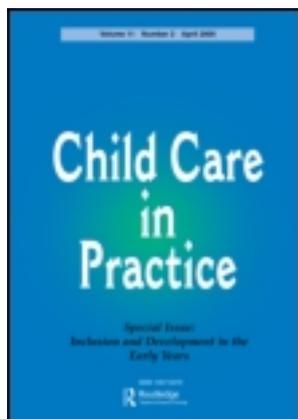


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Incredible Years Parent Training Support for Nursery Staff Working within a Disadvantaged Flying Start Area in Wales: A Feasibility Study

Tracey Jane Bywater, Judith Mary Hutchings, Nicole Gridley & Karen Jones

Parenting programmes are effective interventions for preventing and treating conduct problems in young children. Up to 20% of children in disadvantaged areas have conduct disorder. Recent government initiatives such as targeting early years services to designated disadvantaged Flying Start areas in Wales have resulted in increased nursery-care provision for pre-schoolers, yet little has been done to equip nursery staff with effective child behaviour management strategies. The purpose of this non-randomised trial platform study was to establish the feasibility of delivery and the effectiveness of the new Incredible Years Toddler Parent Programme in supporting nursery staff in managing difficult behaviour in the nursery. The Parent Programme is a 12-session (a two-hour session/week) course for carers/parents of children aged one to three years old, which encourages carers to: establish positive relationships with children through play and child-centred activities; use praise, rewards and incentives to encourage appropriate behaviours; and use effective limit setting and clear instructions. Thirteen nursery workers were recruited from two Flying Start nurseries in Wales. Measures were completed on 28 nursery children by their parents and nursery workers, baseline and four months post-baseline, with the intervention delivered in the interim. Paired t-test analyses demonstrated statistically significant improvements ($p < 0.05$) for child behaviour in the nursery and nursery staff's self-reported stress and sense of competence. No improvement in child behaviour was reported in the home. In conclusion, nursery worker training could incorporate the Incredible Years parent programme to support the staff in managing child behaviour in the nursery. The

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intervention should be delivered to both home and out-of-home carers to encourage consistency in child management strategies.

Introduction

Conduct disorder (CD) is a serious behavioural disorder characterised by a repetitive and persistent pattern of anti-social behaviour in children and adolescents, with prevalence rates estimated to range between 5% and 10% of the school-aged population (National Institute for Clinical Excellence [NICE], 2006; Office for National Statistics, 1999). Rates of CD have been reported to be at least twice as high in socio-economically disadvantaged areas (Attride-Stirling, Davis, Day, & Sclare, 2000). In the absence of intervention, the prognosis for these children is poor (Coid, 2003); studies with children as young as two years have found CD behaviours to be highly stable over time, particularly amongst boys (Shaw, Gilliom, & Giovanelli, 2000). Longitudinal studies have demonstrated that the majority of children with CD continue to experience difficulties in late childhood and adolescence (Farrington, 1995). Furthermore, children with CD are more likely than their non-affected peers to experience academic failure, low self-esteem, peer rejection, and low levels of social competence (Webster-Stratton & Lindsay, 1999). In the long term, as adolescents and adults, they are at heightened risk of substance abuse, depression and long-term unemployment (Kazdin, 1995; Loeber, 1990). Early-onset aggressive behaviour is also a significant predictor of antisocial criminal behaviour in adolescence and adulthood (Broidy et al. 2003; Farrington, 1995). As well as having significant implications for the individual, CD is a huge burden on public spending, with services for individuals costing as much as 10 times more than for non-CD individuals, with costs arising in social, health and education services, as well as the criminal justice system (Scott, Knapp, Henderson, & Maughan, 2001).

The strategies used to manage children's behaviour contribute significantly to the development, establishment and maintenance of conduct problems, and there is substantial evidence in the literature suggesting that parenting programmes are the most effective interventions for preventing or treating conduct problems, in the short and long term, especially if delivered early, before the child encounters secondary risk factors following the transition to school (Bywater et al., 2009; Hutchings, Bywater & Daley, 2007; Hutchings et al., 2007; Webster-Stratton & Hancock, 1998). NICE (2006) recommends the Incredible Years (IY) Parenting Programme as an evidence-based programme that demonstrates the essential characteristics for decreasing problem behaviours associated with CD. There is strong evidence for the effectiveness of the IY Basic Parenting Programme in enhancing parenting skills and reducing child conduct problems, as well as improving parent-child relationships with children aged three to eight years old (Bywater et al., 2009; Hutchings et al., 2007; Scott et al., 2001; Webster-Stratton, 1998).

However, the benefits achieved from parenting programmes, in terms of improved parent-child relationships and increased child compliance, do not always

generalise reliably to settings beyond the intervention setting; that is, the home (Chandler, Lubeck, & Fowler, 1992; Webster-Stratton & Hammond, 1997; Webster-Stratton, 1998).

Other settings, such as nurseries and after-school clubs, present different challenges for children, as well as providing further important opportunities for adults to develop children's social and emotional competence with peers and carers (Webster-Stratton, 1999). Social and emotional competence can be defined as an absence of conduct problems and depression (NICE, 2008). Increasing numbers of high-risk children now spend time in out-of-home care during their pre-school years. Nursery provision for children living in highly disadvantaged areas is increasing as a result of recent government policies, such as Sure Start (Department for Children, Schools & Families, 2010) and Flying Start (Department for Training & Education, 2005a) services in England, and Wales. Government, at national and local level, is increasingly recognising the importance of delivering evidence-based parenting programmes, to parents of children living in disadvantaged areas at risk of developing CD, but this has not been reflected in similar support to childcare staff working in nurseries in these areas.

More needs to be done to ensure that staff responsible for the care and education of pre-school children are trained in skills to effectively manage difficult behaviour and promote children's social and emotional competence. Nurseries may employ staff with a National Nursery Examination Board (Cache, 2009) two-year recognised qualification for working with children aged birth to seven years, yet staff have relatively little training for the challenges that they may face in caring for children living in areas of high socio-economic disadvantage with high prevalence rates of CD. The National Nursery Examination Board curriculum, which includes children's physical, social, educational, intellectual and emotional needs, does not include evidence-based child management skills training. The establishment in England of a National Academy for Parenting Practitioners in 2007 was an initial step towards addressing the need to develop a skilled childcare workforce to work in parallel with parents. The Academy has since been incorporated into the Children's Workforce Development Council (2009). The Council is still in its infancy and the work undertaken in this study could contribute important evidence on ways to develop effective child management by nursery workers.

Prior to the current project a number of childcare workers in North Wales had attended an IY Parenting Programme alongside parents and provided anecdotal evidence of its usefulness. This provided the rationale for the current small feasibility study of the acceptability and effectiveness of the newly developed IY Toddler Parent Programme (Webster-Stratton, 2008) delivered to a dedicated group of nursery workers. Those participating were working with pre-school children living in disadvantaged Flying Start areas in the county of Gwynedd, North Wales.

Hypotheses

The hypotheses were as follows:

- (1) Nursery staff's confidence and "parenting" competence within the nursery setting would increase, and stress levels decrease, post course attendance.
- (2) Children's social, emotional, and behavioural competencies in the nursery setting, and possibly in the home, would increase following nursery staff's attendance on the Parent Programme.
- (3) Nursery workers would feel satisfied with the course as a suitable intervention for managing children's behaviour within the nursery and improving carer-child relationships.

Method

Research Design

A repeated-measures design was applied. Measures were completed at baseline and four months post-baseline. The 12-week IY programme was attended by all nursery workers in the interim, between data collection points.

Sampling Procedures

The North Wales Grants Committee (a sub-committee of the North Wales research committee) was awarded funding in 2008 to conduct a 10-month pilot trial of the IY Toddler Programme for nursery staff from six nurseries across Gwynedd, North Wales. Ethical approval was awarded in 2008 by the School of Psychology Ethics Review Committee, Bangor University. Although the proposed design was robust, it was over-ambitious in terms of personnel and resources and so a feasibility study was agreed upon. Five Flying Start nurseries in Gwynedd were approached by researchers and asked if they would attend the 12-session programme and participate in the small trial. Two nurseries consented to staff trial participation. The three nurseries that declined gave reasons of insufficient capacity and resources. Consenting nursery workers were asked by researchers to select between three and five children in their care who staff felt they needed support in managing or relating to these children. Parents of these potential participants were asked to read the project information sheet and, if interested, give written consent for nursery workers to complete questionnaires on their child's behaviour in the nursery, and for the questionnaires to be forwarded to the research team. Consenting parents completed a battery of measures on their child's behaviour in the home. Parents and nursery workers received a small cash incentive of £10 to thank them for their time when completing the measures. The nursery workers did not receive cash incentives for attending the group, but there was the opportunity of gaining an Open College Network Level 2 qualification on completion of the IY course.

Participants

Thirteen full-time nursery staff from two Flying Start nurseries, eight from one nursery (80%), five from the other (100%), in Gwynedd were recruited to attend the 12-week IY Toddler Parent Programme. Nursery workers were aged between 19 and 45 years old (mean = 30 years; standard deviation (SD) = 8.89) with an average of 4.5 years experience of working with pre-school children. All staff had at least one NVQ qualification Level 2–4, for Child Care and/or Early Years Care and Education.

Nursery workers selected 35 children on whom to complete measures, 17 males and 18 females aged between two and three years old (mean = 31.37 months; SD = 7.22), to represent 45% of the total population of nursery school children attending the two nurseries. Staff selected children on the basis of who they felt they needed support in managing or relating to. Complete data at both time points were only available for 28 of these children (mean = 32.25 months; SD = 5.09), 14 males and 14 females. Participating children received approximately three hours of either morning or afternoon nursery supervision per day (approximately 15 hours per week). All nursery workers, children and parents were white-British, and all children were taught through the medium of Welsh. Flying Start areas are designated highly disadvantaged areas within Wales. The children were eligible to attend free Flying Start early childcare. The intervention was delivered solely to nursery workers with the primary outcome being behaviour change within the nursery, and therefore additional demographic information was not requested from the children's families.

The inclusion criteria were as follows:

- (1) Nursery staff were willing to attend the 12-session Toddler Parent Programme.
- (2) Parents of children consented to completing measures on their child's behaviour in the home, and to nursery staff completing measures on their child's behaviour in the nursery.
- (3) Participating children were aged two to three years old.

The exclusion criteria were as follows:

- (1) The negatives of points 1–3 above.
- (2) Outcome measures were missing or incomplete.

Research Measures

Standardised and validated measures were chosen to assess Nursery staff stress (Greene, Abidin, & Konold, 1997), competency (Johnston & Mash, 1989), child behaviour in nursery (Goodman, 1997), child behaviour at home (Eyberg & Ross, 1978; Goodman, 1997) and overall satisfaction with the IY Toddler Programme (Webster-Stratton, 2008). The selected measures are validated and have been frequently used in high-quality research trials of the IY programmes (for example,

Bywater et al., 2009, 2011; Griffith, 2010; Hutchings, Bywater, & Daley, 2007; Hutchings et al., 2007).

Measures Completed by Nursery Staff (to test Hypothesis 1)

Parent sense of competence

The Parenting Sense of Competence (PSoC; Johnston & Mash, 1989) was adapted for use with nursery staff. The 17-item self-report assesses nursery workers' self-esteem on two sub-scales related to satisfaction (e.g. "a difficult problem in being a Nursery worker is not knowing whether you're doing a good job or a bad one") and efficacy (e.g. "Being a nursery worker is manageable, and any problems are easily solved"). Items are rated on a six-point Likert scale ranging from *strongly agree* (1) to *strongly disagree* (6) with a maximum possible score of 96. In a normative study of 297 mothers and 215 fathers of four-year-old to nine-year-old boys (Johnston & Mash, 1989), Cronbach's alpha coefficients were calculated for the total score and for each factor (nine items) yielded an alpha of 0.75; and the efficacy factor (seven items) revealed an alpha of 0.76.

Teaching stress

The Index of Teaching Stress (ITS; Abidin, Greene, & Konald, 2003) is a 90-item self-report measure normed on 1488 teachers. It assesses the level of teacher stress in three main domains (attention-deficit hyperactive disorder (ADHD), student characteristics, and teacher characteristics). The sub-scales of the ITS evaluate teaching stressors related to the following pupil characteristics; emotionality, learning limitations, aggressiveness, anxiety and ADHD-type behaviours. The ITS also assesses teaching stressors related to the nursery workers' perceptions of loss of satisfaction from their teaching role, sense of competence, lack of support, disruption of the teaching process, and frustration working with pupils' parents. Abidin et al. (2003) suggest that elevated scores, above the 80th percentile, on any of the sub-scales indicate a clinical cause for concern.

Measures Completed by Nursery Staff and Parents (to test Hypothesis 2)

Teacher-rated and parent-rated strengths and difficulties

The teacher-rated and parent-rated Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997), a 25-item inventory, was designed as a behavioural screening measure to assess the occurrence of particular behaviours that have been associated with conduct problems, hyperactivity, emotional symptoms, and peer problems in children aged three to 16 years old. The scale has demonstrated good stability, whether judged by internal consistency (mean Cronbach's alpha = 0.73),

cross-informant correlation (mean = 0.34), and test–re-test stability after four to six months (mean = 0.62) (Goodman, 2001). In terms of discriminant validity, high scores have been associated with an increase in psychiatric risk (Goodman, 2001).

At baseline, six of the 28 children were three years old, and at follow-up 20 were three years old. There is a paucity of easy-to-use, validated measures for two year olds plus, with both a parent and teacher version available for comparability. The SDQ was the most appropriate in this instance. The SDQ for carers of children aged three to four years old was utilised in this study. For the parent-completed SDQ, total difficulties scores ≥ 17 indicate clinical levels of behavioural problems. Scores 14–16 indicate borderline problems. For the teacher-completed SDQ, scores ≥ 16 indicate a child who is at risk for developing conduct problems, and scores 12–15 indicate borderline cases. Both versions of the SDQ include an impact section to assess other aspects of child's life that their behaviour impacts on; for example, friendships or learning. The cut-off point is ≥ 2 .

Eyberg Child Behaviour Inventory

The Eyberg Child Behaviour Inventory (ECBI; Eyberg & Ross, 1978) is a 36-item parent report measure that assesses the occurrence of problem behaviours in children aged two to 16 years. Each behaviour is rated on two sub-scales: a seven-point intensity scale, which measures the frequency of particular behaviours; and a Yes–No problem scale that identifies whether the parent perceives the behaviour to be a problem. The scale demonstrates good stability, with reliability coefficients ranging from 0.86 (test–re-test) to 0.98 (internal consistency) (Robinson, Eyberg, & Ross, 1980). The ECBI discriminates well between children with and without conduct problems (Baden & Howe, 1992; Eyberg & Ross, 1978). The original standardisation of the ECBI stipulates that scores ≥ 127 on the intensity sub-scale, and scores ≥ 11 on the problems sub-scale indicate the clinical range for developing conduct problems. A re-standardisation was conducted by Colvin, Eyberg, and Adams (1999), which suggested clinical cut-off scores of 131 for intensity and 15 for the problem scale. However, this re-standardisation was not as statistically sound as the original, and therefore the original cut-off values will be used, which also allows comparability with many other similar studies specifically evaluating the IY programmes (for example, Hutchings et al., 2007; Bywater et al., 2011).

Incredible Years Nursery Staff Programme Satisfaction Questionnaire (to test Hypothesis 3): Toddler Programme

The satisfaction questionnaire is a 45-item questionnaire designed to evaluate the effectiveness of the IY Infant and Toddler Parent Programme (Webster-Stratton, 2008). Thirty-two questions correspond directly to the attendees' experience of the course and are scored across a seven-point Likert scale. Nine questions relate to the attendees' perceptions of the facilitators and are scored across a five-point Likert scale. The remaining four questions ask for qualitative information relating to the

overall experience of attending such a course. Nursery staff completed the full questionnaire on completion of the course, but for the purpose of this paper we present data from eight of the 10 questions from Part A, relating to respondents' relationship with children in their care following completion of the programme, and the usefulness of the programme in other areas of their lives, as well as their predicted longer-term positive outcomes following training. The questions were adapted for the client group by replacing the word "parent" with "nursery worker".

Intervention

The IY Toddler Parent Programme was developed in 2008 by Webster-Stratton as a 12-week (two-hour session/week) programme. The programme encourages carers to: establish a positive relationship with children through play and child-centred activities; use praise, reward, and incentives to encourage appropriate child behaviours; use effective limit setting and clear instructions; and use non-aggressive strategies for managing non-compliance. Participants acquire these skills through facilitator-led group discussion, brain-storming, videotape modelling, role-play, and rehearsal of newly learned intervention techniques, both within the group and by completion of between session practice assignments.

Programme Integrity

The IY programme incorporates a number of components to enhance implementation fidelity, to include a detailed facilitator manual, leader training with an accreditation process, and standardised materials and books for parents.

Facilitators

The programme was delivered during the autumn term 2009, by an experienced Child and Adolescent Mental Health Service child psychologist who is both an accredited group facilitator and mentor, with seven years experience of IY Parent Programme delivery. In keeping with the IY emphasis on fidelity, the facilitator had access to supervision from the second author.

Analysis Strategy

Paired *t*-tests were applied to analyse mean differences between baseline and the four-month follow-up scores across all measures of nursery worker stress and competence, and child behaviour within the nursery and home settings. Correlational analysis was conducted to establish whether nursery staff and parents reported similar levels of child behaviour problems at both time points. Clinical significance was explored by considering the numbers of children or nursery staff moving from the range for clinical concern to within the normal range on the relevant measures.

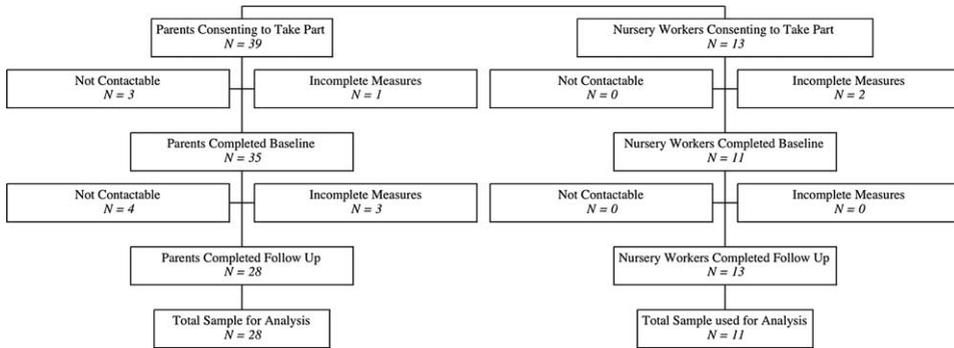


Figure 1 Participant Flow Throughout the Trial.

Results

Participant Flow

Figure 1 shows the recruitment and attrition of participants throughout the trial.

Attendance

All nursery staff attended at least 88% of the sessions (mean attendance = 9.69 sessions, $SD = 0.75$). Attendance at eight out of 12 (i.e. two-thirds or more) of the programme has been demonstrated to be an effective “treatment dose” that produces desired outcomes (Webster-Stratton, 1998).

The IY parent programme was accredited as an Open College Network Level 2 module in 2006; and in addition to completing the programme, nursery staff also submitted evidence of their assignments for a Level 2 Open College Network credit.

Main Outcomes

Nursery workers’ self-reported sense of competence (PSoC)

Complete datasets from 11 of the 13 nursery staff were used in the final analysis. Paired *t*-tests (Table 1) indicated significant increases across the overall competence and satisfaction sub-scales, demonstrating that the IY Toddler Programme was effective at increasing skills and confidence in nursery staff who were already self-reporting at baseline to be competent, satisfied and efficacious. Although no significant increase was found for the efficacy sub-scale, the mean score had moved in the predicted direction.

Nursery workers’ self-report of teaching stress in relation to children’s behaviour (ITS)

Despite relatively low levels of stress reported by nursery workers at baseline, paired *t*-tests demonstrated significant reductions at follow-up (Table 1). Percentiles were used in order to analyse the scores from this measure. Percentiles are derived from the frequency distribution of a normative sample in order to obtain information

Table 1 Results of Paired *t*-Tests for Measures from Baseline to Follow-up (Four Months Post-baseline)

Measure	<i>n</i>	Time point		<i>t</i> value	<i>p</i> value	Effect size ^a
		Baseline	Follow-up			
PSoC	11					
Competence		54.27 (8.73)	64.36 (5.66)	-2.921	0.015*	1.40
Satisfaction		23.91 (6.98)	31.73 (5.10)	-2.695	0.023*	1.29
Efficacy		30.36 (3.59)	32.64 (2.50)	-2.089	0.063	0.75
ITS	28					
ADHD		37.75 (25.36)	25.00 (13.45)	3.639	0.001**	1.40
Student		36.04 (25.05)	21.36 (14.97)	3.839	0.001**	1.48
Teacher		23.57 (24.49)	6.79 (9.00)	4.097	0.000**	1.58
Total Stress		126.71 (49.27)	97.57 (25.76)	3.392	0.002**	1.31
SDQ—Emotion	28					
Teacher		2.00 (1.68)	1.54 (1.71)	1.995	0.056	0.77
Parent		1.29 (1.01)	1.82 (1.49)	-2.063	0.049*	0.79
SDQ—Conduct	28					
Teacher		2.32 (2.60)	1.82 (2.41)	1.491	0.148	0.57
Parent		2.54 (1.53)	2.54 (1.53)	0.284	0.779	0.11
SDQ—Hyperactivity	28					
Teacher		4.25 (2.91)	3.32 (2.60)	2.724	0.011*	1.05
Parent		3.75 (2.63)	4.07 (2.32)	-0.721	0.477	0.28
SDQ—Peer	28					
Teacher		2.07 (1.44)	1.43 (1.35)	2.274	0.031*	0.88
Parent		1.93 (1.33)	2.25 (1.56)	-1.331	0.194	0.51
SDQ—Pro-social	28					
Teacher		6.61 (2.11)	7.61 (2.20)	-2.097	0.046*	0.81
Parent		7.25 (1.78)	7.61 (2.22)	-1.056	0.300	0.41
SDQ—Impact	28					
Teacher		0.29 (0.80)	0.04 (0.19)	1.362	0.184	0.52
Parent		0.32 (0.72)	0.54 (1.62)	-0.881	0.386	0.34
SDQ—Total Problems	28					
Teacher		10.64 (6.16)	8.50 (5.51)	2.600	0.015*	1.00
Parent		9.50 (4.50)	10.61 (6.17)	-1.437	0.162	0.55
ECBI	28					
Intensity > 127		83.43 (34.13)	90.39 (34.08)	-1.513	0.142	0.58
Problems > 11		3.93 (6.45)	4.00 (7.06)	-0.098	0.923	0.04

PSoC, ^aEffect sizes were calculated with Cohen's guidelines, whereby a figure of 0.3 denotes a small but effective change, 0.5 denotes a medium effect size, and 0.8 and above denotes a large effect size. *Significant at < 0.05 level. **Significant at < 0.001 level.

about a particular student's score in comparison with the rest of the sample. Significant reductions across 11 of the 12 sub-scales of the ITS were found. Most importantly these significant reductions were across the three main domain sub-scales that comprised the Total Stress sub-scale of the ITS: ADHD, student characteristics, and teacher characteristics.

The significant reduction in behaviours associated with ADHD, $t(27) = 3.64$, $p = 0.001$, indicates that following completion of the programme nursery workers were reporting that behaviours such as distractibility, impulsivity, restlessness and

major deficits in social skills had significantly reduced for children in their care. Stress associated with coping with children's temperament and behaviour (student characteristics) also significantly reduced from baseline to follow-up, $t(27) = 3.84$, $p = 0.001$. This demonstrates that the IY Toddler Parent Programme was effective at reducing challenging classroom behaviour that can be stressful for nursery workers to manage. Finally, the level of distress experienced by the nursery worker due to a level of self-perception and expectation in relation to the student (teacher characteristics) also showed a significant reduction, $t(27) = 4.09$, $p < 0.001$. This indicates that nursery workers' feelings of frustration, associated with lack of support from fellow colleagues or parents, were fewer following programme attendance. As a consequence of the reduction across the three main domains there was also an overall significant reduction in total stress following completion of the programme, $t(27) = 3.38$, $p = 0.002$, indicating that the IY Toddler Programme has beneficial effects on the overall well-being of the nursery workers.

The increased confidence and reduces stress levels support Hypothesis 1.

Nursery workers' report of child behaviour in the nursery (teacher-completed SDQ)

As shown in Table 2, nursery staff reported significant reductions in the number of difficulties faced by children in the nursery after course completion as reported by their teacher-completed SDQ scores. An overall improvement was also shown across all of the teacher-completed SDQ sub-scales, indicating that problematic behaviour in the nursery decreased significantly following the intervention and that pro-social behaviours increased. Changes were significant for four of the five SDQ sub-scales. The emotional problems sub-scale also changed in the predicted direction but the change was not significant.

Parent reported measures of children's behaviour within the home (ECBI and SDQ)

At baseline, parents reported relatively low levels of problematic behaviour, which may explain why no statistically significant changes were found for the children's behaviour in the home from baseline to follow-up (although there were two incidents of significant increases on the emotion and total impact sub-scales of the parent-completed SDQ).

In addition, correlations were conducted to establish whether a relationship existed between parent and nursery worker reports of children's behaviour. No statistically significant relationships were found at baseline ($r = 0.054$, $p = 0.765$) or follow-up ($r = 0.297$, $p = 0.104$).

These results partially support Hypothesis 2—the Toddler Programme is effective at reducing problem child behaviours and increasing pro-social behaviours within the nursery environment, with some emotional improvements, yet does not facilitate change within the home environment.

Table 2 Number of Samples Below or Above Specified Cut-off points at Baseline ($n = 28$)

Measure (cut-off point)	n	Within clinical range	
		Baseline	Follow-up
Nursery worker self-report			
PSoC Total Competence (\leq mean = 45) ^a	11	1 (9%)	0 (0%)
ITS Total Stress (\geq 80th percentile)	28	1 (4%)	0 (0%)
Carer report on child behaviour			
Teacher-completed SDQ Problems (\geq 16)	28	9 (32%)	3 (11%)
Impact (\geq 2)		1 (4%)	0 (0%)
Emotion (\geq 6)		1 (4%)	0 (0%)
Conduct (\geq 4)		9 (32%)	6 (21%)
Hyperactivity (\geq 7)		8 (29%)	4 (14%)
Peers (\geq 5)		2 (7%)	1 (4%)
Pro-social (\leq 4)		5 (18%)	3 (11%)
Parent-completed SDQ Problems (\geq 17)		3 (11%)	3 (11%)
Impact (\geq 2)		2 (7%)	3 (11%)
Emotion (\geq 5)		0 (0%)	1 (4%)
Conduct (\geq 4)		8 (29%)	8 (29%)
Hyperactivity (\geq 7)		5 (18%)	4 (14%)
Peers (\geq 4)		3 (11%)	6 (21%)
Pro-social (\leq 4)		2 (7%)	3 (11%)
ECBI Intensity (\geq 127)		3 (11%)	4 (14%)
Problems (\geq 11)		3 (11%)	5 (18%)

^aThe PSoC does not specify a clinical cut-off point but has a range between 14 and 90 with mean = 45. The number reported refers to the number of staff members reporting competence below 45. The greater the reported score, the greater the carer self-report of competence.

Clinical Significance

Table 2 presents sample scores in relation to cause for concern on the battery of measures to include cut-off points for each measure. Nursery staff reported greater levels of problematic behaviour on the teacher-completed SDQ in comparison with parents at baseline with greater changes at follow-up. Two-thirds of the children in the clinical range on the teacher-completed SDQ total difficulties score at baseline ($n = 9$) were returned to below the cut-off point at follow-up. Conduct problems and hyperactivity sub-scales demonstrated most change at follow-up with one-third and one-half, respectively, of those within the clinical range at baseline being returned to within the non-clinical range.

Parents did not report any clinically significant changes over time.

Nursery Staff Feedback

Nursery workers completed the full version of the IY End-of-Programme Satisfaction Questionnaire (Webster-Stratton, 2008) with regards to their overall satisfaction of the course; however, in this paper only eight of the 10 questions in Part A were analysed to establish the quality of the carer-child relationship, the effect the programme had in everyday life and the nursery workers' confidence skills.

When asked about the quality of their relationship with the toddlers in their care, 65.7% said that their relationships had improved or greatly improved. When asked whether attendance in the programme had helped in other areas of their lives, 80% said that the course had helped or greatly helped. When asked whether they would recommend the IY course to others, 100% responded that they would. Additionally, 100% said that they felt more confident in their skills after attending the course, more confident in their future abilities, and more positive in achieving their goals with children in their care.

Anecdotal Staff Feedback

In addition to statistically and clinically significant findings demonstrating behaviour change in both nursery workers and children in their care, anecdotal feedback from nursery staff was very positive, with nursery workers enjoying the group dynamics and the social aspects of the course. Examples of nursery staff feedback following completion of the course include the following:

- *What part of the programme was most helpful to you?*

“Role play with work colleagues”.

“Support and role play”.

“I thought that sharing information with the other girls was very beneficial”.

“Group discussions”.

“Child directed play . . . opens doors to all the other things like a chance to give descriptive commentary, praise and encouragement. You have fun with the child instead of just observing and noticing when the child behaves inappropriately”.

- *What did you like most about the programme?*

“The support from everyone”.

“Descriptive commentary”.

“Learning new ways to praise a child other than ‘good girl/boy all of the time’”.

“Since doing this Incredible Years course I have seen a small improvement in Sam. I think it is because I have learnt a lot about praise, tangible rewards and just doing things differently. Sam can concentrate for longer now”.

The positive feedback supports Hypothesis 3 with improved carer–child relationships, and satisfaction with the programme to improve confidence to manage child behaviour more confidently.

Discussion

This feasibility study was the first small-scale evaluation of the acceptability and effectiveness of the IY Toddler Parent Programme with nursery staff, to reduce child

problematic behaviour, and increase pro-social behaviour in the nursery setting. The results support the hypotheses, in that the programme was effective for improving nursery workers' stress and competence levels when working with children aged two to three years old. Children's behaviour in the nursery, in particular hyperactivity, peer problems and pro-social behaviour, improved significantly from baseline to follow-up complemented by a reduction of children exceeding the SDQ clinical cut-off point at follow-up. These findings are important as they indicate that problematic behaviour among young children in nursery settings can be managed effectively using the same evidence-based programmes shown to be effective with parents in changing behaviour in the home setting (Hutchings et al., 2007; Scott et al., 2001). In addition, they suggest that moderate nursery worker stress levels can be reduced when toolkits are expanded to include effective child behaviour management training and strategies.

Despite positive findings from completed nursery staff measures, no significant changes in child behaviour in the home were reported on parent-completed measures. In addition no correlation was found between nursery staff and parent reports of children's behaviour either at baseline or follow-up. In fact the parents report more problem behaviour at follow-up compared with baseline, whereas the nursery staff report less. This suggests that either differences exist in the perception between carers across contexts of the children's behaviour, or children display different behaviour in different contexts. Further research is needed to investigate which may be the case as this small study is unable to provide the answer.

Previous research has shown that behaviour change may not necessarily transfer from one environment to another (Chandler et al., 1992; Taylor & Biglan, 1998; Webster-Stratton, 1998; Webster-Stratton & Hammond, 1997). In the current trial, parents did not receive the intervention so changes at home were not expected. Children may not have had the scaffolding they require from their parents to alter their behaviour in the home environment.

Given the positive results found in previous trials with parents undertaking parent programmes (Hutchings et al., 2007), combined with the positive results of this trial for attendees of the programme and the children in their care, there is evidence to suggest an approach whereby both parents and nursery workers of this age group attend parent programmes in order to maximise the use of consistent positive parenting and behaviour management strategies.

Limitations

This study is not without its limitations. Firstly, this trial lacks sufficient statistical power and rigour due to the small sample size and lack of a comparative control condition, and therefore the results need to be regarded with caution and cannot be generalised to the wider population. A large-scale rigorous evaluation, by randomised controlled trial with longer-term follow-ups, of the IY Programme with nursery staff is required to establish robust intervention effectiveness.

In relation to the limited sample size, some additional analysis could not be conducted. The SDQ Added Value Score (Ford, Hutchings, Bywater, Goodman & Goodman, 2009) is an additional component of the SDQ that can be applied within a specialist or clinical setting in order to quantify the amount of change in relation to receiving a specific intervention in the absence of a control group. However, due to the small sample sizes, and the fact that this analysis is currently only available for the parent-reported SDQ, this method could not be applied.

The SDQ was selected as the most appropriate measure for this population as a teacher and parent version is available; however, both versions are for three to four-year-olds. The majority of children had reached three years of age by follow-up, but there is still a possibility that the results may have yielded lower scores, or a lack of sensitivity to change, with this younger age group.

In this study there was a lack of capacity and resources to offer “mop up” sessions to nursery staff who missed a session; however, there was a high rate of attendance with a mean of 9.69 sessions demonstrating high motivation for this client group.

Finally, nursery staff may have altered their perceptions of the level of problematic behaviour that the children in their care exhibit, and/or the level of demanding behaviour that they themselves can manage. Without a comparison of independently conducted observations, or the use of a comparative control sample, we cannot be certain that changes reported by nursery staff were due to actual changes in behaviour or expectations of staff to report these changes to researchers. Randomised controlled trials that apply both questionnaire and blind observation approaches as a means of corroborating outcomes have found that carer reports of outcomes are reflected in independent observational findings (for example, Bywater et al., 2009; Hutchings et al., 2007; Webster-Stratton, 1988). This suggests that we can have some confidence that the outcomes reported by nursery workers reflect the true state of child behaviour at nursery.

Strengths

The major strength of this study is that the intervention was delivered with fidelity. The child psychologist who delivered the programme is an accredited IY facilitator and an IY trainer and mentor (able to offer supervision to other facilitators of the programme), with more than seven years' IY experience. Nursery workers therefore received quality training in the implementation of new management strategies to enable them to offer high standards of childcare, which is highlighted as one of the Welsh Assembly Government aims in the Childcare Strategy (Department for Training and Education, 2005c).

In addition, this trial is the first to evaluate the usefulness and effectiveness of the IY Toddler Parent Programme when delivered to nursery workers. As the number of children entering out-of-home early-care settings increases, especially in socio-economically deprived areas, it is important that all carers of children are equipped with the strategies and skills that serve to decrease problematic behaviour and increase pro-social behaviour whilst improving the carer's own mental health by

increasing competencies and self-confidence in managing child behaviour. It appears that the IY programme is acceptable and useful to nursery workers in doing just this.

Future Directions and Conclusions

Despite several limitations, the improvement of child behaviour indicates that the IY Toddler Parent Programme is an acceptable and effective intervention for use in out-of-home nursery settings. A large-scale rigorous randomised controlled trial is required to confirm the results and assess longer-term effects to include independent blind observations of behaviour and triangulation of data collection methods. It is important to ensure that the programme is delivered by facilitators with fidelity in any future study to achieve positive results.

With the current development by the Welsh Assembly Government (Department for Training and Education, 2005b) to embed the IY programmes throughout Wales, this small-scale feasibility study makes a valuable contribution to advising policy-makers and service managers on the way forward to support at-risk children and nursery staff working with this client group.

In conclusion, based on previous and current evidence it could be helpful for both parents and nursery workers to attend the IY Toddler Parent Programme to give children at the earliest possible opportunity a solid start in life by encouraging appropriate child behaviours through praise and rewards and by applying consistent limits and strategies to manage non-compliance.

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