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Preventing Toddler Externalising Behaviour Problems: Pilot Evaluation of a Universal Parenting Program

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Introduction

Externalising behaviour problems such as oppositional defiance, hyperactivity and aggression are common in childhood. Clinically significant problems occur in up to 14% of children, while up to 50% experience subclinical levels of problems (Sawyer *et al*, 2000). If left untreated, about 50% of preschool externalising behaviour problems persist (Campbell, 1995). Long-term *sequelae* include poor peer relationships, school drop-out, unemployment, conduct disorder, drug misuse and emotional problems (Coie & Dodge, 1998; Stattin & Magnusson, 1996; Stewart-Brown, 1998). Families of children with externalising problems are more likely to experience maternal depression, family stress and family breakdown (Campbell, 1995). In addition, the pathways to juvenile crime often begin with early externalising problems, and a third of all crime committed in Australia is by juveniles, at an estimated cost of AUD $1.5 billion per year (Bor *et al*, 2001).

Two recent systematic reviews have shown that group parenting programs can successfully reduce established

A B S T R A C T

Universal parenting programs could offer effective prevention for externalising behaviour problems in children. Demonstration of effectiveness requires formal trials, but feasibility data are essential to fund such trials. We report feasibility data from a universal prevention program on parenting, delivered to 57 mothers of infants at their eight-month visit by nurses in well child clinics, Melbourne, Australia. The paper reports on maternal views of the program's usefulness for managing child behaviour, nurse reports of program feasibility and competence in managing child behaviour, and barriers to program implementation.

Strategies to encourage positive behaviour and manage misbehaviour in young children were rated as 'quite' to 'extremely' useful by 89% and 91% of mothers respectively. Nurses reported that the program was feasible to conduct and increased their competence to prevent behaviour problems. Mothers who attended the program were less likely to report continuity of difficult child behaviour from eight to eighteen months of age. Barriers to implementation included lack of after-hours sessions (75%) and childcare (57%). We conclude that a brief universal preventative program for early externalising problems is useful for mothers and feasible in primary health care.

externalising behaviour problems for children aged from three to ten years (Barlow, 1999; Barlow & Parsons, 2002). Maternal depression, parenting efficacy and relationship satisfaction are also improved (Barlow *et al*, 2002). However, these programs are intensive and expensive, have high drop-out rates and are not widely available (Barlow, 1999; Sawyer *et al*, 2000). Thus there is an urgent need to design and evaluate preventative approaches to externalising behaviour problems.

Prevention can be targeted (offered to high-risk families only) or universal (offered to all families). In a comprehensive, integrated, public health approach to reducing externalising behaviour problems, universal prevention strategies would be partnered by targeted secondary prevention and skilled tertiary services (Bayer & Oberklaid, 2004). Universal strategies could offer a number of advantages. First, they avoid stigmatising parents as 'high risk' (Barlow, 1999; Stewart-Brown, 1998). Second, they avoid misclassification of children with early markers of difficult behaviour (such as infant temperament) who in up to 50% of cases grow up to have no behaviour problems (Bennett *et al*, 1998). Third, a universal program is available to 'low risk' families (for example families with two parents and no unemployment) who care for the most children with behaviour problems, simply because low-risk families make up the bulk of the population (Offord *et al*, 1998).

As a novel approach, universal preventative strategies would require rigorous evaluation within the confines of several randomised controlled trials prior to widespread adoption. However, to justify the significant financial outlay of such trials, the feasibility and acceptability of a brief universal approach to both parents and providers must be demonstrated and any barriers addressed. To this end, we report on the design and pilot findings of a universal parenting program (the first of which we are aware) aiming to prevent development of externalising behaviour problems from very early childhood. We hypothesised that in a community sample of children aged eight to fifteen months the program would be acceptable to and useful for parents and feasible to deliver in a primary health care framework. We also hypothesised that barriers to recruitment and retention would exist. We aimed to identify modifiable barriers before conducting a randomised effectiveness trial of the program.

Methods

The pilot study was conducted in Moonee Valley, an economically diverse local government area of Melbourne, Australia, with an annual birth rate of 1,400. As in the rest of Melbourne, Moonee Valley's Maternal & Child Health (MCH) nurses provide a universally available service of developmental surveillance and advice, with individual key visits scheduled at two weeks, two, four and eight months, one year, eighteen months and two, three and a half and four to five years.

Timing and setting of the program

The optimal timing for delivery of a universal parenting program to prevent child behaviour problems is unknown. From eight months, babies become mobile, strive for autonomy, and oppositional behaviours emerge (Dixon, 1992; Stein, 1992). These behaviours can provoke parents to perceive their baby as difficult and lead to inappropriate parenting responses (Fonagy, 1998; Sanson *et al*, 1991). Many parents start to discipline their children between the ages of 10 and 24 months (Sanders *et al*, 2000a). It is likely that anticipatory guidance for externalising behaviour before eight months may not yet be relevant for parents, yet guidance delivered after eighteen months could be too late. We chose, therefore, to deliver the program between eight and fifteen months. This timing allowed recruitment of a broad sociodemographic sample; 84% of families attend their MCH nurse at the eight-month key visit, dropping to 76% at the next 12-month visit with families of lower socioeconomic status under-represented (Department of Human Services, 2003), at an age when it is unlikely that parenting discipline styles are too entrenched to change. A number of models can be adopted to deliver parenting advice (such as booklets, telephone advice, groups run by parenting specialists). We chose to deliver our program in a well-established and well-attended existing primary health care service, and designed the content so that the program could work largely within its existing constraints.

Program content

Our program's parenting strategies were drawn from the large body of empirical research reported in existing systematic reviews of group-based intervention studies for established behaviour problems (Barlow & Stewart-Brown, 2000; Sanders *et al*, 2000a). We selected aspects of parenting most conclusively shown to predict child externalising behaviour problems (lack of parental nurturing and responsiveness, inappropriate expectations of normal development, and harsh and inconsistent discipline) (Sanders *et al*, 2000a). Targeting these particular aspects of parenting significantly reduces established child externalising problems,

parental stress, maternal anxiety and maternal depression (Barlow & Stewart-Brown, 2000; Barlow *et al*, 2002). We developed three structured anticipatory guidance 'packages' for use when children were approximately eight, twelve and fifteen months old. Content and design were overseen by a steering committee comprising paediatricians, psychologists, parenting experts and MCH nurses.

At the **eight-month individual scheduled visit**, the nurse discussed four handouts with the parent. These outlined normal child motor development, normal social/emotional development including limits to toddlers' behavioural self-control, ways to enhance language development and examples of a toddler's view of the world, to encourage parental empathy and understanding of young children. At **12 months**, parents attended a two-hour group session run by their nurse at the local MCH centre, which emphasised how to develop a warm and positive relationship with toddlers, and how to plan for and encourage desirable behaviours from toddlers. Strategies such as 'catch your child being good' were discussed, in which parents aim to praise their child daily for their good behaviour. 'Planned activities' were also discussed; parents plan ahead for challenging situations by engaging their child in appropriate activities to prevent misbehaviour (Sanders *et al*, 200b). A further two-hour parent-group session at **15 months** was co-facilitated by a health professional with expertise in conducting parenting groups. This session emphasised the need for parents to act immediately, consistently and decisively when child early externalising behaviour occurs, with responses other than harsh discipline. Strategies included setting basic rules and limits, providing simple and effective instructions, using 'planned ignoring' for minor misbehaviours (such as toddler whining) and using 'quiet time' for 'high priority' misbehaviours known to predict later externalising behaviour problems (such as hitting, kicking and biting). Information was conveyed to parents through handouts, group discussion, nurse-parent roleplay (for example practice in praising a toddler) and video vignettes (from the widely-available Triple P Program – Sanders *et al*, 2000b) of parental responses to child behaviour (for example use of 'time out' for aggression).

Nurse training

Training consisted of one half-hour and two two-hour sessions with MCH nurses. At the first, a paediatrician and a psychologist outlined the content of the parent handouts for the eight-month session and ways to discuss them with parents. A psychologist expert in parenting groups then conducted training for the 12- and 15-month group ses-

sions, approximately three to four weeks before nurses delivered each session. A training manual facilitated program integrity.

Participants

In May/June 2002, the 10 MCH nurses in Moonee Valley invited all parents of children aged six or seven months who attended their MCH centre to participate in the pilot. Contact details of interested parents were faxed to the research team, who then contacted the parents to obtain informed consent. As well as a baseline questionnaire and written informed consent, parents completed questionnaires two weeks after the 12-month group session and three months after the 15-month group session, to detect outcomes of the program. Approval was obtained from the Ethics in Human Research Committee, Royal Children's Hospital, Melbourne.

Measures

Outcomes were measured when children were 12 and 18 months. Primary outcomes included usefulness of the program's strategies (reported by mothers on a study-designed 5-point scale, where 1 = 'not at all useful' and 5 = 'extremely useful'), helpfulness of the program's handouts (helpful or unhelpful), the ideal timing in their child's life for the program and whether the program's strategies were useful for older children. Mothers completed a study-designed 10-item scale measuring the help-giving behaviours and attributes of the nurses who conducted the group sessions (Dunst, 1996). Nurses completed questionnaires before and after training to assess their self-perceived competence in preventing child behaviour problems over time, their comfort in broaching child behaviour problems with parents and their optimism that intervention families would have more positive parenting. Responses were measured on a study-designed, 4-point scale where 0 = 'not at all competent/comfortable/optimistic' and 3 = 'very competent/comfortable/optimistic'. Nurses also reported on the feasibility of conducting the program. Parents who dropped out were contacted by telephone to ascertain why.

A number of measures were included to pilot their acceptability for the planned randomised effectiveness trial. They included the Child Behaviour Checklist (CBCL/1.5-5) (Achenbach & Rescorla, 2000), measured at 18 months and the Parent Behaviour Checklist (Fox, 1992), measured at 12 and 18 months. At baseline, child temperament was assessed (Sanson *et al*, 1987), together with potential mod-

ifiers of the program's effectiveness, including domestic violence, maternal depression (measured by the Kessler – K10) (Furukawa et al, 2003) in half the sample and the Depression Anxiety Stress Scale - DASS (Lovibond & Lovibond, 1995) in the other half to compare acceptability, family drug use and parenting conflict (Dadds & Powell, 1991). Socioeconomic data were also obtained.

Results

Sample characteristics

Of the 81 mothers approached by nurses, 70 agreed to be contacted by the study team and 57 consented to take part (response rate 70%). Mothers who consented to take part were more likely to have a boy (69% vs 29%, p=.001) and fewer children (p=.003) than non-consenting mothers.

Mean maternal age was 33 years (range 23-44), 97% of mothers had partners and 49% had completed tertiary education. The majority of children were boys (70%) and 48% of children were first-born. Seventy-eight per cent of mothers were not working and 12% of fathers had been 'unemployed but wishing to work' over the past year. Annual household income ranged from less than $AUD35,000 (19% of families) to more than $AUD55,000 (58%). Fifty-nine per cent of mothers were Anglo-Australian, 24% were European, 5% were South East Asian and 5% were African. Twelve per cent of mothers mainly spoke a language other than English in the home. At baseline, seven mothers reported having no social support in their role as a parent, four reported experiencing domestic violence in the past year and one reported a drug problem.

Parent program evaluation

Overall acceptability and usefulness

Fifty-five mothers received the eight-month package (96%), 42 attended the 12-month group (74%) and 27 attended the 15-month group (47%). Fifty mothers (88%) completed the follow-up questionnaires. Acceptability and usefulness of the program were unrelated to the number of children in the family, maternal perception of infant temperament or whether the family was under stress at the time (for example single parent, depressed mother, domestic violence). Most mothers (74%) reported that the timing of the program was ideal. Of the mothers with older children (n=16), 86% reported using the program's strategies with them and all rated the strategies as 'quite' to 'extremely' useful.

Parents who rated their nurse's helping style as low in warmth, empathy and listening skills found the program less useful for understanding why a child can be oppositional (p =.08), knowing how to encourage good behaviour (p =.04) and knowing how to manage unwanted behaviour (p =.02), compared with parents who reported more positively about their nurse.

Usefulness of 8-, 12- and 15-month components

At eight months, most mothers rated the program information as 'quite' to 'extremely' useful for understanding why a child has tantrums and is non-compliant (76%) and how a child develops (65%). All mothers reported that the handouts on motor, social and language development were helpful, and all but two that the handout on a child's view was useful. Mothers were also overwhelmingly positive about the 12- and 15-month groups (see *Table 1*, below).

TABLE 1 *Maternal Report of Usefulness of Parenting Strategies in the 12- and 15-Month Group Sessions*

Target behaviour	Strategies	Maternal report %[1]	Usefulness: Mean (SD)[2]
12 months			
Develop a positive relationship with child	Hugs, praise, short bursts of one-on-one time	91	3.8 (.9)
Encourage good behaviour	'Catch toddler being good'	89	3.7 (.9)
Play ideas	Age-appropriate engaging activities	94	3.5 (.8)
Manage difficult situations	Planned activities	80	3.2 (.9)
Parent coping skills	Simple cognitive re-structuring for unhelpful thoughts	83	3.3 (1.0)
15 months			
Decrease toddler misbehaviour	Keep precious things out of reach, keep a daytime sleep, set simple rules	91	3.9 (.9)
Identify high- and low-priority misbehaviours	Write list of child's minor (eg whining) and major (eg aggression) misbehaviour	91	3.9 (1.0)
Manage low-priority misbehaviours	Ignoring, distraction, logical choices	91	3.9 (.9)
Manage high-priority misbehaviours	Planning ahead, using flowchart for biting/hitting	91	3.9 (1.0)

[1] Quite to extremely useful
[2] Range from 1 = 'not at all useful' to 5 = 'extremely useful'

The majority of mothers reported that written information supporting parenting strategies was helpful at 12 months (range 88% for planned activities sheet to 94% for play ideas) and 15 months (range 83% for flowchart on managing high-priority misbehaviour to 91% for prioritising low- and high-priority misbehaviour). Ninety-five per cent reported that they would recommend the program to their friends.

Videotape and role-play were rated as less useful than the other strategies. At 12 months, 76% and 50% of mothers respectively rated these strategies as 'quite' to 'extremely' useful. At 15 months, 67% and 45% respectively rated these strategies as 'quite' to 'extremely' useful.

Nurse program evaluation

All nurses reported that it was feasible to deliver the program in their practice. After the program, all nurses were 'quite' to 'very' optimistic that intervention families would have more positive parenting, 90% felt 'quite' to 'very' comfortable about broaching the issue of a child's behaviour problems with parents, and 80% felt 'quite' to 'very' competent about preventing behaviour problems over time. On a study-designed, 4-point scale (0 = 'not at all', 3 = 'very'), nurses felt slightly more competent about preventing behaviour problems after delivering the program than before (mean pre = 1.67, mean post = 2.00, t(8) = -2.00, p=.08).

Drop-outs

The 30 parents who missed one or both group sessions were contacted by telephone to ascertain reason/s for missing sessions. They included lack of evening or weekend sessions (reported by 75% of drop-outs), work commitments (60%), lack of child care (57%), the child being sick (32%), the family being under too much stress (14%), lack of confidence in the program (14%) and a perception that their baby was too young (14%). When parents did not attend group sessions, continuity of temperament difficulty at eight months to behavioural difficulty at eighteen months appeared greater (r =.58, p =.06, n = 11), than when parents attended group sessions (r =.32, p =.05, n = 37).

Discussion

This is the first reported pilot of a universally available parenting program designed to prevent externalising behaviour problems from early childhood. The program was perceived as useful and relevant by a diverse range of parents. Primary health care nurses reported that the program was useful and could feasibly be delivered in a busy communi-ty practice. It is important to note that we found no evidence of harm arising from the program, which could have manifested as negative ratings of the program.

An important question to address in group-based parenting programs is why parents drop out (Barlow & Stewart-Brown, 2000). The two most common barriers reported in this study (lack of evening/weekend sessions and lack of on-site childcare) can both easily be addressed in our planned larger, randomised trial assessing the program's effectiveness to prevent externalising behaviour problems. In addition, acceptability of the program was affected by parents' ratings of their nurse's group facilitation skills. Parents who rated their nurse as having fewer group facilitation skills found the program to be less useful. Similar findings have been reported elsewhere (Dunst, 1996). Specific training in facilitation skills and/or co-facilitation of sessions with a professional expert in parenting groups could solve this problem.

Given that externalising behaviour problems are common, are potentially serious, often go unmanaged and, once established, can prove difficult to treat, an effective program offering universal primary prevention could make a considerable contribution (Offord et al, 1998). It must be feasible (in brief) to deliver such a program in a busy primary care setting and the program must be supported by childcare and flexible session times to maximise parent attendance. Coupled with targeted secondary prevention for families facing multiple stresses and clinical tertiary services for established child behaviour problems, a universal approach has the potential to lessen the burden of externalising problems for children and their families. Having demonstrated feasibility and acceptability, we are now rigorously evaluating our parenting program in a cluster controlled trial with a sample large enough to detect change, and follow-up long enough to assess effectiveness.

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