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Outcome Findings from a Parent Training Programme for Young People with Conduct Problems

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Background: Group-based parent training programmes are a common intervention for tackling conduct problems in young people. The objective of this study was to evaluate the impact of a parent training programme on young people presenting with conduct problems. **Method:** 123 parents of young people aged 10 to 17 with conduct problems participated in the study. A one-group, pre-post design was adopted. Participants completed the Child Behaviour Check List (CBCL) at the beginning and end of the parenting programme. The degree of change was indexed by: a) Mean change; b) change from clinical to non-clinical status; and c) Reliable change. Logistic regression was used to identify predictors of reliable positive change in CBCL problems. **Results:** Analyses from all three sources suggest that there was a significant reduction in CBCL internalising, externalising and total scores. Withdrawn score pre-treatment was the only independent predictor of reliable change in internalising and total scores: the higher the score pre-treatment, the greater the chances of reliable improvement in post-treatment scores. **Conclusions:** The study provides evidence in support of the therapeutic improvement achieved by some young people whose parents attended the group parent training programme. The programme had a significant impact on internalising as well as externalising problems. Further studies of the programme would benefit from being run as a randomised clinical trial.

Key Practitioner Message:

- Group-based parent training is effective in reducing conduct problems in young people
- Group-based parent training has a significant impact on internalising problems in young people
- Outcomes for group-based parent training might be improved if the young person as well as the parent attends group sessions

Keywords: Parent-training; conduct problems; adolescents; outcome

Introduction

Conduct disorder and oppositional defiant disorder (ODD) affect 8.1% of boys and 2.8% of girls between 11 and 16 (Green et al., 2005) and are the most common reason for referral to CAMHS (Ford et al., 2007). Conduct disorder is associated with severe functional impairment (Lambert et al., 2001) and often presents with disorders such as depression, anxiety and ADHD (Ford, Doodman, & Meltzer, 2003). Young people with conduct disorder are likely to have worse mental health, less successful family lives, and poorer social and economic prospects in adulthood (Colman et al., 2009). Left untreated, conduct disorders are also economically costly (Scott et al., 2001).

Parent training programmes are effective for treating conduct and oppositional disorders (NICE, 2006; Reyno & McGrath, 2006; Kazdin, 2005; Fonagy et al., 2002; Sanders et al., 2000; Brestan & Eyberg, 1998). Group-based parent-training programmes have become a common intervention for tackling conduct disorders in children and young people. *NICE Clinical Guideline 77* (2009) on the treatment, management and prevention of antisocial personality disorder recommends parent-training programmes for 12 to 17 year olds with conduct problems among a range of parent and family focused interventions including Multisystemic Therapy (MST) and Functional Family Therapy for severe and persistent antisocial behaviour.

Parent training uses behaviour management principles taken from social learning theory (Miller & Prinz, 1990; Kazdin, 2005; Scott & Yule, 2008; Scott & Dadds, 2009). It includes training parents in how to track and monitor behaviour, training in the use of positive reinforcements and training to use mild punishment in an immediate and predictable manner.

This paper reports on the outcomes of Parenting with Love and Limits (PLL), a manualised group parent

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training programme for parents of teenagers with challenging behaviour rated exemplary by the Office of Juvenile Justice and Delinquency Prevention (Sells, 1998, 2001; Smith et al., 2006; http://www.difficult.net).

Findings from an audit of the Brandon Centre's psychotherapy service showed a high rate of dropout for young people with conduct disorders and that a diagnosis of conduct disorder in younger adolescents increased the probability of them dropping out (Baruch, Gerber, & Fearon, 1998; Baruch, Vrouva, & Fearon, 2009). These findings were the impetus for piloting parent training as an alternative to psychotherapy in order to improve the impact of our service on young people presenting with antisocial behaviour. Improving their attendance in psychotherapy was not a purpose of the pilot.

Method

Participants

The data are drawn from 224 adult parents of 10-17 year old adolescents with behavioural problems who attended the Centre's parent-training programme for the first time between January 2005 and May 2008. About 77.1% of the parents who participated were mothers, 2.7% were fathers, and both parents' participation rate was 20.2%. We confirm the research meets the ethical guidelines, including adherence to the legal requirements of the UK.

Fifty-eight parents (25.9%) completed the programme but did not complete the Child Behaviour Check List (CBCL) (Achenbach, 1991a) post-treatment and 43 parents (19.2%) dropped out. The analysed sample therefore consists of 123 adults (54.9% of the total sample), who provided CBCL data pre-and post-treatment. The mean CBCL scores of the analysed sample pre-treatment were 62.8 (*SD*=11), 69.1 (*SD*=7.9) and 67.5 (*SD*=8.3) for internalising, externalising and total problems respectively. The corresponding means for the non-analysed sample were very similar, i.e. 62.7 (*SD*=9.9), 68.6 (*SD*=1.7) and 67.5 (*SD*=9.8) for internalising, externalising, and total problems respectively. Table 1 presents some demographic characteristics and problems presented by the young people whose parents participated in the study.

The majority of participants lived with their mother, and attended mainstream school. They were primarily referred for behaviour problems at home and at school. Antisocial behaviour problems (97.5%), family problems (90.9%) and school problems (81.8%) were the most common problems presented. About 83% of participants lived in the London Boroughs of Camden or Islington, and represented most wards of these boroughs, which are among the 20% most deprived boroughs in the country (Index of Multiple Deprivation (IMD), 2007).

Using the variables presented in Table 1 and the parenting and CBCL scale scores at intake (see Table 2), we carried out independent samples *t*-tests and found that the analysed group had significantly higher overall level of functioning and significantly lower scores on severity of psychosocial stressors than those parents who did not provide data post-treatment ($p < .001$). Moreover, the analysed group attended significantly more sessions ($p < .01$). The analysed group attended on average 8.5 (*SD*=3.7) sessions, whereas the non-analysed group attended on average 6.2 (*SD*=3) sessions. There were no other significant differences between these groups.

Setting and intervention

The Brandon Centre is a community-based, voluntary sector service that provides contraception, sexual health and psychotherapy for 12 to 21 year olds. As well as parent training, the Centre also offers MST (Wells et al., in press). Parents referred to the programme receive a consultation with one of the group facilitators. Following the consultation they receive the dates of sessions in writing and are sent a text message before each session as a reminder about the class.

Parenting With Love and Limits (PLL) can be delivered as a group and family intervention or as a parent-training programme with or without teenagers participating in the programme. At the Brandon Centre PLL is aimed at parents of 11 to 17 year olds with behaviour problems, which are assessed according to parents' concerns. The programme is intended to equip parents with strategies for managing and improving challenging behaviour. The group can accommodate up to 12 parents. There are six, 2-hour classes that cover parent-teen interaction, behavioural contracts, appropriate consequences for high-risk challenging behaviour, praising the teenager, nurturance strategies, and how to enlist and use outside support. The classes use direct teaching, role-play and DVD clips that accompany the programme.

Parents are encouraged to prepare for classes by reading the relevant chapter from *Parenting your out-of-control teenager* (Sells, 2001), a manual for parents that accompanies the programme. They are also encouraged to practise specific skills, which they learn through role-plays in the sessions and through practice with their teenager at home as part of homework.

Design

After a parent or carer has been accepted on the programme, she/he is sent a CBCL form to complete and return by first class mail. After completion of the programme, usually 3 to 6 months after the first class, the parent or carer is asked to complete the CBCL form for a second time.

Measures

The measures used in this study (including reliabilities) follow those presented in earlier papers (e.g. Baruch, 1995; Baruch & Fearon, 2002). Following an interview with the young person's parent(s), the therapist assigns one or more diagnoses using a slightly modified version of ICD-10 (World Health Organisation, 1990). There are nine commonly used diagnostic groupings describing psychological problems. The therapist fills out the Centre's own Presentation of Problems Form comprising 34 items describing the young person's current problems. Other areas of interest assessed include the young person's demographic characteristics, as well as treatment related information, including source of referral, number of weeks between first approach and first appointment at the Centre.

Table 1. Demographic and clinical characteristics of the young people whose parents attended the Centre's parenting programme

Demographic and clinical characteristics of the young people	Study sample (*N*=123)	No follow-up sample (*N*=101)
Mean age, years (*SD*) (min. 10 - max. 17)	14 (1.4)	13.9 (1.5)
Female (%)	42.6	46
Ethnic minorities (%)	26.8	33
Parents married (%)	28.3	16.3
Living with mother (%)	62.8	75.5
Living with father (%)	5.8	2
Living with relatives (%)	1.7	1
Living with both natural parents (%)	25.6	12.2
Living with adoptive or foster parents (%)	3.3	4.1
Living in other situations (%)	.8	5.2
Attending mainstream school (%)	89.3	90.6
Attending PRU/EBD[1] school (%)	6.6	4.2
Not attending school (%)	3.3	3.1
Permanently excluded from school in the last 12 months (%)	10.7	20.4
Temporarily excluded from school in the last 12 months (%)	15.7	22.6
Primarily referred for behaviour problems at home (%)	42.5	52.1
Primarily referred for behaviour problems at school (%)	42.3	33.3
Primarily referred for antisocial behaviour (%)	13.3	14.6
Secondarily referred for behaviour problems at home (%)	49.5	41
Secondarily referred for behaviour problems at school (%)	28	44.9
Secondarily referred for antisocial behaviour (%)	8.4	5.1
Antisocial behaviour (%)	97.5	99
Family problems (%)	90.9	96.9
School problems (%)	81.8	85.4
Emotional problems (%)	28.9	28.1
Substance misuse (%)	30	32.3
Developmental Issues and Separation Anxiety (%)	10	9.4
Bereavement (%)	9.2	15.6
Thoughts of Deliberate Self-Harm (%)	7.4	6.2
Sexual and Relationship Problems (%)	8.3	16.7
Suicide Attempt (%)	5.8	6.2
Median number of current problems presented	4	4
Median rating for Severity of Psycho-Social Stressors (SPSS) scale (1-6)	4	4
Mean score (SD) on Global Assessment of Functioning (GAF) Scale2 (min. 40- max. 70)	57.3 (6.3)	53.6 (7.8)

[1]RU: Pupil Referral Unit. EBD: Emotional and Behavioural Difficulties
[2] score of 70 is normally considered to be the cut-off point between the normal and clinical ranges.

Table 2. Means and standard deviations of pre- and post-treatment CBCL[1] internalising, externalising and total scores (*N* = 123)

Outcome variable	Pre-treatment Mean (*SD*)	Post-treatment Mean (*SD*)
CBCL Internalising scores	62.8 (11)	56.5 (10.4)
CBCL Externalising scores	69.1 (7.9)	63.3 (9.7)
CBCL Total scores	67.5 (8.3)	61.3 (9)

[1]CBCL: Child Behaviour Check List

The Global Assessment of Functioning Scale (GAF; APA, 1994) was used to estimate the young person's overall level of functioning, as described by the parent, according to guidelines on a scale of 1 to 100 of increasing functioning. In addition, the Severity of Psychosocial Stressors Scale for Children and Adolescents (SPSS; APA, 1994) was used to assess the young person's psychosocial stressors, as reported by the parent, on a scale of increasing severity from 1 to 6.

The CBCL was the primary outcome measure in the study. The CBCL is a broad-spectrum inventory that records, in standardised format, the emotional and behavioural problems of children and adolescents aged 4–18, as reported by their parents or parent surrogates. The CBCL comprises 118 items, which contribute to eight specific dimensions of dysfunction: anxious/depressed, somatic complaints, withdrawn, social problems, thought problems, attention problems, delinquent and aggressive behaviour. Five of the subscales are aggregated into two global dimensions of disturbance, termed internalising behaviour and externalising behaviour, and yield a total problem score. A large body of research has demonstrated the reliability and validity of the CBCL in clinical and non-clinical populations (e.g. Ivanova et al., 2007; Lengua et al., 2001) and there is substantial empirical evidence supporting the usefulness of the CBCL as an outcome measure (Achenbach, 1991a; Bérubé & Achenbach, 2007).

Statistical analysis

Outcome in internalising problems, externalising problems and total problems was assessed in three ways: a) comparing pre-and post-treatment CBCL mean scores; b) estimating the percentage of participants who moved from the clinical into the non-clinical range or vice versa; and c) estimating the presence of reliable change (RC) in the level of adaptation (Christensen & Mendoza 1986), which is based upon estimates of the

standard error (SE) of measurement (Guilford, 1965). If the change in a scale score from pre-treatment to the follow-up assessment has changed as much as 1.65 SE of measurement, there is a 90% chance that this is a non-chance change.

Changes over time were analysed using paired samples *t* tests. The McNemar test was used to assess the difference in the proportion of those in the clinical range between pre- and post-treatment. Independent samples *t* tests and chi-square tests were conducted to test for differences in demographic, diagnostic characteristics, and CBCL, GAF and SPSS scores at intake, between participants who reported positive RC after completion of programme and participants who did not report such change. Binary logistic regression was used to identify predictors of reliable improvement in CBCL problems.

Results

The results are presented in two sections. Section one deals with the degree of change in CBCL problems between pre- to post-treatment as indexed by: (1) Mean change; (2) Clinical significance; and (3) Reliable change. The second section describes a series of exploratory analyses aimed at identifying factors associated with reliable positive change at the end of the programme.

Mean change

Although there is arguably less clinical utility in measuring broad changes in group means over time, one advantage of doing so is that these analyses offer a detailed description of the change, and they also facilitate comparisons with previous work (Baruch & Fearon, 2002). We thus carried out three paired samples *t* tests of pre- and post-treatment CBCL scores. There were significant decreases post-treatment for internalising problems, $t(122) = 6.8$, $p < .001$, externalising problems, $t(122) = 8.1$, $p < .001$, and total problems, $t(122) = 8.7$, $p < .001$. The means and standard deviations of these scores are presented in Table 2.

Given that the data analysed represent just above half (54.9%) of the total sample, an intention-to-treat analysis was conducted, assuming that the missing post-treatment data of the non-analysed group would be equal to this group's pre-treatment data (i.e. assuming no change). The decreases remained significant for the total sample, for internalising problems, $t(223) = 6.3$, $p < .001$, for externalising problems, $t(223) = 7.3$, $p < .001$, and for total problems, $t(223) = 7.7$, $p < .001$.

As there were substantial correlations between the three dimensions of the CBCL, the results of the *t* tests are overlapping. For example, total behaviour problems should be seen as a summary score rather than a distinct domain of symptomatology.

Upon completion of the programme, the group mean for internalising problems changed from the clinical to the non-clinical range (i.e. below 60), for externalising problems it remained within the clinical range, and for total problem scores the group mean changed from the clinical to the borderline range (i.e. below 63). The effect sizes of these differences in mean behaviour problems over time were Cohen's $d = 0.61$ for internalising problems, $d = 0.73$ for externalising problems and $d = 0.79$ for total problems.

Clinical significance

Using a score of 60 recommended by Achenbach (1991a) as the boundary between the borderline clinical and the non-clinical range, there were significant improvements in the proportion of participants reporting problems in the non-clinical range. The difference in the proportion of young people falling in the clinical range pre- and post-treatment was significant for internalising, externalising and total problems (McNemar test, $p < .001$). Table 3 shows the overall frequencies of improvement, deterioration, and no change.

Reliable change

In the data presented in this paper, the RC index for boys is 6, 5 and 5 points (using 1.65 SE of measurement) for the CBCL internalising, externalising and total problem scores respectively. For girls, the corresponding RC index was the same, apart from the total scores' index, which was 6 points.

Using RC as the criterion for improvement, there were substantial levels of improvement at the end of the programme. More than half of the participants reported reliable improvement for all types of problems (54.5% for internalising, 55.3% for externalising and 54.5% for total problems). The rate of reliable deterioration was 12.2%, 8.1% and 5.7% for internalising, externalising and total problems respectively.

Table 4 shows the frequency of reliable improvement, reliable deterioration and no change for internalising, externalising and total problems.

Predictors of improvement

On the basis of the previous independent samples *t* tests and chi-square tests, we then selected the predictors and carried out binary logistic regressions, in order to identify which variables, when taken together, make significant independent contributions to the prediction of reliable positive change in CBCL internalising scores.

Table 3. Frequency of clinical levels of pre- and post-treatment CBCL[1] internalising, externalising and total scores ($N = 123$)

	Internalising problems		Externalising problems		Total problems	
	Frequencies	Percent	Frequencies	Percent	Frequencies	Percent
Clinical to non-clinical change	42	34.1	26	21.1	33	26.8
Non-clinical to clinical change	6	4.9	3	2.4	1	.8
Remained in clinical range	41	33.3	83	67.5	73	59.3
Remained in non-clinical range	34	27.6	11	8.9	16	13

[1]CBCL: Child Behaviour Check List

Table 4. Reliable change in pre- and post-treatment CBCL[1] internalising, externalising and total problem scores (*N* = 123)

	Internalising problems		Externalising problems		Total problems	
	Frequencies	Percent	Frequencies	Percent	Frequencies	Percent
No change-1.65 SE[2] or measurement (90% chance that this is a non-chance change)	41	33.3	45	36.6	49	39.8
Reliable improvement -1.65 SE or measurement (90% chance that this is a non-chance change)	67	54.5	68	55.3	67	54.5
Reliable deterioration -1.65 SE or measurement (90% chance that this is a non-chance change)	15	12.2	10	8.1	7	5.7

[1]CBCL: Child Behaviour Check List
[2]SE: Standard Error

Table 5. Significant differences between young people whose CBCL[1] internalising scores decreased reliably (positive change) post-treatment, and young people whose internalising CBCL scores did not change reliably (no positive change) on the pre-treatment CBCL scores and one presented problem (*N* = 123)

Independent variable	Reliable positive change group Mean (*SD*)	No reliable positive change group Mean (*SD*)	*t*	*p*
Pre-treatment CBCL anxious/depressed	65.1 (10.4)	60.4 (9.9)	2.57	.011
Pre-treatment CBCL somatic complaints	63.4 (9.7)	58.8 (7.8)	2.87	<.005
Pre-treatment CBCL withdrawn	65.4 (9.7)	58.0 (9.0)	4.30	<.001
Pre-treatment CBCL attention problems	64.7 (8.6)	61.5 (7.8)	2.14	.034
Independent variable	Positive reliable change group frequency	No positive reliable change group frequency	Chi- squared (*df* = 1)	*p*
Presence of emotional problems	36.4%	20%	3.91	.048

[1]CBCL: Childhood Behaviour Check List

As described in Table 5, independent samples *t*-tests showed young people whose internalising scores were reduced reliably to have higher scores on four CBCL subscales pre-treatment. These subscales were anxious/depressed, somatic complaints, withdrawn, and attention problems. Moreover, the chi-square test showed young people whose internalising scores were reduced reliably to be more likely to have emotional problems, as reported by their parents during the initial interview. When these variables were entered as predictors in the logistic regression, the model was significant, $\chi 2(5) = 20.9$, $p < .001$. However, only the withdrawn subscale was a significant independent predictor of RC in internalising scores ($p < .01$).

Young people whose externalising scores were reduced reliably had higher scores on pre-treatment CBCL social problems. Moreover, they were more likely to have faced developmental issues (e.g. separation anxiety) as reported by their parents during the initial interview. These differences are presented in Table 6. When these variables were entered as predictors in the logistic regression, the model was significant, $\chi 2(2) = 8.4$, $p < .05$. However, no variable was a significant independent predictor of RC in externalising scores.

Young people whose total problem scores were reduced reliably had higher scores on two pre-treatment CBCL subscales, namely withdrawn and thought problems. Moreover, their parents had waited on average more weeks before joining the Centre's programme compared to the parents of young people whose total scores did not decrease reliably. These differences are presented in Table 7. When these variables were entered as predictors in the logistic regression, the model was significant, $\chi 2(3) = 14.3$, $p = .01$. The withdrawn subscale was the only significant independent predictor of RC in total scores ($p < .05$).

Discussion

The findings from this study are in line with those found by previous studies (National Institute for Clinical Excellence, 2006). Analyses from all three sources (change in mean scores, change in numbers from the clinical to the non-clinical range, and RC) provide evidence in support of the therapeutic improvement achieved by some young people. There was a reduction in CBCL internalising, externalising and total scores, which was similar for all three domains.

The findings need to be treated with caution because follow-up data were not obtained from 45% of parents who completed a CBCL at intake. However when a conservative approach was adopted and no change was assumed for the sample that did not supply follow-up data, the decrease in mean CBCL scores for the total sample for internalising, externalising and total problems was still statistically significant.

Nonetheless the findings suggest that although Parenting with Love and Limits can run as a stand alone group parent training programme, its impact may be limited in doing so. The group programme might have a

Table 6. Significant differences between young people whose CBCL[1] externalising scores decreased reliably (positive change) post-treatment, and young people whose externalising CBCL scores did not change reliably (no positive change) on the pre-treatment CBCL scores and one presented problem (*N* = 123)

Independent variable	Reliable positive change group Mean (*SD*)	No reliable positive change group Mean (*SD*)	*t*	*p*
Pre-treatment CBCL Social Problems[2]	60 (8.5)	57.1 (7.4)	1.99	.049
Independent variable	**Positive reliable change group frequency**	**No positive reliable change group frequency**	**Chi- squared (*df* = 1)**	***p***
Presence of developmental issues (e.g. separation anxiety)	15.2	3.7	4.33	.038

[1]BCL: Childhood Behaviour Check List
[2]nequal variances assumed

Table 7. Significant differences between young people whose total CBCL[1] scores decreased reliably (positive change) post-treatment, and young people whose total CBCL scores did not change reliably (no positive change) on the pre-treatment CBCL scores and one service-related factor (*N* = 123)

Independent variable	Reliable Positive Change group Mean (*SD*)	No Reliable Positive Change group Mean (*SD*)	*t*	*p*
Pre-treatment CBCL withdrawn	64.5 (10.3)	59 (9.1)	3.00	.013
Pre-treatment CBCL thought problems	62.2 (9.9)	58 (7.8)	2.44	.019
Weeks waiting before first appointement[2]	3.6 (4.6)	2.1 (1.7)	2.43	.017

[1]CBCL: Childhood Behaviour Check List
[2]Unequal variances assumed

greater impact if, as recommended by the developer of the programme, both parent and teenager were present and sessions for parents and teenager between the group sessions were included as part of the overall intervention. For families of teenagers presenting with severe antisocial behaviour an intensive intervention such as MST would be appropriate. Indeed, at the Brandon Centre we have been able to offer MST to a small number of parents of teenagers with severe antisocial behaviour who have attended the group parent training programme when local commissioners have agreed to commission the service.

The findings from the study show that although young people of parents attending the programme were primarily referred for externalising problems, the programme has a significant impact on both internalising and externalising problems. This finding has been found in other studies evaluating the impact of parent training on conduct problems using the CBCL (Kazdin et al., 1987). Although internalising and externalising problem scores reflect different kinds of problems, they are not mutually exclusive (Achenbach, 1991a). Typically, they correlate positively because young people that present with high scores in one domain usually also have at least above average scores in the other domain. It would be expected that there would be change in both areas.

Limitations

The study has a number of limitations. First, the conclusions that can be drawn are limited because the analysis of outcome covers only a subset of parents (55.8%) that attended the programme and completed a CBCL pre- and post-intervention. Elsewhere we have considered strategies that could be used in order to improve the rate of return of follow-up data in routine outcome studies (Baruch et al., 2009).

Second, the study does not use a parenting scale to measure parenting practices. A parenting scale implemented pre- and post-intervention would help to learn whether changes in the young person are accompanied by changes in parenting practices as measured by such a scale. The inclusion of this measure would be useful for future studies.

Third, the study solely relies on the parental perspective for measuring the young person's emotional and behavioural problems. Measures from multiple perspectives, including the Youth Self Report Form, are recommended, as reports from young people and parents about emotional and behavioural problems tend not to agree (Achenbach, 1991b; Kolko & Kazdin, 1993). Teacher reports using the Teacher's Report Form (Achenbach, 1991c) and police records are also useful sources of information in monitoring changes in antisocial behaviour.

Fourth, since this was a routine outcome monitoring study, there was no control group for comparison with the group that received treatment. We therefore cannot say whether the improvement in young people's problems as shown in CBCL scores occurred because of the intervention. Also it is not clear how far the findings can be generalised to parents other than the ones who

participated in the present study. More studies are needed, preferably using randomised clinical trial methodology, to determine whether the intervention would benefit a wider population.

Fifth, most parents involved in the programme were only followed up once, shortly after the end of the group parent training programme. Clearly this is insufficient for determining whether or not the programme achieves longer lasting change (Kazdin, 2000). A follow-up at 6 and 12 months would provide this information.

Findings from the audit of the Centre's psychotherapy service suggested the need for a model of intervention that was specifically tailored for conduct problems. This led to the introduction of a manualised parent training programme. Five and a half years later we consider the provision of this intervention to be a valuable addition to the Centre's services.

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