RESEARCH PAPER
Teaching social and problem-solving skills to reduce behaviour problems in early childhood

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The PALS program is a social skills and problem-solving program for young children which has now been used in over 300 centres across Australia. Skills, including greeting others, turn-taking, sharing, empathy, dealing with fear and angry feelings, are taught in small groups through the use of puppets, problem-solving, video modelling, role-playing, songs and activities. A new edition of the program has recently been released which is user-friendly and visually appealing. The PALS program places a strong emphasis on generalisation and includes structured tasks for parents and teachers to support the acquisition of skills at home and in the classroom. The program offers a way of improving children's social and problem-solving skills in a way that is enjoyable for both teachers and children. It reduces withdrawn and aggressive behaviour. It is time efficient, with 10 sessions each taking 20 to 30 minutes. As it is carried out in schools and preschools, recruitment of high-risk children is not a problem and 99 per cent of parents give permission for their child to participate. The program has been evaluated using a wait-list control group and was found to be successful in reducing aggressive behaviour and also increasing social interactions in withdrawn children. Additional data are presented on the analysis of change for children with clinically significant problems.

Almost one in five Australian children have clinically significant behavioural or emotional problems (Zubrick, Silburn, Garton, Burton, Daldy, Carlton, Shepherd & Lawrence, 1995) and there is evidence that the incidence of these problems is increasing (Sanders & Markie-Dadds, 1992). Recently, a comprehensive inquiry into public education in New South Wales (Vinson, 2002) confirmed that behaviour problems are a major concern for teaching staff in schools. Children with behaviour problems tend to take up more teaching time and affect educational outcomes for other children in the classroom. Furthermore, over the last 10 years there has been a sharp increase in the number of children who have received diagnoses such as attention deficit hyperactivity disorder (ADHD), oppositional defiant disorder, anxiety disorders, and Asperger's syndrome. For many children with these disorders there is a deficit in the social and problem-solving skills required for optimum peer interaction.

One approach to helping these children is to directly teach the problem-solving and social skills which have been found to help children with behavioural problems (Webster-Stratton, Reid & Hammond, 2001). Social skills training programs can be delivered directly to children in schools or child-care settings, which ensures that all or most children in need receive a service. Teaching children social and problem-solving skills in the classroom has been shown to bring about similar results to parenting programs (Kazdin, 1996; Webster-Stratton & Hammond, 1997). Social skills training programs, however, have one important advantage over parenting programs. A major difficulty with parenting programs is the recruitment of parents of children with problems into the programs. For example, Durlak and Wells (1997) found that parents of children with behaviour problems are difficult to engage, concluding that, 'involving parents in training programs remains a challenge' (p. 239). Barkley, Shelton, Crosswait, Moorehouse, Fletcher, Barrett & Metevia (2000), in

an important study looking at the effects of different interventions on a class of children with ADHD, found that social problem-solving skills training had more effect on the children in the class than a parenting program. This was attributed to the fact that attendance in the parenting program was poor, despite every effort to provide a quality parenting program free of charge.

The development of core social skills is an important protective factor for good mental health in later life (Werner, 1989). It is possible, however, that in recent years social skills in children have declined. This is due to children spending increased time watching television and videos, and playing computer games, leaving less time for social activities. In addition, neighbourhoods are considered less safe for children to play unsupervised, reducing opportunities for children to interact with peers. As such it is possible that providing social skills programs as part of the curriculum could be of benefit to many children.

During the preschool years, social skills are just beginning to develop. The important social skills for preschoolers include: turn-taking, sharing, problem-solving, empathy and forming friendships. Some children are able to learn these skills with relative ease while others experience more difficulty. Those who experience difficulty tend to be children also showing early signs of behaviour problems. Interactions between preschool children are often short in duration and marked by repetitive negative behaviours, such as hitting, pushing or grabbing toys (Bierman & Montminy, 1993). With intervention it is possible that the short and relatively simple exchanges during these early years are amenable to change. In support of this, Elliott and Gresham (1993) give evidence that social skills interventions are more effective for preschool children than children of primary school age.

In a recent article evaluating the 10 week PALS social skills program designed for preschool-aged children, it was found that the program improved children's social skills and reduced problem behaviours for both internalising and externalising children (Cooper, Paske, Goodfellow & Muhlheim, 2002). In that study, measures of behaviour such as the Preschool Kindergarten Behaviour Scale (PKBS) (Merrell, 1994) and Caregiver–Teacher Report Form (C–TRF) (Achenbach, 1997) were employed. The present study aimed to reproduce these results using a different measure: the Sutter-Eyberg Student Behavior Inventory (SESBI) (Eyberg, 1984). The Eyberg scales have been

used widely in early childhood research, in particular for evaluating the effectiveness of parenting programs, such as Triple P (Sanders, Markie-Dadds, Tully & Bor, 2000). The SESBI consists mainly of externalising items, such as 'argues with teachers', 'has temper tantrums', 'steals', 'is impulsive'. In view of their wide use in evaluating parent programs, the Eyberg scales should offer a useful indication of the effectiveness of the PALS program, especially with regard to externalising problems.

Early childhood teachers completed the SESBI prior to and after the social skills program. This was compared to a wait-list control group in which the same data were taken at the same intervals. Data were examined to determine if the social skills program reduced problem behaviour.

Method

Participants

A multi-stage screening approach was used to select children most in need of help for the study. The first stage involved identifying child-care centres in areas characterised by low income levels, high unemployment and high crime rates. In the second stage, child-care staff selected children who exhibited the highest levels of internalising and externalising behaviours. Thirdly, these children were rank-ordered in terms of severity of problems so that the children most in need received the intervention. Approximately six to seven children were thus chosen for each social skills group. In larger centres two or more groups were run. In total, 39 children participated in the experimental group compared to 38 in the wait-list control. Children were between three and five years of age and most were due to attend school the following year.

Treatment conditions

The 13 child-care centres which participated in the study were randomly assigned to treatment or wait-list conditions. Children in the treatment condition received the 10 week PALS social skills program. Initially child-care staff observed the group conducted by psychologists and early childhood teachers from the Child and Family Service. Subsequently the staff in the child-care centres conducted the programs independently.

PALS consists of 10 weekly small-group sessions lasting between 20 and 30 minutes that are run at the child-care centre. The program is in two parts, the first

covering social skills such as greeting, sharing and turn-taking. The second part teaches self-management skills such as dealing with stressful situations and managing angry feelings. Each session focuses on a specific skill and employs storytelling using puppets and play activities to introduce and teach skills. A problem-solving framework is used to help children develop pro-social solutions to a range of social conflicts. The program utilises videotape vignettes to illustrate conflict situations and to model appropriate problem-solving. Role-play scenarios are used to practice different skills including turn-taking and relaxation. Songs with actions are included as a further teaching aid. Essential to the intervention are the two support programs, one for early childhood teachers and the other for parents. The teachers' program includes activities aimed at supporting each week's skill for early childhood staff to carry out during the week. For example the first session teaches greeting skills and some of the activities recommended include setting up a shop or post office where children can practice greeting, creating posters of greetings in different languages, and suggestions for songs and stories. Similarly, parents receive information sheets each week explaining the skills taught and how they can reinforce the skills at home.

Assessment

Children in the treatment group were assessed prior to the start of the PALS program and shortly after its completion, approximately 12 weeks apart. Children in the wait-list control were assessed at the same times, 12 weeks apart, but did not receive the program in between; these children received the program later. These pre- and post-measures consisted of ratings by early childhood teachers using the SESBI scale. This is a psychometrically sound and clinically relevant rating scale for measuring the number and intensity of behaviour problems in young children. This particular scale was designed for teachers. The Eyberg scales have been used extensively in Australia and overseas to measure changes brought about by child and parent interventions. The Eyberg scales are considered reliable and sensitive to change (Sanders et al., 2000).

Results

Treatment effects were analysed using teacher ratings of the SESBI. There were four sets of measurements: pre- and post-tests for the wait-list control, and pre- and post-treatment for the experimental group. The results are shown in Figure 1.
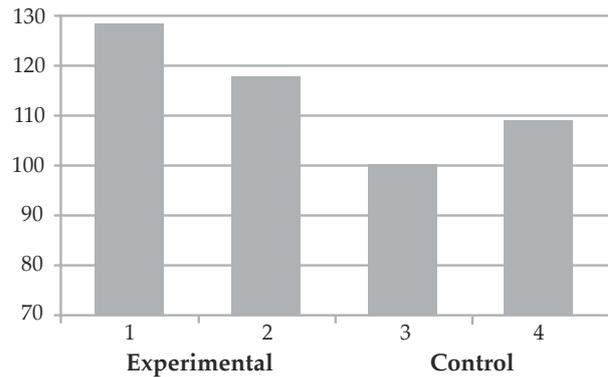

Figure 1: Sutter-Eyberg Student Behavior Inventory Intensity Scores

The scores were analysed to determine statistical differences between experimental and control groups at pre- and post-tests using a two-way analysis of variance.

The intensity and severity of problem behaviour in the experimental group was reduced significantly in comparison with the control group ($F(1,75)=8.94$, $p=.004$). This indicates that problem behaviours measured by the SESBI reduced significantly after the PALS intervention in comparison with the control group.

Discussion

The severity of children's behaviour problems was significantly reduced as measured by the SESBI. The Eyberg scales have been used widely to assess parenting programs, and to obtain a significant result on this scale shows that the PALS program is another effective tool which can be added to the armoury of programs to prevent behaviour disorders in children.

One of the interesting consequences of using the SESBI is that the items primarily reflect problems associated with externalising problems. In the previous study on PALS by Cooper et al. (2002), it was concluded that PALS was possibly more effective for internalising problems. The results using the SESBI show that PALS can achieve positive results on a scale designed to measure externalising problems. However, Webster-Stratton, Reid and Hammond (2001) found that social skills training was effective for children with behaviour problems, but that additional training for parents was required if parent–child interactions were overly coercive. Therefore additional interventions in the form of parenting programs will be necessary for families with extreme coercive styles.

98.5 per cent of parents consented to their child being involved in the PALS program. This is in contrast to the difficulty experienced in recruiting parents of children who are at high risk for behaviour problems into parenting programs. This indicates that social skills programs may be an effective and acceptable way of accessing children who might otherwise miss out on early intervention programs.

Further research is needed to determine whether social skills interventions in young children can be of benefit to all children and not just children displaying problem behaviours. Such programs could then be offered to assist readiness for school in the preschool years or to aid school adjustment for young children in kindergarten or Year 1.

References

Achenbach, T. M. (1997). *Caregiver-teacher report form for ages 2-5*. Burlington, VT: University of Vermont.

Barkley, R. A., Shelton, T. L., Crosswait, C., Moorehouse, M., Fletcher, K., Barrett, L. & Metevia, L. (2000). Multi-method psycho-educational intervention for preschool children with disruptive behaviour: Preliminary results at post-treatment. *Journal of Child Psychology and Psychiatry, 41*, 3, 319–332.

Bierman, K. L. & Montminy, H. P. (1993). Developmental issues in social-skills assessment and intervention with children and adolescents. *Behavior Modification*, *17(3)*, 229–254.

Cooper, J. A., Paske, K. A., Goodfellow, H. & Muhlheim, E. (2002). Social skills training to reduce aggressive and withdrawn behaviours in child care centres. *Australian Journal of Early Childhood, 27(4),* 29–35.

Cooper, J., Pearson, L., Paske, K., Goodfellow, H. & Muhlheim, E. (2000). *PALS (Playing and Learning to Socialise)*. Bowral: Wingecarribee Community Health Service.

Durlak, J. A. & Wells, A. M. (1997). Primary prevention mental health programs: The future is exciting. *American Journal of Community Psychology*, *25(2)*, 233–243.

Elliott, S. N. & Gresham, F. M. (1993). Social skills interventions for children. *Behavior Modification*, *17(3)*, 287–313.

Eyberg, S. (1984). *Sutter-Eyberg student behavior inventory – revised*. Florida: Psychological Assessment Resources.

Kazdin, A. E. (1996). Problem solving and parent management in treating aggressive and antisocial behavior. In E. D. Hibbs & P. S. Jensen (Eds.), *Psychosocial treatments for children and adolescent disorders: Empirically based strategies for clinical practice* (pp. 377–408). Washington, DC: American Psychological Association.

Merrell, K. W. (1994). *Preschool and Kindergarten Behavior Scales*. Vermont: Clinical Psychological Publishing Company Incorporated.

Sanders, M. R., Markie-Dadds, C., Tully, L. A. & Bor, W. (2000). The Triple P — Positive Parenting Program: A comparison of enhanced, standard and self-directed behavioral family intervention for parents of children with early onset conduct problems. *Journal of Consulting and Clinical Psychology*, *68*, 4, 624–640.

Sanders, M. R. & Markie-Dadds, C. (1992). Toward a technology of prevention of disruptive behaviour disorders: The role of behavioural family intervention. *Behaviour Change, 9(3)*, 186–200.

Vinson (2002). *Inquiry into the provision of public education in NSW*. NSW Teachers Federation and P&C Association of NSW.

Webster-Stratton, C., Reid, J. & Hammond, M. (2001). Social skills and problem-solving skills training for children with early-onset conduct problems: Who benefits? *Journal of Child Psychology and Psychiatry*, *42*, 7, 943–952

Webster-Stratton, C. & Hammond, M. (1997). Treating children with early-onset conduct problems: A comparison of child and parent training interventions. *Journal of Consulting and Clinical Psychology*, *65(1)*, 93–109.

Werner, E. E. (1989). High-risk children in young adulthood: A longitudinal study from birth to 32 years. *American Journal of Orthopsychiatry*, *59(2)*, 72–81.

Zubrick, S. R., Silburn, S. R., Garton, A., Burton, P., Daldy, R., Carlton, J., Shepherd, C. & Lawrence, D. (1995). *Western Australian Child Health Survey: Developing Health and Well-being in the Nineties*. Perth, WA: Australian Bureau of Statistics and the Institute for Child Health Research.