Child and Adolescent Mental Health
a journal for all professionals working with children and young people

Child and Adolescent Mental Health Volume 16, No. 3, 2011, pp. 136–143 doi: 10.1111/j.1475-3588.2010.00590.x

The extended school aged Incredible Years parent programme

Judy Hutchings, Tracey Bywater, Margiad Elen Williams, Chris Whitaker, Eleanor Lane & Kate Shakespeare

Bangor University, Bangor, Gwynedd LL57 2DG, Wales. E-mail: j.hutchings@bangor.ac.uk

Background: This paper reports on outcomes for the Incredible Years (IY) parent programme with parents of 8-13 year olds. **Method:** The sample consisted of 280 parents of children at risk of adolescent antisocial behaviour, mean age 10.3 years. **Results:** Paired *t* tests for both the per protocol ($t(113) = 8.41$, $p < .001$) and intention-to-treat ($t(258) = 7.37$, $p < .001$) data found significant improvements in child behaviour problems (ECBI). Statistically significant improvements were also found for parental depression and parenting skills. **Conclusions:** The Incredible Years School Aged programme is effective in improving child behaviour, parenting competencies and parental mental health with parents of youngsters aged 8–13 years.

Key Practitioner Message:

- There is extensive evidence of the effectiveness of the IY parenting programme with parents of children aged 3 to 8 years
- Testing the impact of evidence-based programmes in real-world settings is necessary to assess whether they are robust enough to be effective under less controlled conditions
- These data provide convincing evidence of the effectiveness of the IY programme with parents of high-risk youngsters aged 8 to 13
- Staff in regular service settings can achieve good outcomes when supported with training, supervision and adequate time and resources

Keywords: Behaviour problems; conduct disorder; maternal depression; parent training; adolescence

Introduction

Developed to improve parenting skills, parenting programmes have been shown to be effective and cost-effective interventions for parents of children with challenging behaviour (Hutchings et al., 2007b; Edwards et al., 2007), with very little else having been shown to work (McMahon & Forehand, 2005). There is considerable evidence of their effectiveness from randomised trials (e.g. Scott et al., 2001) and in systematic reviews (Barlow & Stewart-Brown, 2000), but there have been few trials to test parent programmes in real-world community settings delivered by existing staff as part of their everyday work.

For programmes that have demonstrated effectiveness in research trials and are intended for use in mainstream clinical and community services, a major concern is the ability of the programme to be delivered successfully in real-world settings (Hutchings, Bywater, & Daley, 2007a; Hutchings et al., 2008). Even programmes with strong evidence of effectiveness can face challenges when used in service settings. Weisz (2004) has argued that intervention research in the community needs to be an integral part of programme development. If we are to make effective programmes available to families, we need to know if they will be as effective when used in such conditions where there is less control over the way the programme is implemented.

Weisz (Weisz, 2004; Weisz et al., 2005, 2006) identified many of the barriers to real-world implementation of evidence-based treatments. These barriers arise mainly because programme delivery is taken out of the hands of the programme developers and researchers and managed by therapists who, for a variety of reasons, do not deliver the programme with fidelity. They may not have the same resources, enthusiasm for the programme or the time to complete each component properly, and may fail to keep to the schedule and complete relevant paperwork. As a result they may make changes to the programme that make it easier to deliver but could also undermine the programme's integrity and reduce its effectiveness.

The quality and fidelity of programme delivery is highlighted as being of major importance (Hutchings, Gardner & Lane, 2004a; Mihalic et al., 2002), and research has shown a significant relationship between high programme fidelity and better outcomes (Elliott & Mihalic, 2004; Scott, Carby, & Rendu, 2008; Eames et al., 2009).

The Incredible Years (IY) parenting programme (Webster-Stratton, 1998a, 1998b) is one of the few programmes that includes strategies and resources to help clinicians in the field to implement the pro-

grammes with fidelity (Webster-Stratton & Taylor, 1998). Programme manuals contain detailed protocols, checklists for monitoring both content and process, and materials to support the collaborative leader style on which the programme is based. There are materials for leaders and parents, and basic leader training with mentors, which provide subsequent ongoing consultation and support.

Webster-Stratton and Reid (2010) have pointed out that ensuring fidelity does not mean that the programme must be delivered in the same way every time. While there are essential core components of content and delivery, there is scope for leaders to make informed clinical adaptations of the IY programme to match the needs of a particular population or family, and the barriers to participation that they may encounter without affecting core components of the programme fidelity. Such proactive adaptations may be considered to complement, rather than compete with, efforts to maintain fidelity.

There is international evidence of the effectiveness of the IY parenting programme with parents of 3- to 8-year-old children (e.g. Baydar, Reid, & Webster-Stratton, 2003; Gardner, Burton, & Klimes, 2006), including evidence in the UK from three high quality service-based trials (Scott et al., 2001; Gardner et al., 2006; Hutchings et al.; 2007b) in clinical, voluntary sector and community settings. The Welsh Assembly Government has endorsed the IY programme for use across Wales in its Parenting Action Plan for Wales (Welsh Assembly Government, DfTE, 2005), and the UK Government has included the programme in a number of funded projects, including the Family Intervention Project (DCSF, http://www.dcsf.gov.uk) and the Pathfinder Early Intervention project (DCSF, http://www.dcsf.gov.uk; Lindsay et al., 2008), and through the training provision delivered by the National Academy for Parenting Practitioners whose work is now incorporated into the Children's Workforce Development Council (http://www.cwdcouncil.org.uk).

The aim of the present study was to evaluate the effectiveness of the IY parenting programme when delivered to parents of children aged 8 to 13 in a service setting, by staff that had received basic leader training but were new to IY programme delivery.

The Pathfinder Early Intervention Project (PEIP) (Lindsay et al., 2008) was established in 2006 and provided an opportunity for such an evaluation. The PEIP was funded by the Department for Children, Schools and Families (DCSF, http://www.dcsf.gov.uk) to deliver three evidence-based programmes, including the IY programme, to parents of children aged 8 to 13 years. Children were identified as being at high risk of developing conduct disorder because of evidence of significant behavioural difficulties as well as 'at risk' family characteristics that included socio-economic disadvantage, young and/or single parents, unemployment and adult mental health problems (Rutter, 1978). The IY programme was delivered in 6 of the 18 participating authorities and an evaluation of the three programmes was conducted by the Centre for Education Development Appraisal and Research (CEDAR) team at Warwick University, led by Professor Geoff Lindsay.

Although there was substantial clinical evidence for the effectiveness of the IY programme with parents of children aged 8 to 13 years, the extensive randomised controlled trial evidence had come from clinical and preventive work with children aged 3 to 8 years and there had been no research trials or published data on the use of the programme with this older age range. Consequently, the results of this study provide the first evidence of the usefulness of the programme for this age group.

The IY programme delivered in this intervention was designed by Webster-Stratton to meet the needs of the PEIP target age group and the problems they were likely to encounter. It included content from the School Aged Basic Programme developed for children aged 6 to 12 years combined with elements of the Advanced, Adult Relationship and Problem-Solving Programme. Based on evidence that high-risk clinically referred younger children obtained better outcomes with this programme combination (Webster-Stratton & Hammond, 1997), Webster-Stratton was of the view that the parents of high-risk children aged 8 and above, who were likely to have well-established problems, would need this longer programme in order to make and – more importantly – maintain positive changes.

Although the age group targeted for the PEIP project was 8 to 13 years, and the IY programme delivered was designed for this age group, overall PEIP reported that 28% of the total sample was under the age of 8. As the aim of the present study was to evaluate the effectiveness of this IY programme with the children aged between 8 and 13 for whom the programme was intended, it was decided that only the data for these children would be included in this evaluation.

This investigation uses the data obtained in a real-world setting, where practical issues often take precedence over experimental design. It is recognised that the internal validity of this study will be weakened due to the experimental design employed in the original evaluation and also the lack of control of factors, other than the IY intervention, that could have affected the data. However, the trade-off between internal and external validity is well documented and this investigation addresses the need to investigate the external validity of this programme with this age group.

This study tests the hypothesis that the IY parent programme delivered as part of the PEIP project in a real-world service setting would be effective for high-risk children, aged 8 to 13 years, by producing positive changes in child behaviour, parenting practices and parental mental health.

Method

Sample

Participants were the parents of children aged 8 to 13 who participated in the PEIP evaluation of the IY parenting programme. The recruitment strategy varied across the six authorities, but included referral through CAMHS and other agencies, self-referral advertised through road shows, local press, schools libraries, various centres and via websites. Parents received the intervention in a variety of settings, many within schools as part of the 'extended schools' initiative.

Although the PEIP was intended for parents of 8–13 year olds, children of participating parents in the IY intervention were aged from 1 to 16 years. Data were received from 400 parents of 375 children (25 couples). This paper reports on the data from the primary parent of the 280 children aged 8–13 years, with a mean age of 10.3 years (*SD* 1.40). These represent 75% of the 375 children for whom some baseline data were available.

Intervention

The IY parent programme delivered was a 16–17 week programme designed by Webster-Stratton after consultation with the PEIP authorities during several visits. This programme combined the 12-week School-Age Basic Programme with components from the Advanced Parenting Programmes. The school-aged basic programme is intended for parents of children with significant behavioural and related problems aged 6–12 years, and the material is coded to enable leaders to select video material that is appropriate for parents of children aged 6–8 or 8–12 years old. The advanced programme, normally delivered in nine sessions, was developed to deal with relationship and other difficulties associated with poorer long-term outcomes. It focuses on adult relationship and problem-solving skills, and strategies to help children become effective problem solvers (Webster-Stratton, 1994).

Programme delivery

The six authorities varied in both size and experience in delivering an IY parent programme. Facilitators were recruited from qualified and experienced clinicians in disciplines related to mental healthcare for families and children, including nurses, psychologists, psychiatrists and social workers. None of the authorities had previously delivered targeted programmes to parents of high-risk children in the 8-plus age range and, in almost all cases, the staff trained for this project were new to the IY parent programme.

Leader training and support

Mentor or trainer support, from within the UK mentor network, provided 3-day basic leader training, additional training specific for the target age group, and supervision. In addition, the first author was funded for 18 months by DCSF to provide co-ordination for the six authorities and their mentors. Between them, the six authorities ran a total of 54 groups that included parents of children within the 8-13 age range. The mean number of groups per authority was 9, ranging from 6 to 11. Both parents of the identified child were invited to attend, although the majority of children (94%) were represented by one parent. There were generally between 8 and 10 parents per group (mean 9.5).

Data collection

In order to evaluate the effectiveness of the IY intervention, the PEIP local service co-ordinators agreed to collect additional pre- and post-course data using several measures that are recommended for IY service providers for routine evaluation. They were chosen to provide a robust measure of outcome for parents and their children. Two of the measures were already included in the PEIP evaluation but, whereas their evaluation concluded whilst several of the groups were still running, the present study included post-course data collected on all groups, including those that finished after the end of the PEIP project.

Measures

The following parent report measures (one demographic and four standardised questionnaires) were administered by group leaders to course attenders. The standardised measures were administered both pre- and post-course, and the demographic questionnaire at baseline only.

The Personal Data and Health Questionnaire (PDHQ2) is a semi-structured interview based on a demographics questionnaire (the PDHQ) developed by the first author for a previous study (Hutchings, Lane, and Kelly, 2004b). Questions explore basic socio-demographic and general health data on family members.

The Eyberg Child Behaviour Inventory (ECBI; Eyberg & Ross, 1978; Eyberg, 1980) is a 36-item inventory measuring child problem behaviours among 2- to 16-year-old children as reported by the caregiver. It measures the number of problem behaviours and the frequency with which these behaviours occur. It has two scales: the Intensity scale measures the frequency of problem behaviours displayed by their child; and the Problem scale measures whether or not these behaviours represent a problem for the parent.

The Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) is a 25-item behavioural screening measure to assess the occurrence of behaviours associated with conduct problems. It has five subscales: Emotional Problems, Conduct Problems, Hyperactivity, Peer Problems and Pro-social Behaviour. An additional Impact Supplement scale measures the extent to which the caregiver perceives the child's difficulties to impact on their daily life.

The Beck Depression Inventory (BDI; Beck et al., 1961) is a 21-item inventory used to measure the self-reported level of adult depression. It measures the severity of characteristic attitudes and symptoms that are associated with depression.

The Arnold-O'Leary Parenting Scale (Arnold et al., 1993) is a 30-item inventory of parenting competencies. The scale yields an overall score and three subscales. 'Laxness' refers to insufficient monitoring of the child and their behaviour. 'Over-reactivity' refers to displays of anger, meanness or irritability. 'Verbosity' refers to lengthy verbal responses to inappropriate child behaviours.

Analysis

Pre- and post-intervention data were analysed using paired *t*-tests. Paired pre- and post-intervention data were available for between 45 and 51% of children depending on the measure. An intention-to-treat analysis was also undertaken and included all children for whom no follow-up data were available. Baseline scores were inserted into the analysis for these participants, assuming that their responses had not changed. Prior to analysis of these data a comparison was run between those for whom pre- and post-course data were or were not available. This revealed no significant differences on

either key demographics or any of the three outcome measures ($p > .05$ for all comparisons).

Mediator and moderator analyses were undertaken on the matched pre- and post-intervention data. Mediation analysis seeks to establish causal relationships that have contributed to the positive outcomes. Moderator analysis looks at baseline characteristics and explores whether these factors have a significant influence on outcome.

Results

For most services this was the first time that their programme delivery staff had collected pre- and post-course information, and the amount of baseline data returned varied by authority, with three providing data on 100% of children and the lowest rate of return being 39%. The overall return of baseline data was 79%, representing 400 of the 508 participants in the 54 groups. These 400 parents represented 375 children, of whom 280 were aged between 8 and 13, with 20 aged 13 + and 75 aged less than 8.

Demographic information

Baseline characteristics for the 8–13 sample are presented in Table 1. In all identified cases the primary carer was female and 95% were the child's biological parent. Sixty-five percent were married or co-habiting. Sixty-three percent had left school at aged 16 or younger. State benefits were the main source of income for 61% of the families, and 62% of children were entitled to free school meals. Three-quarters of families (75%) lived in council or private rented accommodation. The mean number of children per household was 2.58 (*SD* 1.45).

The mean age of primary carers at the birth of their first child was 6 years younger (21.89, *SD* 5.58) than the UK national average (Social Trends, 2007). Overall, 55% of families lived on an income of £64 per person, per week or less, the recognised poverty indicator, more than three times the 17% UK national rate (Social Trends, No.37, 2007). The number of families with three or more resident children (42%) was double the UK national average, and there were almost twice as many lone parents with three or more children in the household (23%) (Social Trends, No.37, 2007).

Twenty-eight percent of primary carers reported problems with drugs or alcohol within the family, with the father most commonly reported as the person with the problem, and 35% reported a member of their family having had a history of crime and/or contact with the police. Depression during the child's first year of life was reported by 38% of carers and, subsequent to the first year of the child's life, this increased to 61%.

The children had a mean age of 10.3 years and 67% of the sample were boys. Fifty-three percent of children received additional help at school and half (50%) of the children were either 'statemented' or involved in the statementing process.

Baseline measures

At baseline, mean scores on both the Intensity and Problem scales of the ECBI exceeded the clinical cut-off, with 70% and 82% of children within the clinical range respectively. Results were similar for the SDQ with the Total Problem score falling within the 'abnormal' range for 74% of children and the Impact Supplement score exceeding the clinical cut-off for 71% of children.

The mean parental depression score, on the BDI, fell within the 'moderate to severe' range, with 78% of parents scoring at or above the cut-off for mild depression. Other studies of conduct-disordered children report depression levels in parents of around 50% (Alpern & Lyons-Ruth, 1993).

Mean baseline parenting scores for the primary carers were notably higher than the clinic-referred population mean score (Arnold et al., 1993), suggesting that parenting practices reported by parents in this sample were problematic.

Taken together, the data reported above demonstrate that the 8- to 13-year-old sample accurately represented the intended PEIP target population of high-risk children with predominantly disadvantaged and stressed parents with poor parenting practices.

Post-course outcome measures

The analyses present the data from the 280 children aged 8–13 and for whom the PEIPS project was intended and this IY intervention designed. The data first describe the results for the sample where matched pre- and post-course data were available (Table 2) and then the Intention to Treat (ITT) data and analysis (Table 3).

Table 1. Demographic information

Primary Carer*	Biological parent*	Age left school*	Age at birth of 1st child*	Income source*
Female 280 (100%)	260 (95%)	≤16 yrs 165 (63%)	*N* = 261 Mean 21.89, *SD* 5.58	State benefit 152 (61%)
Income per week*	Housing*	Marital status*	Children per household*	Problems -drugs/alcohol*
≤£64 145 (55%)	Council/privately rented 200 (75%)	Married/cohab 128 (65%) Single 70 (35%)	*N* = 280 mean 2.58 *SD* 1.45	75 (28%)
Family history of crime*	Depression - 1st year*	Depression after 1st year*	3 + children*	Lone parent - 3 + children*
95 (35%)	102 (38%)	160 (61%)	118 (42%)	63 (23%)
Sex of child*	Age of child*	Additional school help*	Involved in statement process*	Free school meals*
M 187 (67%) F 92 (33%)	*N* = 280 mean 10.3 *SD* 1.40	142 (53%)	109 (50%)	161 (62%)

*Not all respondents answered every question and percentages were calculated based on the numbers of respondents for each category

Table 2. Pre- and post-intervention outcomes (8 + aged matched sample data)

Outcome measures (*n*)	Cut-off	Baseline Mean (*SD*)	Follow-up Mean (*SD*)	*p*-value	Effect size (Cohen's *d*)
ECBI Intensity (114)	127	145.43 (36.46)	121.90 (41.54)	<.001*	0.6
ECBI Problem (114)	11	18.25 (8.39)	10.16 (9.06)	<.001*	0.9
SDQ Total (114)	17–20	19.82 (6.99)	16.87 (7.56)	<.001*	0.4
SDQ Impact (108)	2+	3.90 (4.11)	3.09 (3.95)	<.01**	0.2
BDI (114)	Mild-mod (10–18) Mod-severe (19–20)	19.61 (12.17)	10.68 (9.44)	<.001*	0.8
Arnold-O'Leary (114)	3.1	3.71 (.85)	2.82 (.81)	<.001*	1

*Significant to *p*-value < .001; ** Significant to *p*-value < .05

Table 3. Pre- and post-intervention: Intention-to-Treat analysis (8 + sample)

Outcome measure (*n*)	Cut-off	Baseline Mean (*SD*)	Follow-up Mean (*SD*)	*p*-value	Effect size (Cohen's *d*)
ECBI Intensity (258)	127	146.66 (39.26)	133.27 (41.95)	<.001*	0.3
ECBI Problem (244)	11	18.61 (8.62)	13.93 (9.73)	<.001*	0.5
SDQ Total (249)	17-20	19.91 (7.06)	18.12 (7.49)	<.001*	0.2
SDQ Impact (239)	2+	4.31 (4.12)	3.79 (3.95)	<.001*	0.1
BDI (250)	Mild-mod (10–18), Mod-severe (19–20)	19.99 (17.61)	14.36 (11.97)	<.001*	0.4
Arnold-O'Leary (242)	3.1	3.72 (.85)	3.17 (.95)	<.001*	0.6

*Significant to *p*-value < .001
Note: Not all data sets were complete at baseline so data included in the ITT analysis are for participants for whom a completed baseline score was available for that measure (90–96% of all participants depending on the measure)

Child behaviour

Paired *t*-tests showed a significant difference between the pre- and post-intervention scores for both ECBI scales (Intensity: $t(113) = 8.41$, $p < .001$; Problem: $t(113) = 11.29$, $p < .001$). At follow-up, parental report of problematic child behaviour reduced significantly on both scales and the mean ECBI Intensity score dropped below the clinical cut-off at follow-up (see Table 2). At baseline, 80 (71%) of caregivers rated their child's behaviour as above the clinical cut-off and at follow-up this had reduced to 48 (42%), a reduction of 29% of children in the clinical range ($p < .001$) (see figure 1). The mean Problem Scale score at follow-up also dropped below the clinical cut-off, 93 children (82%) scored within the clinical range at baseline and only 47 (41%) (see Figure 2) at follow-up, demonstrating a reduction of 41% ($p < .001$). The ITT analysis of data also demonstrates a highly significant reduction in scores at follow-up with medium-effect sizes maintained.

A significant difference was found between the pre- and post-intervention scores for the SDQ total score using a paired *t*-test ($t(113) = 5.46$, $p < .001$). The mean SDQ Total score showed a significant reduction ($p < .001$) in child problems and this was also evident in two of the four subscale scores, Conduct problems and Hyperactivity. There was also a significant increase in positive social behaviours as measured by the Pro-social scale. At baseline, 84 (74%) of parents reported their child's behaviour as at, or exceeding, the cut-off for 'abnormal behaviour' (17–20); at follow-up this reduced to 58 (51%), a reduction of 23%. There was

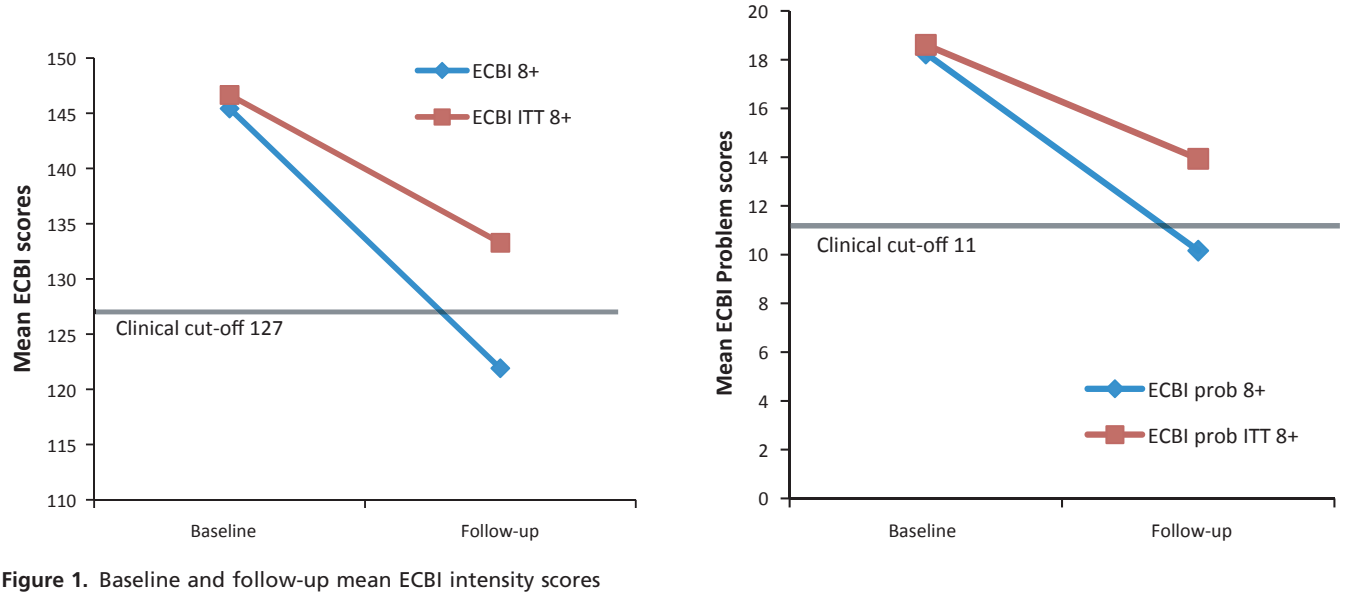

Figure 1. Baseline and follow-up mean ECBI intensity scores

also a significant difference between the pre- and post-intervention scores for the Impact Supplement SDQ subscale ($t(107) = 2.68$, $p < .01$). The mean Impact Supplement score reduced significantly at follow-up ($p < .01$), yet remained within the range for abnormal behaviour of 2 +, despite a reduction of 16% in the total number of caregivers reporting their child's behaviour as problematic. Medium effect sizes were observed. Results from the ITT analysis also demonstrated significant changes, although smaller effect sizes were observed because of the inclusion of the 'no change' observations.

Parental depression

A paired *t*-test confirmed a significant difference between the pre- and post-intervention scores for parental depression (BDI; $t(113) = 9.97$, $p < .001$). The mean baseline BDI score was within the 'moderate to severe' depression range, but reduced to the lower end of the 'mild to moderate' range at follow-up. At baseline, 89 (78%) of caregivers exceeded the clinical cut-off of 10 or above, with scores ranging from 'mild to severe' depression. At follow-up this dropped to 46 (40%), a reduction of 38% ($p < .001$). The significant reduction (and large effect size) demonstrates that the programme was successful in reducing parental depression. ITT analysis also showed significant reductions in BDI score at follow-up whilst again maintaining a medium effect size.

Parenting skills

A significant difference between pre- and post-intervention scores was found for the Arnold and O'Leary total parenting score using a paired *t*-test ($t(113) = 11.89$, $p < .001$). Parenting scale scores showed a significant improvement in both the total score and all subscale scores ($p < .001$ for all) and large effect sizes, demonstrating that the programme was successful in reducing dysfunctional parenting strategies. Significant reductions in problematic parenting behaviour also remained in the ITT analysis.

Correlations and mediator/moderator analyses

These analyses are reported in full by Hutchings, Bywater and Shakespeare (2009) and are summarised as follows. Mediation analyses were run to explore the mediating effects of parenting skills on child behaviour. Baseline child behaviour was introduced as the independent variable (IV); change in child behaviour (difference between pre-and post-course ECBI scores) as the dependent variable (DV); and follow-up parenting scale scores as the mediating variable (MV). Significant correlations were found between all three variables; therefore, the data were appropriate to run a mediation analysis. A full mediation was found for parenting skills on change in child behaviour, a Sobel test confirmed the mediation was significant ($z = -2.68$, $p = .007$).

Moderator analyses were run to assess the effects of identified risk factors on child outcomes, as measured by the ECBI. Six potential risk factors were identified: teenage parent at birth of first child, family history of drug/alcohol use, family history of crime, parental depression, single parenthood and poverty, i.e. an income of £64 or less per person per week. Moderator effects were found only for family history of crime and not for young parenthood, low income, parental depression or single parent status, suggesting that the programme was equally effective for families with these broader social disadvantaging characteristics, but that the parents of children living in homes where there is a history of criminality may require an additional targeted intervention.

Discussion

The six authorities came from across England and had varied experience of delivering an IY parent programme. Even the more experienced services had predominantly worked with younger children. The leaders that were trained to run the 54 groups were, for the most part, new to the programme but were supported by mentors who provided both basic and age-specific leader training and fortnightly supervision. The fact that the leaders successfully collected baseline data from 79% of participants was impressive and, although paired follow-up data were only available from 45 to 51% of the sample depending on the measure, those that provided follow-up data were not significantly different at baseline from families for whom only baseline data were available.

The PEIP project targeted high-risk children aged 8 to 13 and, both in terms of the demographic profile of the sample and the levels of problems experienced by the children, this was achieved in the recruitment for the IY groups. There was a high percentage of low-income families and lone parents compared to UK national rates. Parents were five years younger than the national average at the birth of their first child. The majority of caregivers left school at or below aged 16, lived on state benefits, and in council or privately rented accommodation.

The results demonstrate, by both methods of analysis (matched pre- and post-course and intention to treat analyses), that the programme was successful in improving the behaviour of children. The scores on the parent-reported ECBI and SDQ measures showed a significant reduction in the frequency of conduct problems and the extent to which these behaviours were considered problematic by the caregiver. The SDQ data showed an increase in pro-social behaviours and reduced impact of problem behaviours on the child's daily living. ITT analyses also showed positive outcomes on all measures, although effect sizes were reduced.

The positive changes in parental mental health demonstrate that the programme was successful in improving caregiver's wellbeing in a sample with high baseline levels of depression. This is likely to be due to the transferable skills gained from the parenting programme in building accurate observation, problem solving and realistic goal-setting skills that can also contribute to greater self-control and improvements in relationships with their partners (Hutchings, et al., 2004b; Hutchings et al., 2011). Levels of depression in caregivers have been shown to decrease in the randomised controlled studies of the IY parent programmes (Webster-Stratton & Spitzer, 1996; Hutchings et al., 2007b) and reductions in maternal depression are associated with longer term maintenance of child behaviour change following parenting interventions (Hutchings, et al., 2004a).

The significant improvement in parenting skills suggest that parenting competencies improved and a significant relationship between parental competency and level of child behaviour was demonstrated. The reduction in problematic parenting behaviour also remained significant in the ITT analysis.

These results are consistent with previous findings from RCT trials of the parenting programme with children aged 3 to 8 in different real-world service settings in the UK using similar measures. Scott et al. (2001) reported significant improvements when the programme was delivered in a CAMHS setting to parents of children referred with antisocial behaviour. Hutchings et al. (2007b) also reported significant improvements when the programme was delivered in 11 Sure Start areas in North and Mid Wales. Trained leaders from a range of backgrounds, including social workers, family support workers, health visitors and psychologists delivered the programme to groups of parents of children identified by health visitors as being at risk of developing conduct disorder.

This is the first demonstration that the IY parent programme delivered to children aged 8-13 in service settings across England benefited both children and their primary caregivers by significantly improving child behaviour, increasing parenting competencies and reducing parental depression levels. However, despite highly significant outcomes, as evidenced by both statistically and clinically significant effects, many children remained within the clinical range for behaviour problems and their parents for depression and problematic parenting practices. This is likely to be due to the children being older and having longer established problems. As children get older, their social network widens and the influences of peers, school and community can be as great or greater than that of parents and family. Additional direct support may well be needed for older children to maintain the improvements achieved by some families and to enable more of these children and their families to make significant changes (Lane et al., 2004). Longer-term follow-up is needed to clarify whether improvements achieved with this age group are maintained. This is not to downplay the present results since they provide convincing evidence that the home environment continues to exert a significant influence over child behaviour.

The improvements brought about by the programme used in this study provide further evidence of the effectiveness of the IY parent programme. The data also provide evidence that staff in regular service settings, even when relatively inexperienced, can achieve good outcomes when supported with training, supervision and adequate time and resources.

Limitations of the study

This was an opportunistic study. The PEIP evaluation provided an opportunity to evaluate the IY programme with children older than those for whom current research exists. While the results show a number of positive changes, these must be interpreted with the awareness that there were weaknesses in the research design that often occur in real-world research.

The investigators had little control over the methods used to ensure that data were available for the evaluation. The study depended on more than 50 group leaders, managed by local co-ordinators, to collect the data. The success at data collection varied across groups and authorities. The data were collected in different ways depending on resources available to the service, and many staff had never previously collected pre- and post-course data. This resulted in complete data being available for less than half of the participating families.

Another limitation is that there were no comparison or control groups against which to compare the effects. This makes it more difficult to draw conclusions about the effectiveness of the programme. Also, as programmes were delivered in a variety of real-world settings, there was little control of some variables that may have affected the results.

These preliminary, but positive, results provide a compelling justification for replication in a more rigorous RCT that incorporates independent measures of child behaviour and longer-term follow-up. The inclusion of a control group, together with systematic data collection, would yield more robust findings and be more informative about the value of this programme with this age group.

Despite the success reported here, many children remained within the clinical range. Future studies could include comparison of the benefits of other components of the IY series, including intervention with children/young people and teachers as Webster-Stratton has done in studies of younger conduct-disordered children (Webster-Stratton & Hammond, 1997; Reid, Webster-Stratton, & Hammond, 2007). Longer-term follow-up is particularly important given that, for children/young people in this age range, such behaviour starts to impact significantly on those around them through violence, criminal behaviour and substance misuse (Patterson, 1982, 1986).

One of the most impressive features of this study is the fact that these results were achieved by staff, many of whom were new to the programme. It is important to recognise the level of skill involved in engaging and retaining high-risk families in a group setting. The data were collected from parents attending 54 groups (mean 9.5 participants per group) by a large number of staff working in service settings for whom both the intervention and pre- and post-intervention data collection were new experiences. They are to be congratulated for their commitment to, and support for, this project and for the achievements reported in this paper.

References

Alpern, L., & Lyons-Ruth, K. (1993). Pre-school children at social risk: Chronicity and timing of maternal depressive symptoms and child behaviour problems at school and at home. *Development and Psychopathology*, *5*, 371–387.

Arnold, P.S., O'Leary, S.G., Wolff, L.S., & Acker, M.M. (1993). The Parenting Scale. A measure of dysfunctional parenting in discipline situations. *Psychological Assessment*, *5*, 137–144.

Barlow, J., & Stewart-Brown, S. (2000). Review article: Behavior problems and parent-training programmes. *Journal of Developmental and Behavioral Pediatrics*, *21*, 356–370.

Baydar, N., Reid, M.J., & Webster-Stratton, C. (2003). The role of mental health factors and program engagement in the effectiveness of a preventive parenting program for Head Start mothers. *Child Development*, *74I*, 1433–1453.

Beck, A.T., Ward, C.H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An Inventory for measuring depression. *Archives of General Psychiatry*, *4*, 561–571.

Eames, C., Daley, D., Hutchings, J., Whitaker, C.J., Jones, K., Hughes, J. C., & Bywater, T. (2009). Treatment fidelity as a predictor of behaviour change in parents attending group-based parent training. *Child: Care, Health and Development*, *35*, 603–612.

Edwards, R.T., Ó Céilleachair, A., Bywater, T., Hughes, D.A., & Hutchings, J. (2007). Parenting programme for parents of children at risk of developing conduct disorder: Cost-effective analysis. *BMJ*, doi:10.1136/bmj.39126.699421.55.

Elliott, D.S., & Mihalic, S. (2004). Issues in disseminating and replicating effective prevention programmes. *Prevention Science*, *5*, 47–53.

Eyberg, S.M. (1980). Eyberg child behaviour inventory. *Journal of Clinical Psychology*, *9*, 27.

Eyberg, S.M., & Ross, A.W. (1978). Assessment of child behaviour problems: The validation of a new inventory. *Journal of Clinical Child Psychology*, *7*, 113–116.

Gardner, F., Burton, J., & Klimes, I. (2006). Randomised controlled trial of a parenting intervention in the voluntary sector for reducing child conduct problems: Outcomes and mechanisms of change. *Journal of Child Psychology and Psychiatry*, *47*, 1123–1132.

Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A research note. *Journal of Child Psychology and Psychiatry*, *38*, 581–586.

Hutchings, J., Gardner, F., & Lane, E. (2004a). Making evidence-based interventions work. In C. Sutton, D. Utting & D. Farrington (Eds.), *Support from the start: Working with young children and their families to reduce the risks of crime and anti-social behaviour* (Research Report 524, pp. 69–79). Norwich: Department for Education and Skills.

Hutchings, J., Lane, E., & Kelly, J. (2004b). Comparison of two treatments of children with severely disruptive behaviours: A four-year follow up. *Behavioural and Cognitive Psychotherapy*, *32*, 15–30.

Hutchings, J., Bywater, T., & Daley, D. (2007a). A pragmatic randomised controlled trial of a parenting intervention in Sure Start Services for pre-school children at risk of developing conduct disorder: How and why did it work? *Journal of Children*'s Services, *2*, 4–14.

Hutchings, J., Bywater, T., Daley, D., Gardner, F., Whitaker, C., Jones, et al. (2007b). Parenting intervention in Sure Start services for children at risk of developing conduct disorder: A pragmatic randomised controlled trial. *British Medical Journal*, *334*(7595), 678.

Hutchings, J., Bywater, T., Eames, C., & Martin, P. (2008). Implementing child mental health interventions in service settings: Lessons from three pragmatic randomized controlled trials in Wales. *Journal of Children*'s Services, *3*, 17–27.

Hutchings, J., Bywater, T., & Shakespeare, K. (2009). *Pathfinder early intervention project: Incredible Years phase one 2006-2008. Final Report*. Bangor: Bangor University.

Hutchinas, J., Bywater, T., William, M.E. and Whitaker, E. (2011). Improvements in parental edpression as a mediator of Child Behaviour change. Manuscript submitted for publication.

Lane, E., Gardner, F., Hutchings, J., & Jacobs, B. (2004). Eight to thirteen years: Risk and protective factors; effective interventions. In C. Sutton, D. Utting & D. Farrington (Eds.), *Support from the start: Working with young children and their families to reduce the risks of crime and antisocial behaviour* (Research Report 524). London: Department for Education and Skills.

Lindsay, G., Davies, H., Band, S., Cullen, M.A., Cullen, S., Strand, et al. (2008). *Parenting early intervention pathfinders evaluation* (Research Report DCSF-RW054). Warwick: University of Warwick Department for Children, Schools and Families.

McMahon, R.J., & Forehand, R. (2005). *Helping the noncompliant child: Family-based treatment for oppositional behaviour* (2nd ed.). New York: The Guilford Press.

Mihalic, S., Fagan, M., Irwin, K., Ballard, D., & Elliot, D. (2002) *Blueprints for violence prevention replications: Factors for implementation success*. Boulder: University of Colorado, Center for the Study and Prevention of Violence.

Patterson, G.R. (1982). *Coercive family process*. Eugene, OR: Castalia.

Patterson, G.R. (1986). Performance models for antisocial boys. *American Psychologist*, *41*, 432–444.

Reid, M. J., Webster-Stratton, C., & Hammond, M. (2007). Enhancing a classroom social competence and problem-solving curriculum by offering parent training to families of moderate- to high-risk elementary school children. *Journal of Clinical Child and Adolescent Psychology*.

Rutter, M. (1978). Family, area and school influences in the genesis of conduct disorder. In L. Hersov, M. Berger & D. Shaffer (Eds.), *Aggression and antisocial behaviour in childhood and adolescence*. Oxford: Pergamon Press.

Scott, S., Carby, A., & Rendu, A. (2008). *Impact of therapists*' skill on effectiveness of parenting groups for child antisocial behaviour. London: King's College, Institute of Psychiatry.

Scott, S., Spender, Q., Doolan, M., Jacobs, B., & Aspland, H. (2001). Multicentre controlled trial of parenting groups for child antisocial behaviour in clinical practice. *British Medical Journal*, *323*, 1–5.

Social Trends, No.37 (2007). London: Office for National Statistics.

Webster-Stratton, C. (1994). Advanced videotape parent training: A comparison study. *Journal of Consulting and Clinical Psychology*, *6*, 583–593.

Webster-Stratton, C. (1998a). Parent training with low-income clients: Promoting parental engagement through a collaborative approach. In J. Lutzker (Ed.), *Handbook of child abuse research and treatment* (pp. 183–210). New York: Plenum Press.

Webster-Stratton, C. (1998b). Preventing conduct problems in Head Start children: Strengthening parenting competencies. *Journal of Consulting and Clinical Psychology*, *66*, 715–730.

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

Webster-Stratton, C., & Reid, M.J. (2010). Adapting the Incredible Years and evidence-based parenting programme for families involved in the child welfare system. *Journal of Children*'s Services, *5*, 25–42.

Webster-Stratton, C., & Spitzer, A. (1996). Parenting a young child with conduct problems: New insights using qualitative methods. *Advances in Clinical Child Psychology*, *18*, 1–62.

Webster-Stratton, C., & Taylor, E.T. (1998). Adopting and implementing empirically supported interventions: A recipe for success. In A. Buchanan & B.L. Hudson (Eds.), *Parenting, schooling and children*'s behaviour: Interdisciplinary approaches. Aldershot: Ashgate Publishing.

Weisz, J. R. (2004). *Psychotherapy for children and adolescents: Evidence-based treatments and case examples*. Cambridge: Cambridge University Press.

Weisz, J.R., Sandler, I.N., Durlak, J.A., & Anton, B.S. (2005). Promoting and protecting youth mental health through evidence-based prevention and treatment. *American Psychologist*, *60*, 628–648.

Weisz, J.R., Sandler, I.N., Durlak, J.A., & Anton, B.S. (2006). A proposal to unite two different worlds of children's mental health. *American Psychologist*, *61*, 644–654.

Welsh Assembly Government, Department for Training and Education (2005). *Parenting Action Plan for Wales*. DfTE information document No: 055-05. http://wales.gov.uk/docrepos/40382/4038232/4038211/Guidance_and_Information/parenting-summary-e.pdf?lang=en

Accepted for publication: 2 August 2010
Published online: 1 March 2011