3)	55.82	.000***
$20–$40,000	382 (27.3)	305 (22.8)		
$40–$100,000	755 (53.9)	686 (51.4)		
More than $100,000	118 (8.4)	233 (17.5)		
Education level				
None/Primary	42 (2.8)	20 (1.4)	103.62	.000***
Junior high	363 (24.5)	244 (16.6)		
Senior high	334 (22.6)	341 (23.2)		
Trade/Technical	393 (26.6)	288 (19.6)		
University/College	348 (23.5)	576 (39.2)		

Table 1 continued

	Triple P system condition (Brisbane)	Care as usual condition (Sydney/Melbourne)	Difference between conditions at pre-test	
	Frequency (%)	Frequency (%)	Tarone's χ^2	Sig.
Indigenous identity				
Yes	30 (2.0)	19 (1.3)	2.51	.113
No	1468 (98.0)	1479 (98.7)		
Ethnic identity				
Yes	258 (17.2)	647 (43.1)	239.10	.000***
No	1241 (82.8)	853 (56.9)		

* Signifies a statistically significant χ^2 statistic at $p < .05$

** Signifies a statistically significant χ^2 statistic at $p < .01$

*** Signifies a statistically significant χ^2 statistic at $p < .001$

the participant to the target child, participant age distribution, and child gender, age, and school status. As expected, there were some differences between conditions. Compared to the TPS group, the CAU group was more likely to be older, married, identify with an ethnic group, and have a higher income and education.

Program Implementation

Training of Providers

A total of 375 providers from the health, education and welfare sectors were trained to deliver various levels of the Triple P intervention. This was accomplished through 21 professional training courses. Table 2 outlines the number of different courses that practitioners completed. Of these, 275 (73%) became accredited Triple P providers. These practitioners subsequently conducted 35 Triple P groups and 122 Triple P seminars over the intervention period, with over 2,500 parents participating.

Media and Communication

Significant media activity took place during the two-year intervention period, including 29 television programs (mainly news and current affairs programs) featuring Triple P, 48 radio broadcasts featuring Triple P messages about positive parenting, and 58 newspaper or magazine articles on positive parenting. There were also 1750 website hits to the *Every Family* website during the implementation period. The resources distributed to practitioners through the Every Family project are shown in Table 3.

Public Awareness of and Participation in Triple P

At post-intervention the household survey showed that significantly more parents in the TPS (81.8%) than the CAU (46.0%) condition were aware of Triple P

Table 2 Number of training and accreditation courses conducted and number of participants per training level

Training course type	Number of courses conducted	Number of participants	Percentage breakdown
Selected triple P training	6	95	25.33
Primary care triple P training	5	79	21.07
Group triple P training	7	136	36.27
Enhanced triple P training	1	22	0.06
Stepping stones triple P training	2	43	11.47
Training total	21	375	100
Selected triple P accreditation	4	68	24.82
Primary care triple P accreditation	5	51	18.61
Group triple P accreditation	6	107	39.05
Enhanced triple P accreditation	1	18	0.07
Stepping stones triple P accreditation	2	30	10.95
Accreditation total	18	274	100

Table 3 Summary of triple P resources distributed to practitioners in Every Family

Type of resource	Quantities distributed
Brochures	250,000
Tip sheets	190,110
Positive parenting booklets	9,483
Every parent books	183
Parent workbooks (group triple P)	1,400
Family workbooks (stepping stones triple P)	185
Videos	519
Wall charts (GPs)	170
Practitioner kits	20
Practitioner selected kits	18
Posters	1,000
Laminated tip sheets (libraries)	220
Information kits	500
Seminar flyers	360,000
Group flyers	105,000
Information kits: GPs	80
Newsletters (Professionals)	45,000
Newsletters (Parents)	112,000

($\chi^2 = 411.13$, $p < .001$), and more than three times as many parents in the TPS (7.5%) as in the CAU (2.1%) condition had participated in a Triple P intervention ($\chi^2 = 48.93$, $p < .001$).

Population Level Child Outcomes

Change over time on child outcome measures for both the TPS and CAU conditions is presented in Table 4. At Time 1, a significantly greater proportion of children in the TPS condition (15.3%) were clinically elevated on *SDQ Emotional Symptoms* than in the CAU condition (12.1%, OR = 1.314, CI = 1.07, 1.62). From pre- to post-intervention in the TPS condition, the proportion of children who were clinically elevated on *SDQ Emotional Symptoms* decreased significantly to 12.6% (OR = 0.803, CI = 0.653, 0.988), whereas in the CAU condition, no significant change was observed (13.4%, OR = 1.128, CI = 0.909, 1.398). Thus, pre- to post-intervention improvements for *SDQ Emotional Symptoms* between the conditions was significantly greater for the TPS condition than the CAU condition (Tarone's $\chi^2 = 4.969$, $p = .026$).

Table 4 Proportion of children clinically elevated on child outcome variables at Time 1 and Time 2 for the TPS and CAU conditions

	Triple P system condition (Brisbane)			Care as usual condition (Sydney/Melbourne)			Tarone's χ^2	Sig.
	% Clinical	Odds ratio (OR)	95% CI	% Clinical	Odds ratio (OR)	95% CI		
SDQ emotional								
Pre	15.3	1.00	.653	12.1	1.00	.909	4.969*	.026
Post	12.6	0.803*	.988	13.4	1.128	1.398		
SDQ conduct problems								
Pre	18.7	1.00	.685	16.8	1.00	.661	.036	.850
Post	16.0	0.828	1.001	14.0	.806*	.822		
SDQ hyperactivity								
Pre	20.5	1.00	.787	15.9	1.00	.764	.006	.940
Post	19.6	.941	1.125	14.9	.932	1.136		
SDQ peer problems								
Pre	13.1	1.00	.621	14.0	1.00	.699	.470	.493
Post	10.5	.776*	.970	12.3	.864	1.068		
SDQ prosocial scale								
Pre	3.4	1.00	.569	4.2	1.00	.613	.013	.910
Post	2.9	.857	1.291	3.7	.885	1.277		
SDQ total difficulties								
Pre	13.9	1.00	.608	9.7	1.00	.855	4.783*	.029
Post	10.9	.757*	.941	10.4	1.085	1.377		
	% Yes	Odds ratio (OR)	95% CI	% Yes	Odds ratio	95% CI	Tarone's χ^2	Sig.
Behav./Emot. problems								
Pre	32.5	1.00	.644	22.7	1.00	.658	.119	.730
Post	26.7	.754*	.883	18.7	.787*	.940		

* Signifies a statistically significant odds ratio or Tarone's statistic at $p = .05$

Similarly, at Time 1, a significantly greater proportion of children in the TPS condition (13.9%) were clinically elevated on *SDQ Total Difficulties* than in the CAU condition (9.7%, OR = 1.514, CI = 1.21, 1.90). In the TPS condition, the proportion of children who were clinically elevated on *SDQ Total Difficulties* decreased significantly from Time 1 to Time 2 to 10.9% (OR = 0.757, CI = 0.608, 0.941), whereas in the CAU condition the proportion did not change significantly (10.4%, OR = 1.085, CI = 0.855, 1.377). Thus, improvements over time in the proportion of children who were clinically elevated on *SDQ Total Difficulties* were significantly greater for the TPS condition than the CAU condition (Tarone's $\chi^2 = 4.783$, $p = .029$).

For *SDQ Conduct Problems*, no difference was found at Time 1 between the TPS (18.7%) and CAU (16.8%) conditions in the proportion of children clinically elevated (OR = 1.138, CI = 0.943, 1.372). From pre- to post-intervention in the CAU condition, the proportion of children who were clinically elevated actually decreased significantly to 14.0% (OR = 0.806, CI = 0.661, 0.822), whereas in the TPS condition, the proportion decreased to 16.0%, but only approached significance (OR = 0.82, CI = .685, 1.001). When the equality of the two odds ratios was tested, odds ratios for Time 1 and Time 2 did not improve significantly (Tarone's $\chi^2 = 0.036$, *ns*).

For *SDQ Peer Problems*, no difference was found at Time 1 between the TPS (13.1%) and CAU (14.0%) conditions in the proportion of children in the clinical range (OR = 0.924, CI = 0.750, 1.139). Despite a significant decrease in the proportion of children clinically elevated on *SDQ Peer Problems* in the TPS condition to 10.5% (OR = 0.776, CI = 0.621, 0.970), and no such significant change in the CAU condition (OR = 0.864, CI = 0.699, 1.068), the test of the equality of the two odds ratios revealed that they were not significantly different between the conditions (Tarone's $\chi^2 = 0.470$, *ns*).

At Time 1, a significantly smaller proportion of children in the CAU condition (15.9%) were clinically elevated on *SDQ Hyperactivity* than in the TPS (20.5%) condition (OR = .729, CI = 0.605, 0.879). No significant changes were observed over time for the TPS or CAU condition on *Hyperactivity;* accordingly, the difference observed at Time 1 remained at Time 2 (OR = .722, CI = 0.596, 0.874).

No significant difference was found between the TPS and CAU conditions at Time 1 on the *SDQ Prosocial Scale* (OR = 1.245 CI = 0.854, 1.814) and further, no change over time was observed in either condition.

At Time 1, significantly fewer children in the CAU condition (22.7%) than in the TPS condition (32.5%) were reported by parents to have experienced *Behavioral and Emotional Problems* in the previous six months (OR = 0.607, CI = 0.516, 0.715). Between Time 1 and Time 2, the proportion of children with *Behavioral and Emotional Problems* decreased significantly to 26.7% (OR = 0.754, CI = 0.644, 0.883) in the TPS condition and also decreased significantly to 18.7% in the CAU condition (OR = 0.787, CI = 0.658, 0.940). However, no significant difference was observed between the conditions in the level of change over time (Tarone's $\chi^2 = 0.119$, *ns*).

Population Level Parent Outcomes

Changes in the parent outcome measures (e.g., depression, stress) from Time 1 to Time 2 are provided in Table 5. At Time 1, a significantly greater proportion of parents in the TPS condition (26.7%) were high scorers on *Depression* than in the CAU (19.1%) condition (OR = 1.537, CI = 1.294, 1.826). From Time 1 to Time 2, the proportion of parents in the TPS condition with a 'high' score for depression decreased significantly to 19.7% (OR = .676, CI = 0.570, 0.802), while in the CAU condition, no change over time was observed (18.6%, OR = .963, CI = 0.802, 1.157). Thus, the pre- to post-intervention improvement in *Depression* scores was significantly greater for the TPS condition than the CAU condition (Tarone's $\chi^2 = 7.673$, $p = .006$).

At Time 1, a significantly greater proportion of parents in the TPS condition (58.2%) were high scorers on *Stress* than in the CAU (45.4%) condition (OR = 1.673, CI = 1.448, 1.933). From Time 1 to Time 2, the proportion of parents in the TPS condition with a score of 'high' on *Stress* did not change (56.1%, OR = .920, CI = .796, 1.064) while in the CAU condition, the proportion increased significantly to 49% (OR = 1.154, CI = 1.00, 1.332). Thus, the increase in *Stress* over time was significantly greater for the CAU condition than the TPS condition (Tarone's $\chi^2 = 4.734$, $p = .030$).

No significant difference was found at Time 1 between the conditions for *Confidence* (OR = .558, CI = 0.163, 1.910), nor for *Support* (OR = .929, CI = 0.805, 1.072). Furthermore, no significant changes were observed from Time 1 to Time 2 in the proportion of parents who were high scorers on *Confidence*, nor on *Support*.

Table 5 Parent outcome measures at Time 1 and Time 2 for the TPS and CAU conditions

	Triple P system condition (Brisbane)			Care as usual condition (Sydney/Melbourne)			Tarone's χ^2	Sig.
	% High	Odds ratio	95% CI	% High	Odds ratio	95% CI		
Depression								
Pre	26.70	1	.570	19.10	1	0.802	7.673**	0.006
Post	19.70	0.676*	.802	18.60	0.963	1.157		
Stress								
Pre	58.20	1	.796	45.40	1	1.00	4.734*	0.03
Post	56.10	0.92	1.064	49.00	1.154*	1.332		
Social support								
Pre	52.40	1	0.836	50.60	1	0.895	0.435	0.51
Post	51.50	0.965	1.113	51.40	1.003	1.192		
Confidence								
Pre	99.70	1	0.148	99.50	1	0.263	0.193	0.661
Post	99.40	0.491	1.634	99.30	0.694	1.827		

* Signifies a statistically significant odds ratio or Tarone's statistic at $p = .05$

** Signifies a statistically significant odds ratio or Tarone's statistic at $p = .01$

Parenting Behavior Measures

Changes in the likeliness of parents using different parenting strategies (e.g., positive parenting) from Time 1 to Time 2 are provided in Table 6. At Time 1, a significantly greater proportion of parents in the TPS condition (94.2%) were likely to use *Appropriate Parenting Strategies for Child Misbehavior* than in the CAU (87.5%) condition (OR = 2.323, CI = 1.779, 3.033). From Time 1 to Time 2, the proportion of parents in the TPS condition likely to use these strategies did not change (93.6%, OR = .904, CI = .668, 1.223), while in the CAU condition, the proportion increased significantly to 90.5% (OR = 1.362, CI = 1.079, 1.719). Thus, the pre- to post-intervention improvement in the proportion of parents likely to engage in appropriate strategies for child misbehavior was significantly greater for the CAU condition than the TPS condition (Tarone's $\chi^2 = 4.449$, $p = .035$).

Table 6 Proportion of parents likely or very likely to engage in different parenting strategies at Time 1 and Time 2 for the TPS and CAU conditions

	Triple P system condition (Brisbane)			Care as usual condition (Sydney/Melbourne)			Tarone's χ^2	Sig.
	% Likely/ Very likely	Odds ratio (OR)	95% CI	% Likely or Very likely	Odds ratio (OR)	95% CI		
Appropriate parenting for misbehavior								
Pre	94.2	1	.668	87.5	1	1.079	4.449*	0.035
Post	93.6	0.904	1.223	90.5	1.362*	1.719		
Inappropriate parenting for misbehavior								
Pre	29.60	1	0.506	26.80	1	0.651	4.24*	0.039
Post	20.10	.599*	0.71	22.00	.770*	0.91		
Appropriate parenting for anxious/fearful behavior								
Pre	74.40	1	1.024	77.20	1	.999	0.019	0.89
Post	77.90	1.212*	1.434	80.10	1.191	1.491		
Inappropriate parenting for anxious/fearful behavior								
Pre	97.30	1	.600	97.50	1	.647	0.101	0.75
Post	97.10	0.926	1.430	97.50	1.027	1.629		
Positive parenting								
Pre	99.80	1	.202	99.50	1	.212	0.589	0.443
Post	99.80	1.003	4.976	98.90	0.496	1.163		
	% High	Odds ratio (OR)	95% CI	% High	Odds ratio (OR)	95% CI	Tarone's χ^2	Sig.
Parenting consistency								
Pre	91.10	1	0.808	86.10	1	.915	0.243	0.622
Post	91.40	1.04	1.34	87.50	1.13	1.397		

* Signifies a statistically significant odds ratio or Tarone's statistic at $p = .05$

At Time 1, there was no significant difference in the proportion of parents likely to use *Inappropriate Parenting Strategies for Child Misbehavior* between the TPS (29.6%) and Control (26.8%) conditions (OR = .874, CI = 0.745, 1.025). From Time 1 to Time 2, the proportion of parents in the TPS condition likely to use such strategies decreased significantly to 20.1% (OR = .599, CI = 0.506, 0.710). Similarly, in the CAU condition the proportion decreased significantly to 22.0% (OR = .770, CI = 0.651, 0.910). However, the magnitude of pre- to post-intervention change between the conditions was significantly greater for the TPS condition than the CAU condition (Tarone's $\chi^2 = 4.24$, $p = .039$).

No significant difference was found between the TPS (74.4%) and CAU (77.2%) conditions at Time 1 for *Appropriate Parenting for Fearful/Anxious Behavior* (OR = 1.164, CI = 0.984, 1.377). Despite a significant increase in the proportion of parents in the TPS condition using these strategies to 77.9% (OR = 1.212, CI = 1.024, 1.434), and no such significant change in the CAU condition (80.1%, OR = 1.191, CI = 0.999, 1.491), the test of the equality of the two odds ratios revealed that they were not significantly different between the conditions (Tarone's $\chi^2 = 0.019$, *ns*).

No significant difference was found between the conditions at Time 1 for *Positive Parenting* (OR = .375, CI = 0.099, 1.415) or for *Inappropriate Parenting for Fearful/Anxious Behavior* (OR = 1.077, CI = 0.684, 1.693). Furthermore, no significant change was observed over time for either the TPS or CAU condition on either parenting behavior variables.

At Time 1, a significantly smaller proportion of parents in the CAU condition (86.1%) were high scorers on *Parenting Consistency* than in the TPS (91.1%) condition (OR = .608, CI = 0.483, 0.766). No significant changes were observed over time for the TPS or CAU condition on *Consistency* and, accordingly, the significant difference observed at Time 1 remained at Time 2 (OR = .661, CI = 0.522, 0.838).

Discussion

This is the first study to our knowledge to document the population level effects of a multi-level public health approach to parenting on indices of child mental health and parenting. The implementation of the TPS was associated with significantly greater reductions in emotional problems and psychosocial difficulties in both children and their parents than in the CAU condition. Consistent with hypothesis 1, following the intervention parents in the TPS condition reported greater reductions in SDQ total scores. This finding supports earlier reports by Zubrick et al. (2005), Heinrichs et al. (2006) and confirmed our prediction that the systemic introduction of a coordinated across agency system of parenting support can produce meaningful population level effects. The intervention effects were for overall psychosocial problems and emotional difficulties, but not for conduct problems, hyperactivity and peer relationship difficulties.

It is unclear why intervention effects were confined to total psychosocial difficulties and emotional problems. One possibility is that as most parents exposed

to Triple P had relatively "light touch" interventions such as exposure to media messages on positive parenting, the Triple P seminar program and the Triple P Newsletter. Some parents with more severe problems may have required, but not received, a more intensive program variant such as the Group, Standard, or Enhanced Triple P. Another possibility is that parents receiving a more intensive intervention did not participate in the household telephone survey.

Another beneficial effect of the intervention was its impact on parent functioning. Although individual studies have previously shown that Triple P interventions improve some form of parental depression (Sanders and McFarland 2000), no studies have shown an impact on parental depression at a population level. Hence, findings that parental reports of depression reduced by 26% while the CAU group showed no change and the CAU reported significant increases in stress while the TPS group reported no change are encouraging.

Similarly, there was a 32% reduction in coercive parenting in the Triple P communities. Although there was a reduction in coercive parenting in both the TPS and CAU conditions, there was a 14% greater reduction in the Triple P communities than in the CAU communities. This finding is important as Triple P has been advocated as a child maltreatment prevention strategy (Sanders and Cann 2002) and the detection of meaningful population level effects on negative parenting practices has not been previously reported. These findings support those from another recent population level trial using the TPS that has shown significant differences on various statutory indices of child maltreatment in counties implementing Triple P compared to CAU counties (Prinz et al. under review).

Contrary to our hypotheses, we were unable to detect population level effects favoring Triple P on parental reports of consistency and self-efficacy. We suspect this may be due to ceiling or floor effects on these measures where base rate levels on both measures were already high in both intervention and control communities. Our method of assessing these constructs may have some implicit social desirability response, therefore making them less useful in population level evaluations such as this.

The findings must be interpreted in the light of the limitations of the study. First, our inability to randomize communities to conditions precludes unambiguous causal inferences regarding the observed TPS effects. Despite these limitations, we felt that a careful service-based evaluation using population level auditing similar to that which has been used to monitor the effects of other public health interventions targeting smoking, nutrition and physical activity, constituted a robust field trial of the intervention under usual "real world" conditions of delivery, rather than at the level of individual cases. Second, all outcomes measures reported here were based on household survey data. It was not possible to conduct independent observations or assessments or to track individual children over time. Indeed, in contrast to a typical randomized controlled trial, the aim was to examine effects in an entire population of parents rather than just those receiving interventions. Although telephone surveys produced samples at each measurement occasion in each group of communities that were sociodemographically similar in many respects, they tend to under-represent indigenous parents, parents who could not speak English, and those who do not have a telephone. We considered using a primary evaluation method that

relied on use of outcome data provided by individual service providers and their clients, but we rejected this approach due to our inability to get similar data in comparison communities, and also because service providers using different levels of the TPS use somewhat different measures. Also, the measurement plan needed to be achievable with a limited evaluation budget and involve a level of participant burden that would not be viewed as too onerous, as we were unable to pay parents for their participation in data collection.

Although beyond the scope of the present paper and not the primary focus of the research, we also sought to clarify the individual level effects of interventions employed in a subset of parents who were exposed to specific Triple P interventions. These substudies were used to benchmark against prior clinical trial results. Individual client outcomes for families participating in Group Triple P and a newly developed variant of Triple P (the level 2 Triple P seminar series) were employed. In both cases there were significant improvements on child and parent outcome measures (see Sanders et al. under review).

The major implication from this large-scale implementation of Triple P as a public health intervention targeting parents of young children is that a relatively small increase in parental exposure to an evidence-based program was associated with a significant population level reduction in problems with children and reduced parental distress at the transition to school period. These population level effects have not been previously demonstrated and point to the value of further trials using cluster randomization to replicate and extend these finding and to rule out alternative explanations for change. The present findings show the feasibility of targeting dysfunctional parenting practices in a cost-effective manner and the feasibility and public acceptance of an approach that blends universal and targeted program elements in a comprehensive multilevel strategy. Such an approach can be blended alongside more targeted outreach to hard to engage families or parents whose parenting problems are complicated by mental health problems, relationship conflict or other forms of adversity (e.g. poverty). The blending of universal and targeted intervention components has the advantage of creating a more generally supportive community environment for raising children which may in turn improve the maintenance of gains over time.

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