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The Transition to School Project: Results from the classroom

Philippa McTaggart and Matthew R. Sanders

Parenting and Family Support Centre, University of Queensland, Brisbane, Australia

Abstract

Conduct problems in children are common, and are associated with significant costs to the family, schools, and society at large. Behavioural Family Intervention (BFI), which targets family interactions, is known to be one of the most effective interventions for the management of child behaviour problems. The school environment is an important aspect of a child's life, and the degree to which parenting interventions impact on the children's classroom behaviour has not been adequately assessed. The present research aimed to evaluate the effectiveness of a parenting intervention, namely The Positive Parenting Program – Triple P, in reducing child behaviour problems in the classroom. Year One teachers at 25 state primary schools in Brisbane completed a standardised teacher report measure of child behaviour on all children in their classrooms (n=495 children in control schools, n=490 children at intervention schools). Compared to control schools, the levels of teacher reported conduct problems were significantly lower in the intervention schools. The results of this study provide evidence that a parent training program such as Triple P can be effective in reducing the impact of child behaviour problems in the classroom.

Keywords
Parenting, classroom behaviour, teachers, Behavioural Family Intervention (BFI)

Introduction

The development of child conduct problems has consistently been linked with poor parental supervision and erratic child management strategies. For this reason, training parents to use more effective parenting strategies would seem an effective way to reduce these problems (Farrington, 1994; Webster-Stratton & Hammond, 1997). Such parent training programs are known as Behavioural Family Interventions (BFI) and are acknowledged as being the most effective, well researched and cost effective method of preventing child behaviour problems (Christensen, Johnson, Phillips & Glasgow, 1980; Kazdin, 1987; Kazdin, 1993; Serketich & Dumas, 1996; Taylor & Biglan, 1998).

There are several key features of BFI interventions, most significantly their focus on training parents to implement specific behaviours in the home. Little contact between the therapist and child is typically involved in these interventions, although in some programs children are required to attend some sessions to assist parents in practising their skills (Kazdin, 1996; Sanders, Markie-Dadds, Tully, & Bor, 2000). Generally, parents are taught a number of skills, such as the contingent use of praise, specific instructions, planned ignoring and non-exclusionary and exclusionary time out. The aim is to provide parents with instruction in the use of social learning and behavioural principles to enable them to generalise their skills to other settings and children (Kazdin, 1996). As such, the focus is not on conduct problems themselves,

Contact: Philippa McTaggart, Parenting and Family Support Centre, University of Queensland, St Lucia, Queensland, Australia, 4072 philippa@psy.uq.edu.au
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but on increasing pro-social behaviour (McMahon, 1999). The use of active skills training is encouraged in most programs, with parents rehearsing skills and being provided with modelling, feedback and homework tasks by the therapist. Usually, parents are encouraged to monitor their children's behaviour throughout the intervention using observation, providing useful information for the parent, but also valuable research data. The underlying model is one of collaboration that sees a non-blaming, supporting and reciprocal relationship between therapist and parent as essential to success (Webster-Stratton & Herbert, 1993). The rationale is that a treatment approach that encourages parents to develop solutions to their problems themselves will enhance parents' sense of competency. Parental self-efficacy is seen as a mediating factor between a parent's theoretical knowledge and their behaviour, hence increasing the long-term success of treatment.

As children commence academic learning, new risk factors relating to school performance and peer relationships can increase the likelihood of a child developing conduct problems and compromise the effects of earlier intervention. The well being of children, their families and the school community depends on an effective partnership between home and school. After the age of five or six years children spend around half their waking hours at school, and it is in this context that much of their social and cognitive development occurs (Rutter, Maughan, Mortimore & Ouston, 1979; Sanders, Gooley & Nicholson, 2000). At the time that children enter the school system they face new challenges in social-behavioural adjustment. Specifically, they must learn to adjust to teacher and peer interactions. Children who fail to adjust to either of these interactions are at increased risk of developing conduct problems and of later school failure. Failure to adjust to both domains has a more negative impact on the long-term prognosis (Walker, Colvin & Ramsey, 1995).

There are a number of reasons for the development of conduct problems in the school setting. These problems are generally an extension of the conduct problems seen in the home, and the risk factors that contribute to these problems at home also operate in the classroom. Often, for children who have displayed conduct problems at home, the introduction of the classroom setting provides further opportunities to behave in a disruptive manner (Patterson, DeBaryshe & Ramsey, 1989). In most cases, children displaying antisocial behaviours prior to the commencement of school make relatively poor adjustments to the school setting. This is generally because these children commence school with a negative attitude towards schooling, a limited repertoire of co-operative behaviours, and a tendency to use coercive tactics to control and manipulate others (Walker et al., 1995). These behaviours place a child at significant risk for rejection by peers and teachers that is in turn associated with academic failure and the tendency to associate with similarly rejected children.

Interventions aimed at enhancing family relationships and reducing the chaotic environment in which many at-risk children live is seen by researchers as the best option for assisting these children to achieve at school. Some of the most effective interventions for reducing conduct problems are those that use the school as a mechanism for accessing non-educational supports such as parents (Walker et al., 1995). Prevention programs which are conducted with the school as the vehicle for accessing parents will be most effective if they are universal, and hence offer some benefit to all students rather than only those already at risk (Blechman, 1996; Kamps & Tankersley, 1996). The screening of children to determine level of risk and the provision of services to only those who meet the risk criteria stigmatises the services provided and may result in many families missing out on services because their child is not yet showing a clinical level of behaviour problems.

Schools provide the ideal venue from which to launch parent-training programs (Miller, Brehm & Whitehouse, 1998). They allow access to all parents and children within a given area, and hence provide a vehicle for population wide dissemination of information and intervention (Walker et al., 1995). If targeted at certain key transition periods (i.e. the commencement of schooling) the motivation of the parents may be

higher than at a later time. If the aim is to integrate parent training into the general school climate, Walker et al. (1995) claim 'infusing effective interventions for antisocial behaviour into the school's ongoing operations requires sensitivity, tact, and careful attention to a host of details' (p32). To be successful it is vital that the program is not imposed on the school, but that the school sees it as their own initiative and hence have ownership of it (Offord, 1996). A program must be seen to be cost effective and feasible to run in the long term to be considered sustainable (Offord, 1996).

BFI has shown impressive results in terms of improved behaviour at home. In general, BFI evaluation research has shown that parents report high levels of overall satisfaction with the program (McMahon, 1999; Webster-Stratton, 1993; Williams, Zubrick, Silburn & Sanders, 1997). More specifically, these parents generally feel that the specific techniques they have been taught (e.g. the use of time out) are effective and acceptable to them (McMahon & Forehand, 1983; Webster-Stratton, 1989). Positive short-term treatment outcomes have consistently been reported, with home observations indicating that parents who undergo parent training are able to reduce their children's aggressive behaviour by 20%-60% (Patterson, 1982; Patterson, Chamberlain & Reid, 1982; Dishion, Patterson & Kavanah, 1992; Patterson, Reid & Dishion, 1998; Webster-Stratton, 1985; Willams et al., 1997). Parents generally report that the intervention has resulted in statistically significant reductions in the non-compliance of their child (e.g., Patterson, Cobb & Ray, 1973; Webster-Stratton, 1981; Wierson & Forehand, 1994; Williams et al., 1997). These treatment gains are generally still evident at one-year follow-up (e.g. Webster-Stratton, 1996).

Despite these impressive results in the home, there is little evidence to suggest that these improvements in children's behaviour generalise to school. There are a small number of studies that have examined the effects of parent training on at-school behaviour, but few have found any improvements in school behaviour following parent training (Breiner & Forehand, 1981; Webster-Stratton, 1993; Webster-Stratton, 1998). The lack of generalisation of results to the classroom reported by the majority of studies may be, as McNeil, Eyberg, Eisenstadt, Newcomb & Funderburk (1991) suggest, due to the parent training programs that are implemented targeting specific at-home behaviours rather than an improvement in general child compliance and parent-child relationships. Moreover, in the studies where a lack of generalisation to school was found, the treatment program that was implemented was generally not of proven efficacy in the home. It is unlikely that changes will occur in the school setting if the intervention is not powerful enough even to create changes at home (McNeil et al., 1991). Another possible reason for the lack of success in generalisation of treatment gains to school could be that the intervention may have come too late in the developmental pathway. Many researchers have suggested that the transition into schooling is a critical period in a child's development and that it is at this point that interventions may have the most impact (e.g., Alexander & Entwisle, 1996).

There is, however, one study that has shown evidence of generalisation to school without any intervention taking place within the school environment (McNeil, et al., 1991). This was the first controlled group study to show changes in both parent and teacher reports of child behaviour following a specific parenting intervention. Hence, the work of McNeil et al. (1991) was the first to dispute the findings of prior research that direct classroom intervention is necessary to produce significant results. The study provided Parent-Child Interaction Therapy (PCIT) to parents of children who were showing significant conduct problems. PCIT involved children and parents in two phases, both of which involved play situations and tutoring the parent in communication and behaviour management (McNeil et al., 1991). No intervention was provided in the school setting, but the results found generalisation of the improvements at home to the school, with teachers rating children's behaviour at school as significantly improved following participation in the program. The study found that generalisation of treatment effects to school occurred for existing high levels of conduct problem and oppositional behaviour. It did not

occur for hyperactivity, inattention and peer relationships.

The results of the McNeil et al. (1991) study provide important evidence for the usefulness of BFI programs in reducing behaviour problems in the classroom and further research into the area is important. However little research has been conducted extending the findings of this research and it therefore seems premature to conclude that parent training cannot generalise to children's behaviour at school.

In summary, although behavioural parent training has been shown to be extremely effective in reducing child behaviour problems in the home, evidence to support the generalisation of this improved child behaviour to the classroom has been limited and has provided conflicting information (Funderburk et al., 1998; Little & Hudson, 1998). Ultimately it is difficult to know what the link between schooling, independent of the role of the family, and the future outcome for students is (Louden, et al., 1985). Research has shown that school variables such as classroom climate and size, account for far less variance in children's scholastic achievement than family ones, with some estimates attributing only 2% to the school and around 50% to the family (Rutter, 1983).

The current paper is one in a series of publications that report on the results of the Transition to School Project on reducing the risk factors for the development of child behaviour problems, the overall behaviour of children at home, and the behaviour of children in the classroom. The current paper aims to determine the contribution of family intervention to improving children's behaviour at school. Determining the impact of parenting intervention on school behaviour is an essential step in increasing our knowledge about the generalisation of the effects of parenting intervention to the classroom, and the impact of children's home-life on their school behaviour. The current study tests the hypothesis that parent training (Triple P – The Positive Parenting Program) provided in a universal fashion to all parents at participating schools will have the effect of reducing the degree and intensity of behaviour problems shown by children in the classroom. It is hypothesised that the Triple P will result in generalisation of behaviour change to the classroom, both because of the efficacy of the program, and the general nature of its content. The research will test the statement made by Little and Hudson (1998) that it 'would be of interest to determine whether generalisation to school will also occur with [the] BFI [program of Sanders and Dadds (1993)]' (p 215).

Method

Participants

All state primary schools (n=78) in two Education Department districts of metropolitan Brisbane (Mt Gravatt and Redlands), Australia, were contacted and provided with information about the research. A series of meetings with principals and behaviour management staff from schools in the two districts were held to discuss the research program and its potential benefits for schools. In addition, school guidance and behaviour management staff in the districts provided verbal and written information about the program to principals who were unable to attend meetings. Twenty-five (32%) of these state primary schools then agreed to take part in the research. The number of year one students enrolled at these schools ranged from 10 to 115 per school (a total of 1389 students; mean number of year one students per school was 59; SD = 33). In total, there were 59 year one classes involved in the study, 6 of which were composite classes where only the year one students formed part of the study. The data were collected during the 1999 and 2000 school years.

Individual schools were paired on the basis of enrolment numbers and geographical location (in one instance two schools were combined and paired with one larger school due to the uneven number of interested schools). One school from each pair was then randomly allocated to the intervention group and the other to the control group using an Internet randomisation program (www.randomization.com). In total, 13 schools (29 year one classes) were allocated to the intervention condition and 12 schools (30 year one classes) to the wait-list control condition.

Recruitment of teachers
All teachers of year one classes at the 25 schools were asked to complete a questionnaire on each child in their class. At the intervention schools this data were collected at three time intervals (pre-intervention, post-intervention and 6-months following intervention). The follow-up data were collected during the subsequent school year, and hence by a different (Year 2) teacher. As the control group were waitlisted, and hence received the intervention following the post-intervention assessment, they were not asked to complete follow-up questionnaires 6-months after because their data would have been altered by exposure to the intervention. Complete data across all time periods were obtained from teachers at the waitlist control schools on 495 children (71% of children enrolled at those schools), and at the intervention schools on 490 children (71% of children enrolled at those schools).

Procedure

The major component of the intervention involved teaching parents positive parenting skills for enhancing desirable behaviour and managing misbehaviour. Parents in the intervention schools were exposed to this training via a universal media campaign that provided them with written tip-sheet information about parenting. In addition, parents could participate in group parent training (Triple P - Positive Parenting Program). The two levels of intervention offered in this program is consistent with the Triple P model of flexible delivery so that parents could participate in the level of intervention most suited to their personal requirements.

The teacher data, discussed in this paper, represent data on all children from the intervention schools, some of whom (n=79) had parents who participated in Group Triple P. The remaining parents (n=411) elected to access the parent information campaign only. Teachers were blind to which parents had access to the different levels of Triple P, and because no identifying information was present on teacher questionnaires it was impossible to cross-reference this to the parent data. For this reason the data that are presented in this paper refers to access to Triple P as a whole, irrespective of what level of access the individual parent may have had.

Parent information campaign
The parenting information campaign was universally provided to all parents who had children enrolled in year one at the intervention schools. This information campaign ran continuously throughout the school year and provided regular contact with the families via a brochure, letters, a poster at the school and through fortnightly school and Triple P newsletters. In addition, parents were provided with tip sheets that gave practical tips for dealing with common behaviour problems in children of this age. Interested parents enrolled in Group Triple P following receipt of this information regarding Triple P and some initial newsletters.

Group Triple P
A group format behavioural family intervention program (Group Triple P) involving approximately 9 hours of intervention was made available to parents in the intervention schools. Participation involved attending a group program of 2 hours duration once a week for four weeks. These group sessions followed the standard Level 4 Group program of Triple P (Turner, Markie-Dadds & Sanders, 1998), consisting of one two hour session once a week for four weeks followed by four 15-30 minute follow-up phone calls from Triple P facilitators. These sessions were complemented by weekly homework tasks and the viewing of a video on positive parenting. Each participating family received a copy of a parent workbook (Every Parent's Workbook for Groups) (Markie-Dadds, Turner & Sanders, 1997) at no cost. The program is designed to teach 17 core child management strategies to parents. Ten of the strategies aimed to promote positive behaviours in children and enhance their competence and development (i.e. quality time; talking with children; physical affection; praise; attention; engaging activities; setting a good example; Ask, Say, Do teaching strategies; incidental teaching; and behaviour charts). The remaining seven provide parents with strategies for managing their child's misbehaviour (i.e. setting rules; directed discussion; planned ignoring; clear, calm instructions; logical consequences; quiet

time and time out). In addition to the core behaviour management strategies, the Triple P group program teaches parents a six-step planned activities routine to enhance the generalisation and maintenance of their parenting skills (i.e. planning ahead; deciding on rules; selecting engaging activities; deciding on rewards and consequences; and holding a follow up discussion with the child). Overall, parents are taught a broad range of skills and given role-playing practice in applying these skills at home and in community settings.

Up to 12 parents enrolled in each group. Parents whose children attended the same school were placed in the same group. Groups were offered at a variety of times to suit the needs of parents, including evenings and weekends, however no childcare was available at these groups due to the limited financial and personal resources available to the project. A total of nine parenting groups were run with an average of nine parents attending each one. In several instances, two schools combined to run one group due to small numbers of year one parents at their school. Guidance officers, non year-one teachers, psychologists and trainee educational psychologists were recruited and trained to deliver the Group Triple P intervention in the participating schools. Participation was free of charge to the parents. Each individual school paid for their staff to be trained in conducting Triple P Groups and also paid for the resources (*Every Parents Workbook for Groups*). This training was conducted by the Parenting and Family Support Centre at the University of Queensland by an accredited trainer.

Protocol adherence

Several steps were undertaken to ensure that the session protocols of Triple P were adhered to in the delivery of the program. All facilitators undertook the standardised Triple P Training program and delivered the program using treatment manuals. Facilitators completed detailed self-report checklists about their adherence to the protocol, had a co-facilitator present at the group, and participated in ongoing group supervision with a psychologist during the program.

Measures

Teacher data were collected at pre-intervention, post-intervention and 6-month follow up to evaluate the effects of the intervention on children's behaviour in class. Classroom behaviour was assessed via teacher reports of child behaviour using the Sutter-Eyberg Student Behaviour Inventory (SESBI). The SESBI is a 36-item teacher version of the Eyberg Child Behaviour Inventory, measuring the number (problem scale) and intensity (intensity scale) of child behaviour problems in the classroom, including aggressive, oppositional, attentional and disruptive behaviours, as well as problems with teachers, peers or self (Funderburk, et al., 1998; McNeil, et al., 1991). The scale has excellent internal consistency (α=0.98 for intensity scale and α=0.96 for problem scale) and good test-retest reliability (r=0.90 for intensity scale and r=0.89 for problem scale) (Burns, Walsh & Owen, 1995; Funderburk et al., 1998). Normative data for the SESBI has been provided by Burns and Patterson (2001) and this data provide cut-offs at various percentile levels. The 80th percentile has been used in this study as indicating clinically elevated levels of child behaviour problems (SESBI problem scale = 6 for boys and 3 for girls; SESBI intensity scale = 94 for boys and 72 for girls).

Statistical analysis

The research was conducted using 12 matched clusters (13 intervention and 12 control schools) and three assessment occasions (pre-intervention, post-intervention and 6-month follow-up). Teacher data were gathered at three time points for the intervention group (pre, post and follow-up) and at two data points for the control group (pre and post). A comparison of the intervention and control groups was made for the pre- and post-intervention data to assess differences in these groups as a result of the intervention. Teacher data consisted of Sutter-Eyberg Child Behaviour Inventory (SESBI) scores for both intensity and frequency of child behaviour problems. All analysis of teacher data has been conducted using a 2 group (intervention vs control) x 2 time (pre vs post) ANCOVA where the pre-assessment data were used as a co-variate. Data were obtained at 6-month follow-

up for teachers in the intervention group. These data were used to assess for linearity from pre- to post- to follow-up assessments via SPSS GLM repeated measures procedure.

The Clinically Reliable Change Index was also calculated and compared across the two groups to assess whether scores on the SESBI had changed significantly more in the intervention than the control condition. The Clinically Reliable Change Index was calculated according to the procedure outlined by Jacobson and Truax (1991) and chi-square analysis was then conducted to test whether there was greater than expected levels of clinically reliable change in either of the groups.

Results

Details of Teacher data for child disruptive behaviour (SESBI problem and intensity scores) are shown in Table 1. SESBI problem scale data showed a significant main effect for condition when the pre data were used as a covariate. The adjusted post-intervention means for the SESBI problem scale were 1.4 for the intervention group and 1.9 for the control group. While the number of student behaviour problems reported by teachers in the control group remained the same over time, students in the intervention group became significantly less problematic. On the SESBI intensity scale there was also a significant main effect for condition after controlling for pre-intervention differences. The adjusted means for the SESBI intensity scale were 63.8 for the intervention group and 67.6 for the control group. While students at the intervention schools improved slightly from pre- to post-assessment, the behaviour of the students in the control group became significantly more disruptive at post intervention.

SESBI scores showed a descending trend from pre to post to follow-up for the problem scale where there was a significant main effect for time, F=6.20(1,280), p<0.01. However, on the Intensity scale the main effect for time was non-significant, F=0.36(1,280), *n.s.*, as the scores did not decline in a linear fashion across the three data points.

Initial inspection of the data showed that 9% of teachers reported a clinical number of child behaviour problems in children in their class, while 15% reported clinical intensity of problems prior to the intervention. Following intervention, there were significantly more children who made clinically reliable change on the SESBI intensity scale in the schools receiving intervention than at the waitlist control schools (5% compared with 2%, χ^2(1, N=984)=5.77, p<.05). Standardised residuals showed that number of children making clinically reliable change were under-represented in the control group and over-represented in the intervention group. No differences were evident on the SESBI problem scale. Given a pre-intervention level of 15% of children being clinical, a post-intervention drop of 5% compared to 2% equates to 33% versus 13% of children showing clinical changes.

Table 1. Teacher reports of child disruptive behaviour

Classroom Variable	**Intervention group N=490**						**Control group N=494**						
	pre		**post**		**Follow-up**		**pre**		**post**		**Follow-up**		**F[a]**
	M	*SD*	M	*SD*	M	*SD*	M	*SD*	M	*SD*	M	*SD*	
SESBI problem	2.0	*5.0*	1.5	*4.0*	1.5	*4.3*	1.8	*3.9*	1.8	*4.8*	--	--	4.24*
SESBI intensity	66.4	*33.7*	65.2	*34.9*	65.4	*35.6*	63.0	*28.8*	66.3	*32.7*	--	--	7.89**

*Note: a=ANCOVA F value for main effect of group membership when the pre-data is held constant (for the linear trend from pre to post to follow-up see the text). * = p<0.05; **=p<0.01; --=no follow-up data collected for control group; SESBI = Sutter-Eyberg Student Behaviour Inventory*

Discussion

The hypothesis of the study predicted that the parent training intervention (Triple P) would result in improved school behaviour. This hypothesis was confirmed. Teachers at the intervention schools reported a significantly greater improvement in children's behaviour than did teachers at control schools. The improved school behaviour in intervention schools was sustained at 6-month follow-up. Statistically significant results can be misleading in that seemingly small changes can often be deemed 'significant'. For this reason, the current research also examined the degree of clinically reliable change that resulted from the intervention.

In addition to statistically significant reductions in child behaviour problems in the classroom, there were significantly greater numbers of children whose behaviour improved sufficiently to achieve clinically reliable change in the intervention schools than the control schools. This finding is clinically important as it is known that children who display conduct problems at both home and school have a poor prognosis (Walker et al., 1995). The reduction of child behaviour problems in the classroom is an important step in reducing the risk factors for children developing serious behaviour problems.

The results for child behaviour problems in the classroom show that the behaviour of children in the control condition become mores problematic across time, not the expected result of the behaviour of the intervention group improving. That the statistical analysis compared the post-intervention data while holding the pre-intervention data as a co-variate, and still obtained significant results, suggests that the intervention had the effect of preventing the development of conduct problems in children. Moreover, the deterioration of the behaviour of children at the control schools suggests a significant prevention effect of the intervention.

This study provides evidence that the universal dissemination of information on parenting, and the availability of parent training to all interested parents, can have an impact on the in-class behaviour of students. This finding supports McNeil et al. (1991) who reported similar improvements in classroom behaviour after parenting interventions. The current study overcame some of the methodological problems of the McNeil et al. (1991) study, such as teachers being aware which children received intervention, and provided important information regarding the usefulness of parent training within the school context. The reasons why this study achieved a change in children's classroom behaviour while the majority of other studies did not is worth considering. As with the results of the McNeil et al. (1991) study, this is likely to be because of the known efficacy of the program used, and the fact that the Triple P targets general improvements in the parent child relationship and in child compliance as well as improvements in specific behaviours.

The outcomes of this study, particularly in relation to the issues of implementation on a large scale, suggest that the widespread offer of a universal population approach to preventing childhood conduct problem through BFI is feasible. In the present situation some schools within the catchment area chose not to participate. For these schools, the value of preventative programs was not clear and it was difficult to clarify this in the absence of data to suggest that prevention programs that target parents are effective and may save money in the long term.

This research trial adds valuable information to support the usefulness, and immediate impact of universal prevention approaches within the school context. This project was conducted as a trial of the effectiveness of schools having the ownership for conducting Triple P. This meant that the costs of running the program were necessarily kept to a minimum. Each school funded the training of their staff in facilitating Triple P groups and the costs of the Triple P materials (video, facilitator manual, workbooks for each participating family). In addition, the schools funded the copying of the newsletter information that was produced free of charge by the researcher. The success of the project in reducing the risk factors for child behaviour problems, and lowering the levels of behaviour problems in the classroom shows that the universal offer of Triple P in schools is feasible

provided the school community is willing to take ownership and commit resources such as teacher time to the program.

While the study provided support for universal prevention approaches to parent training being effective, it has a number of limitations. Firstly, while the intervention was made available to every parent at the school, and all parents received the media campaign, parents in the intervention schools could not be randomly assigned to participate in Group Triple P. Consistent with the multilevel approach of Triple P, parents could self-select to either participate in Triple P groups or to receive newsletters alone. This self-selection into the group program presents a potential bias in terms of the motivation of parents who elected to enrol in Triple P Groups and the general representativeness of the sample. It is important that future research examines the degree to which high-need families are engaged in parent training and potential processes for enhancing this engagement.

Being an effectiveness trial that was reliant on the school's ownership of the recruitment process, there was limited funding available in the current trial for recruitment. The recruitment strategies used by schools were as intensive as was judged to be feasible. The suggestions of authors such as Cunningham (1996) were used to increase parental participation in the groups. For example, groups were held in convenient locations (usually the child's school), a widespread media campaign and outreach strategy was used, and the program was an evidence-based intervention. Recruitment rates into groups may have been increased by the inclusion of more direct approaches to all parents, such as personal invitations through telephone contact. This was outside of the scope of the present study, but should be considered in further trials.

To assess the longer term prevention effects of Triple P, longer periods of follow-up are necessary where parents are assessed over several years to determine the stability of child behaviour changes in the classroom. This was outside of the scope of the current study, but is an important avenue for future research.

The encouraging results seen in terms of improvement in children's classroom behaviour were possibly a result of teacher's classroom management being influenced by the school's involvement in Triple P. While individual classroom teachers did not conduct the groups, they did have access to the written information about Triple P and were exposed to the promotional campaign to recruit parents. It would be useful for future research to include an independent assessment of teacher behaviour to rule out the possibility that improved child behaviour was a consequence of differences in teachers' classroom management strategies, rather than a reduction in family risk factors such as dysfunctional parenting style.

A further possibility is that the teachers at the intervention schools had different expectations for change than the teachers in the control condition. Although teachers were blind as to the specific children in their class whose parents had taken part in Triple P it could be argued that they expected the behaviour of their class to improve as a consequence of the school's involvement in the program. However, similar to the research of Gross, Fogg, Webster-Stratton et al. (2003), the fact that the behaviour of children in the control group became worse from pre- to post-intervention argues against teacher expectations for improvement as an explanation. Teachers' expectations are generally for an improvement in children's behaviour over the course of year one due to maturational changes. If expectations were the reason for the improvements seen in the classroom the data would show the intervention group improving over time with the control group remaining constant rather than worsening behaviour of the control group.

Overall, this study has provided further evidence to support the usefulness of a universal offer of prevention programs that target family risk factors for the development of later conduct problems in children. The study has shown that not only did important risk factors such as dysfunctional parenting style reduce as a result of the intervention, but also that children's behaviour showed a subsequent change at school. The widespread implementation of a universal population program aimed at the

prevention of the risk factors of conduct disorders has shown to be both feasible and clinically useful. This is an important step towards increasing the utilisation of parenting programs in clinical practice.

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