

# A cognitive behavioural group approach for adolescents with disruptive behaviour in schools

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## Abstract

Cognitive behavioural approaches emphasize the links between thoughts, feelings and behaviour (Greig, 2007). Previous research has indicated that these approaches are efficacious in reducing disruptive behaviour in adolescents. The aim of the current study was to provide further evaluation of cognitive behavioural group work to reduce disruptive behaviour with this population and to determine if improvements made were maintained in the longer term. The sample comprised 22 adolescents aged 13- to 14-years-old identified by school staff as displaying disruptive behaviour (Cameron, 1998). A curriculum based on Squires (2001), using key cognitive behavioural approaches, was delivered over a seven-week period to the participants. Participant, parent, and teacher ratings on the Strengths and Difficulties Questionnaire (SDQ) immediately after the intervention all indicated significant reductions in disruptive behaviour. Other positive effects included enhanced ratings of self-concept on the Beck Youth Inventories, 2nd Edition and trait emotional intelligence on the Trait Emotional Intelligence Questionnaire–Adolescent Short Form (TEIQue-ASF). Improvements in behaviour and self-concept were maintained at six-month follow-up according to participant and teacher ratings. However, parent ratings of behaviour had returned to pre-intervention levels. Further research, with different age groups and demographic populations along with concurrent parent programmes is recommended.

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**Keywords**

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Adolescence is often described as a time of great change in a person's life. Young people during this time are expected to behave as adults in their relationships with their peers and adults. However, many adolescents experience frustration and stress in being independent, in some instances, and yet dependent on their parents and school/community authorities in others (Vickers, 2002). Most adolescents will occasionally exhibit difficult behaviour or occasional aggressive outbursts, but this behaviour becomes problematic when persistent.

Withers (1995) in a major review of programmes for vulnerable youth in the UK, Canada, Australia, and the USA, concluded that all adolescents feel anger and frustration, and exhibit a range of behaviour difficulties as a result of the many physical, emotional, and social stresses associated with this developmental stage. It is often appropriate to feel sad, angry, persecuted, or confused (Wilberg, 1998). During adolescence, young people seek greater control of their lives as they create and explore their own identity. If this is not adequately provided for by the significant adults in their lives, or if the adults do not offer other support that they value, they may seek their independence and relationships outside the approved value systems of the adults and may develop disruptive behaviour (Rose, 1998).

**Adolescent disruptive behaviour: Implications for schools**

Young people with frequent disruptive behaviour are usually classified as experiencing behavioural, emotional or social difficulties and may also be recognized as having special educational needs (Jones, 2003). A significant number of research studies have highlighted disruptive behaviour as a major challenge for teachers, where conflicts can arise between meeting individual needs and providing for the education of other pupils (MacBeath, Galton, Steward, & Page, 2004). The definition of disruptive behaviour includes any behaviour which appears problematic, inappropriate, or disturbing to teachers (Galloway & Rogers, 1994). Cameron (1998) provides a more detailed breakdown of the different types of disruptive behaviour in classrooms under five different categories (see Table 1).

The rise in disruptive behaviour among students in secondary schools is a very pertinent and serious issue for school staff. With an estimated one in six students engaging in disruptive behaviour (Buchanan & Ritchie, 2004), there has been an increasingly negative effect on schools and the wider community (Frick, 2004). The main issue for teachers and pupils is the effect of frequent, low level disruption. This has a wearing effect on staff, interrupts learning, and creates a climate in which it is easier for more serious incidents to occur. Disruptive behaviour is associated with poor academic achievement (Gu, Lai, & Ye, 2011), drug and alcohol misuse

**Table 1.** Types of disruptive behaviour in the classroom (Cameron, 1998)

Category	Description
(a) Aggressive behaviour	Hitting, pulling hair, kicking, pushing, using abusive language
(b) Physically disruptive behaviour	Smashing or damaging or defacing objects, throwing objects, physically annoying other pupils
(c) Socially disruptive behaviour	Screaming, running away, exhibiting temper tantrums
(d) Authority-challenging behaviour	Refusing to carry out requests, exhibiting defiant verbal and non-verbal behaviour, using pejorative language.
(e) Self-disruptive behaviour	Daydreaming, reading comics under the desk. It may be noted that although the behaviour did not disturb the teacher or other pupils, such behaviour is likely to interfere considerably with the pupil's academic attainments

Note: Table formulated from text content in Cameron (1998).

(Farrington, 1991), early school leaving (James & Lawlor, 2001), and juvenile criminality (Nelson, Finch, & Ghee, 2006).

There is a vast body of literature examining the effectiveness of psychological interventions for adolescents with behavioural problems. It is considered that school-based interventions for pupils with disruptive behaviour are most effective, as they are already engaging in experiences within the school context that assist them in their social and cognitive development (Murphy & Christner, 2006). Young people who engage in disruptive behaviour often get involved in verbal and physical quarrels with their peers, throw tantrums, have poor social skills and show a lack of self-control (Kendall & Panichelli-Mindel, 1995). Given the correlation between problem behaviours in adolescence and poor cognitive and social problem-solving abilities, cognitive behavioural approaches have been described as an efficacious intervention for young people with behaviour difficulties (Erikson, 1998).

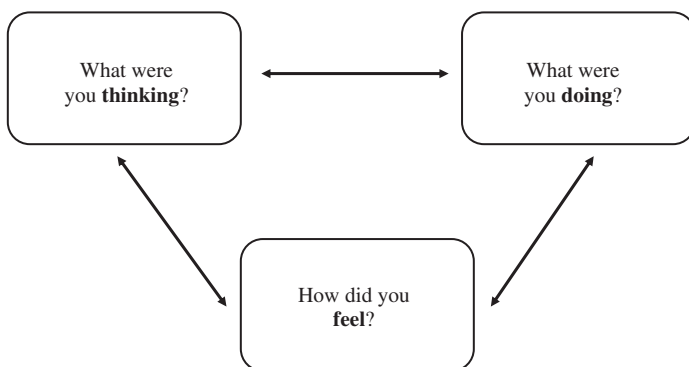
## **Cognitive behavioural interventions with adolescents: An overview**

Cognitive behavioural approaches are used for a range of problems in children, adolescents, and adults. The core principle of the cognitive behavioural approach is that people are not disturbed by things, but by the views they take of them (Greig, 2007). Drawing largely on the work of Beck, Rush, Shaw, and Emery (1979), the

development of cognitive behavioural interventions was based around the application of techniques to correct cognitive distortions through the application of logic and the search for evidence.

Cognitive distortions have been reported in young people with a range of difficulties. For example, aggressive children perceive more aggressive intent in ambiguous situations, and select fewer cues when making decisions about the intent of another person's behaviour (Dodge, 1985). Cognitive behavioural interventions that address cognitive distortions are primarily concerned with the teaching of new cognitive and behavioural skills. Programmes often involve psycho-education in the areas of social problem solving, attribution retraining, learning new cognitive strategies (e.g. positive self-talk), practice, and self-reinforcement (Stallard, 2002; Toland & Boyle, 2008). In order to demonstrate how changing thoughts may change feelings and behaviours, a diagram like the example in Figure 1 is often used to show the interaction.

Most research into the efficacy of cognitive behavioural approaches has been done with adults, but there is a growing body of evidence showing how they might be used with children and adolescents. Cognitive behavioural approaches have been found to be effective in reducing anxiety and depression (Muris, Meesters, & van Melick, 2002), panic attacks (Fonagy, Target, Cottrell, Philips, & Kurtz, 2002) and obsessive-compulsive disorder symptoms (Benazon, Ager, & Rosenberg, 2002). The cognitive behavioural focus on self-guidance and strategic problem-solving provides an ideal match to the core difficulties faced by young people with behaviour problems. The most promising effects were found in a meta-analysis by Sukhodolsky, Kassinove, and Gorman (2004), who found that cognitive behavioural approaches were as effective as other interventions used with children and adolescents who had anger management difficulties.



**Figure 1.** Links between thoughts, feelings and behaviour.

## **Group work using cognitive behavioural approaches**

Group interventions can be delivered to multiple adolescents within a limited time-frame, thus maximizing efficiency while not compromising effectiveness (Péruce, Goodhough, & Lee, 2009). While this is convenient in terms of time, space, staffing, and financial considerations, groups also allow professionals to begin work with young people sooner to prevent the escalation of disruptive behaviours, which could lead to eventual exclusion during a long wait period (Mennuti, Freeman, & Christner, 2006). The experience of being in a group is central to human existence given that a great proportion of people's lives is spent interacting with others in groups from the moment they are born. Action research undertaken by Larmar (2006) indicates that a group approach is an effective means of facilitating cognitive behavioural intervention for pupils exhibiting disruptive behaviours.

One of the reasons why cognitive behavioural group work may be a compelling intervention for young people exhibiting disruptive behaviour is that it uses peer influence for the benefit of the participants (Burton, 2006). Squires (2001) devised a project involving six one-hour sessions using cognitive behavioural approaches with adolescents exhibiting disruptive behaviour in middle and secondary schools. Pre- and post-intervention measures showed improved teacher ratings of pupils' behaviour and improvements in pupil ratings of self-control of behaviour. No improvements were found for peer relationships or self-concept. One side effect of the intervention was a change in teacher attitudes, some of whom had been doubtful about the possibility of change.

Often adolescents who engage in disruptive behaviour build up a reputation with peers that can be difficult to overcome. Acceptance from peers may protect adolescents from social-emotional maladjustment (Beran & Lupart, 2009). Within cognitive behavioural groups, there is a belief that change will occur and as 'participants begin to report on steps they have taken towards their targets, they are in effect giving each other permission to change' (Burton, 2006, p. 225). Squires (2002) described a number of advantages of group over individual work. It facilitates the normalization of feelings or behaviours by highlighting that the participant is not the only one who feels or acts in that way. A group provides a variety of viewpoints on a situation and how one could react. It also offers peer support and friendship which can continue outside of the group meetings.

## **The current study**

This study sought to examine the efficacy of an intervention based on Squires (2001), using a cognitive behavioural group approach with young people who engage in disruptive behaviour. Previous studies have found that positive effects have been maintained in the longer term (i.e. at six months). However, the follow-up data collected were in many cases anecdotal and the researchers did not take quantitative measures from participants, parents, or teachers.

## Study aims

The current study aimed to address the following research questions: RQ1: Is a cognitive behavioural, group-based intervention effective in reducing disruptive behaviour in adolescents? RQ2: To what extent are any reductions in disruptive behaviour achieved during the intervention maintained in the longer-term (i.e. at six-month follow-up)?

## Method

### *Design*

This study used a repeated measures design. The main independent variable was time, with assessment occurring twice before the intervention (Time 1 and Time 2), immediately after the intervention (Time 3), and at 26 weeks follow-up (Time 4). The dependent variables included measures of behaviour, self-concept, and trait emotional intelligence gathered from teachers, parents, and participants.

### *Participants*

The participants were drawn from three secondary schools in Ireland. It was decided to offer the intervention to 2nd year students (Year 9 is the UK equivalent) aged between 13- and 14-years-old. In total, 25 young people (19 boys and 6 girls) were identified to take part in the intervention. All of the students were of white-Irish origin, reflecting the ethnic profile of the schools; the primary language of all participants was English. Five of the students had special educational needs such as Dyslexia and Autistic Spectrum Disorder and were availing of extra resource support (e.g. 1:1 teaching time).

Of the 25 participants starting the intervention, three pupils (12% of sample) did not complete the course for various reasons, such as illness. Pre- and post-data were, therefore, available for 22 participants (88% of sample). It was not possible to examine the effect of gender due to the fact that only 27% of the final sample was female.

### *Procedure*

Teachers in the three schools were asked to identify students to be involved in the groups based on Cameron's (1998) description of the different types of disruptive behaviour in classrooms (see Table 1). Teacher descriptions of the pupils included: 'difficulties following class routines', 'persistent talking in class', 'bullying', 'difficulties interacting with peers', 'socially excluded', 'refuses to do class work', 'negative self-concept', 'verbally insults other students', 'frequent late arrival to class', 'difficult home background', and 'fights with others'. Similar to Squires (2001),

students who were in acute crisis in their personal lives (e.g. death of a family member), or who were at risk of permanent exclusion were not included in the groups.

Consent was obtained from the students and from their parents/carers and the right of the student to withdraw at any time was emphasized. Following Squires (2001), it was decided to involve a member of the school staff in implementing the intervention, in order to have continuity of approach and to facilitate work being carried out by the participants outside of the group sessions. This provision also enabled participants to access support readily if they needed to discuss a particular issue between meetings.

Each group met for six one-hour sessions, with the researcher and a teacher from the school, to go through materials based on Squires (2001). Materials were developed using resources from *Think good, feel good* (Stallard, 2002) and *Anger management. A practical guide* (Faupel, Herrick, & Sharp, 1998). Typically, the sessions followed a set format of: 1 welcome; 2 revision of group rules; 3 warm-up game; 4 discussion of homework activity; 5 cognitive behavioural teaching point (e.g. situation sheets); 6 explanation of new homework activity; 7 warm-down activity (e.g. positives about session); 8 thanks to all for their attendance and contributions.

## Measures

The following measures were administered at each of the four measurement points:

**Beck Youth Inventories, 2nd edition (BYI; Beck, Beck, Jolly, & Steer, 2005).** These are five self-rating scales assessing young people's emotional and social impairment in terms of depression, anxiety, anger, disruptive behaviour, and self-concept.

**Trait Emotional Intelligence Questionnaire-Adolescent Short Form (TEIQue-ASF; Petrides, Sangareau, Furnham, & Frederickson, 2006).** Trait emotional intelligence (trait EI or trait emotional self efficacy) is defined as a constellation of emotional self-perceptions located at the lower levels of personality hierarchies (Petrides, Pita, & Kokkinaki, 2007). The TEIQue-ASF comprises 30 short statements designed to measure global trait EI.

**Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997; Meltzer, Gatward, Goodman, & Ford, 2000).** The SDQ consists of 25 items that produce scores in five areas: emotional difficulties, conduct problems, hyperactivity, peer relationships, and prosocial behaviour. Self-report, parent, and teacher ratings were obtained.

**Teacher Behaviour Checklist (TBC; Faupel, Herrick, & Sharp, 1998).** The TBC is a 20-item questionnaire completed by all teachers who taught each of the

participants. It yields a score in the range 20–80 indicating the extent to which an adolescent causes difficulty in the classroom.

## Results

### Beck Youth Inventories

Initial analysis focused on change over time using a series of one-way repeated ANOVAs. No significant differences were found for anxiety (Wilks' Lambda = 0.91,  $F(3,19) = 0.636$ ,  $p > 0.05$ ) or depression (Wilks' Lambda = 0.73,  $F(3,19) = 2.315$ ,  $p > 0.05$ ).

A significant difference over time was found for self-concept (Wilks' Lambda = 0.47,  $F(3,19) = 7.280$ ,  $p < 0.05$ , multivariate partial eta squared = 0.54), anger (Wilks' Lambda = 0.50,  $F(3,19) = 6.404$ ,  $p < 0.05$ , multivariate partial eta squared = 0.50) and disruptive behaviour (Wilks' Lambda = 0.44,  $F(3,19) = 8.112$ ,  $p < 0.05$ , multivariate partial eta squared = 0.56). Post-hoc comparisons using Tukey tests revealed no significant change in self-concept, anger, or disruptive behaviour over the two pre-intervention assessments (Time 1–Time 2). A significant improvement was found from pre-intervention (Time 1 and Time 2) to post-intervention (Time 3) and at the six-month follow-up (Time 4) for all three

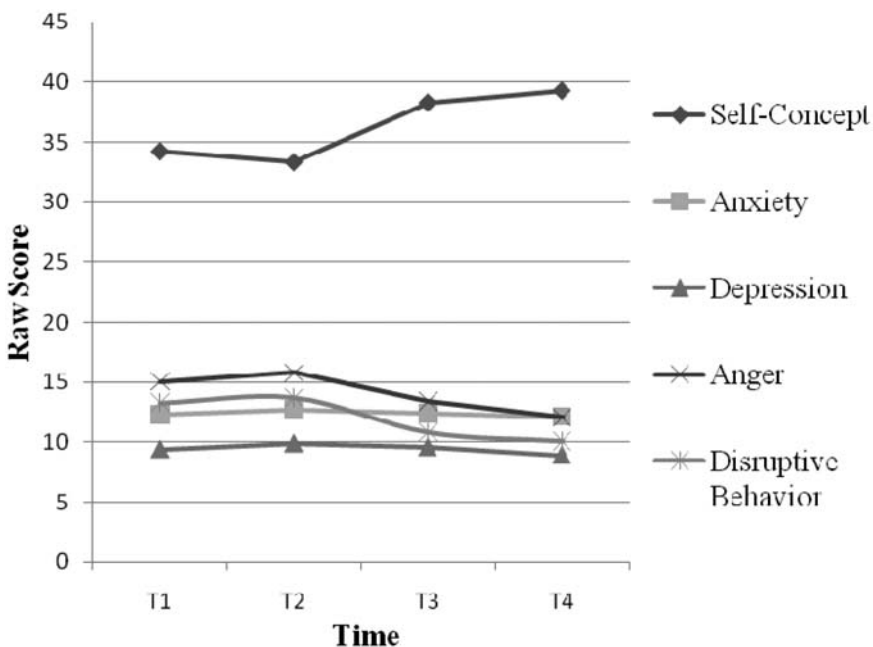


Figure 2. Line graph displaying Mean BYI scores at Times 1–4.



variables. This indicates a stable baseline period followed by a reduction in problem behaviours after the intervention, which was maintained at six-month follow-up (see Figure 2).

### *Trait Emotional Intelligence Questionnaire-Adolescent Short Form*

A one-way repeated measures ANOVA revealed a significant difference over time for scores on the TEIQue-ASF (Wilks' Lambda = 0.44,  $F(3,19) = 8.027$ ,  $p < 0.05$ , multivariate partial eta squared = 0.56).

Post-hoc comparisons using Tukey tests revealed no significant change in scores on the TEIQue-ASF over the two pre-intervention assessments (Time 1–Time 2). However, as shown in Table 2, there was a significant increase in scores from Time 1 to post-intervention (Time 3) and to follow-up (Time 4).

### *Participant ratings on the Strengths and Difficulties Questionnaire*

One-way repeated measures ANOVAs of participant SDQ ratings revealed no significant change across time for emotional symptoms (Wilks' Lambda = 0.78,  $F(3,19) = 1.777$ ,  $p > 0.05$ ) or peer problems (Wilks' Lambda = 0.91,  $F(3,19) = 0.605$ ,  $p > 0.05$ ).

A significant difference over time was found for total difficulties (Wilks' Lambda = 0.49,  $F(3,19) = 6.730$ ,  $p < 0.05$ , multivariate partial eta squared = 0.52), hyperactivity (Wilks' Lambda = 0.44,  $F(3,19) = 7.980$ ,  $p < 0.05$ , multivariate partial eta squared = 0.56), conduct problems (Wilks' Lambda = 0.54,  $F(3,19) = 5.320$ ,  $p < 0.05$ , multivariate partial eta squared = 0.46) and prosocial behaviour (Wilks' Lambda = 0.45,  $F(3,19) = 7.657$ ,  $p < 0.05$ , multivariate partial eta squared = 0.55). Post-hoc comparisons using Tukey tests revealed no significant changes over the two pre-intervention assessments (Time 1–Time 2), but there were significant improvements in all four variables from Time 1 to Time 3 which were maintained at the six-month follow-up (see Table 3).

**Table 2.** Comparison of Mean TEIQue-ASF scores at Times 1–4

	Time 1	Time 2	Time 3	Time 4	One way ANOVA significance	Post Hoc Tukey Time 1–3 significance	Post Hoc Tukey Time 1–4 significance
Participant TEIQue-ASF Ratings							
Rating	$\bar{x} = 134.27$ (SD = 18.56)	$\bar{x} = 133.64$ (SD = 18.30)	$\bar{x} = 142.90$ (SD = 18.63)	$\bar{x} = 142.95$ (SD = 19.84)	$p = 0.001$	$p = 0.017$	$p = 0.048$

Table 3. Comparison of Mean SDQ scores at Times 1–4

	Time 1	Time 2	Time 3	Time 4	One way ANOVA significance	Post Hoc Tukey Time 1–3 significance	Post Hoc Tukey Time 1–4 significance
Participant SDQ ratings							
Total difficulties	$\bar{x} = 15.77$ (SD = 4.46)	$\bar{x} = 16.05$ (SD = 4.44)	$\bar{x} = 13.09$ (SD = 4.08)	$\bar{x} = 12.18$ (SD = 4.50)	$p = 0.003$	$p = 0.006$	$p = 0.002$
Hyperactivity	$\bar{x} = 6.14$ (SD = 1.58)	$\bar{x} = 6.14$ (SD = 1.55)	$\bar{x} = 5.00$ (SD = 1.48)	$\bar{x} = 4.77$ (SD = 1.60)	$p = 0.001$	$p = 0.001$	$p = 0.004$
Conduct Problems	$\bar{x} = 4.41$ (SD = 1.92)	$\bar{x} = 4.55$ (SD = 2.04)	$\bar{x} = 3.28$ (SD = 1.38)	$\bar{x} = 2.82$ (SD = 1.50)	$p = 0.008$	$p = 0.003$	$p = 0.002$
Emotional difficulties	$\bar{x} = 3.09$ (SD = 1.82)	$\bar{x} = 3.27$ (SD = 1.86)	$\bar{x} = 2.68$ (SD = 1.70)	$\bar{x} = 2.64$ (SD = 1.71)	–	–	–
Peer problems	$\bar{x} = 2.17$ (SD = 2.21)	$\bar{x} = 2.09$ (SD = 2.33)	$\bar{x} = 2.18$ (SD = 2.17)	$\bar{x} = 1.95$ (SD = 1.86)	–	–	–
Prosocial behaviour	$\bar{x} = 5.13$ (SD = 2.44)	$\bar{x} = 5.32$ (SD = 2.48)	$\bar{x} = 6.55$ (SD = 1.85)	$\bar{x} = 6.59$ (SD = 1.74)	$p = 0.001$	$p = 0.001$	$p = 0.017$
Parent SDQ ratings							
Total difficulties	$\bar{x} = 16.50$ (SD = 6.35)	$\bar{x} = 16.59$ (SD = 6.04)	$\bar{x} = 14.14$ (SD = 6.38)	$\bar{x} = 15.59$ (SD = 6.17)	$p = 0.047$	$p = 0.034$	–
Hyperactivity	$\bar{x} = 6.50$ (SD = 1.50)	$\bar{x} = 6.73$ (SD = 1.52)	$\bar{x} = 5.55$ (SD = 1.84)	$\bar{x} = 6.14$ (SD = 2.17)	$p = 0.002$	$p = 0.014$	–
Conduct problems	$\bar{x} = 4.00$ (SD = 2.23)	$\bar{x} = 4.05$ (SD = 2.19)	$\bar{x} = 3.23$ (SD = 2.02)	$\bar{x} = 3.77$ (SD = 1.99)	$p = 0.013$	$p = 0.014$	–

(continued)

Table 3. Continued

	Time 1	Time 2	Time 3	Time 4	One way ANOVA significance	Post Hoc Tukey Time 1-3 significance	Post Hoc Tukey Time 1-4 significance
Emotional difficulties	$\bar{x} = 3.86$ (SD = 2.53)	$\bar{x} = 3.59$ (SD = 2.24)	$\bar{x} = 3.27$ (SD = 2.05)	$\bar{x} = 3.18$ (SD = 2.28)	-	-	-
Peer problems	$\bar{x} = 2.14$ (SD = 2.36)	$\bar{x} = 2.23$ (SD = 2.20)	$\bar{x} = 2.09$ (SD = 2.14)	$\bar{x} = 2.50$ (SD = 2.11)	-	-	-
Prosocial behaviour	$\bar{x} = 6.27$ (SD = 1.75)	$\bar{x} = 6.23$ (SD = 1.77)	$\bar{x} = 6.59$ (SD = 2.09)	$\bar{x} = 6.18$ (SD = 2.20)	-	-	-
Teacher SDQ ratings							
Total difficulties	$\bar{x} = 16.59$ (SD = 8.16)	$\bar{x} = 16.91$ (SD = 7.67)	$\bar{x} = 12.55$ (SD = 6.42)	$\bar{x} = 12.46$ (SD = 5.75)	$p = 0.001$	$p = 0.004$	$p = 0.041$
Hyperactivity	$\bar{x} = 6.77$ (SD = 2.67)	$\bar{x} = 7.09$ (SD = 2.37)	$\bar{x} = 4.91$ (SD = 2.20)	$\bar{x} = 5.00$ (SD = 2.29)	$p < 0.001$	$p < 0.001$	$p = 0.026$
Conduct problems	$\bar{x} = 3.77$ (SD = 2.65)	$\bar{x} = 3.68$ (SD = 2.51)	$\bar{x} = 2.36$ (SD = 2.06)	$\bar{x} = 2.23$ (SD = 2.25)	$p = 0.002$	$p = 0.002$	$p = 0.020$
Emotional difficulties	$\bar{x} = 3.82$ (SD = 2.06)	$\bar{x} = 3.91$ (SD = 2.14)	$\bar{x} = 3.05$ (SD = 2.28)	$\bar{x} = 3.18$ (SD = 1.53)	-	-	-
Peer problems	$\bar{x} = 2.23$ (SD = 2.65)	$\bar{x} = 2.23$ (SD = 2.58)	$\bar{x} = 2.23$ (SD = 1.97)	$\bar{x} = 2.05$ (SD = 1.50)	-	-	-
Prosocial behaviour	$\bar{x} = 6.17$ (SD = 2.71)	$\bar{x} = 6.23$ (SD = 2.72)	$\bar{x} = 7.18$ (SD = 2.89)	$\bar{x} = 6.55$ (SD = 2.72)	$p = 0.007$	$p = 0.003$	-

### *Parent ratings on the Strengths and Difficulties Questionnaire*

One-way repeated measures ANOVAs of parent SDQ ratings revealed no significant change across time for emotional symptoms (Wilks' Lambda = 0.79,  $F(3,19) = 1.725$ ,  $p > 0.05$ ), peer problems (Wilks' Lambda = 0.90,  $F(3,19) = 0.685$ ,  $p > 0.05$ ) or prosocial behaviour (Wilks' Lambda = 0.91,  $F(3,19) = 0.619$ ,  $p > 0.05$ ).

A significant difference over time was found for total difficulties (Wilks' Lambda = 0.66,  $F(3,19) = 3.203$ ,  $p < 0.05$ , multivariate partial eta squared = 0.34), hyperactivity (Wilks' Lambda = 0.46,  $F(3,19) = 7.372$ ,  $p < 0.05$ , multivariate partial eta squared = 0.54) and conduct problems (Wilks' Lambda = 0.57,  $F(3,19) = 4.729$ ,  $p < 0.05$ , multivariate partial eta squared = 0.43). Post-hoc comparisons using Tukey tests revealed no significant change over the two pre-intervention assessments (Time 1–Time 2), but a significant change from Time 1 to Time 3 for all three variables. However, there were no significant differences between Time 1 and Time 4 ( $p > 0.05$ ).

### *Teacher ratings on the Strengths and Difficulties Questionnaire*

One-way repeated measures ANOVAs of teacher SDQ ratings revealed no significant change across time for emotional symptoms (Wilks' Lambda = 0.71,  $F(3,19) = 2.655$ ,  $p > 0.05$ ), or peer problems (Wilks' Lambda = 0.99,  $F(3,19) = 0.059$ ,  $p > 0.05$ ).

A significant difference over time was found for total difficulties (Wilks' Lambda = 0.44,  $F(3,19) = 8.193$ ,  $p < 0.05$ , multivariate partial eta squared = 0.56), hyperactivity (Wilks' Lambda = 0.33,  $F(3,19) = 12.064$ ,  $p < 0.05$ , multivariate partial eta squared = 0.67), conduct problems (Wilks' Lambda = 0.48,  $F(3,19) = 7.011$ ,  $p < 0.05$ , multivariate partial eta squared = 0.53) and prosocial behaviour (Wilks' Lambda = 0.54,  $F(3,19) = 5.437$ ,  $p < 0.05$ , multivariate partial eta squared = 0.46). Post-hoc comparisons using Tukey tests revealed no significant change in any of the four variables over the two pre-intervention assessments (Time 1–Time 2). In contrast, there was a significant improvement in scores from Time 1 to Time 3 for all four variables, which was maintained for total difficulties, hyperactivity and conduct problems at Time 4 (see Table 3).

### *Teacher Behaviour Checklist*

A one-way repeated measures ANOVA found a significant difference over time for teacher ratings of behaviour (Wilks' Lambda = 0.15,  $F(3,19) = 36.725$ ,  $p < 0.05$ , multivariate partial eta squared = 0.85). Post-hoc comparisons using Tukey tests revealed no significant change in scores on the Teacher Behaviour Checklist over

the two pre-intervention assessments (Time 1–Time 2), but a significant improvement between Time 1 and Time 3, which was maintained at Time 4.

## Discussion

The results indicate that a cognitive behavioural group approach is an effective form of intervention for adolescents with disruptive behaviour (RQ1). We found that self-report, parent, and teacher measures of disruptive behaviour were significantly lower immediately after the intervention. These findings are consistent with Squires (2001) who reported significant improvements in teacher ratings of behaviour and in participant ratings of self-control. Participants also demonstrated improvements in a number of other areas including self-concept and prosocial behaviour. This is a positive effect of the intervention which corroborates Kendall, Reber, McLeer, Epps, and Ronan (1990), who found increased ratings of social competence after a cognitive behavioural intervention for conduct-disordered youth.

In relation to RQ2, it was found that improvements in self and teacher ratings were maintained at six-month follow-up according to teacher and self-report measures. These results are consistent with Whitfield (1999) who found that at six-month follow-up participants maintained improvements in self-control after a cognitive behavioural anger control intervention. In contrast, parent ratings of behaviour returned to pre-intervention levels. This could be the result of the intervention being wholly school-based and of the content material on relapse prevention being specifically focused on school-behaviour. Hornby and Witte (2010) report that the involvement of parents enhances young people's behaviour, attendance at school, and mental health. Parental involvement in the present study was limited to signing a consent form based on an information sheet describing the intervention. The involvement of parents in a concurrent programme could have aided transference of skills beyond the school setting (Humphrey, Kalambouka, Wigelsworth, & Lendrum, 2010). For example, Webster-Stratton and Hammond (1997) found that parental involvement enhanced the results of a cognitive behavioural group programme for children aged 4- to 7-years-old.

The intervention also proved effective in increasing participant trait emotional intelligence (trait EI) scores, an effect that was maintained at the six-month follow-up. This is the second controlled study reporting increases in trait EI scores following carefully developed intervention programmes (see also Nelis, Quoidbach, Mikolajczak, & Hansenne, 2009). This finding is particularly encouraging given that high trait EI scores are inversely related to deviant behaviour in school (Petrides, Frederickson, & Furnham, 2004). It should be noted at this point that trait EI should be *optimized* rather than increased, because high trait EI scores have adaptive as well as maladaptive consequences (see Petrides & Furnham, 2003;

Sevdalis, Petrides, & Harvey, 2007). In this case, the nature of the current sample was such that optimization entailed an increase in scores.

### *Limitations*

While the results of this study are encouraging, a number of limitations have been identified in relation to the methodologies used in the research design. First, there is no control group with which to compare the observed intervention effects. Many of the positive changes reported by participants, parents and teachers could have been achieved over a similar time period without a cognitive behavioural group intervention. In order to draw firm conclusions about the positive effects of the intervention, the results would have to be compared to a matched group of adolescents who received no intervention. Second, the relatively small sample size makes it difficult to generalize the findings to other adolescents, and to answer questions such as whether the intervention outcomes are the same for boys and girls. Third, the study's focus on a specific age group and a wholly white-Irish population places a caveat on applying the results to other age groups and populations. Fourth, self-report measures can underrate the presence of difficulties if adolescents are unwilling to divulge that their behaviour causes a problem in school (Ybrandt & Armelius, 2010). Fifth, the researcher not only implemented, but also evaluated the intervention. Efforts were made to reduce researcher bias through the use of standardized measures.

### *Implications for educational psychologists*

Cognitive behavioural interventions have enormous potential to change young people's lives and can be an exciting and worthwhile aspect of an educational psychologist's practice (Dunsmuir & Iyadurai, 2007). Schools are under increased pressure from national legislation (e.g. 'Every child matters', Department for Education and Skills, 2004; 'No child left behind', United States Department of Education, 2001) to improve outcomes for students. Cognitive behavioural group approaches can offer time-efficient, but none the less effective ways of working with pupils who engage in disruptive behaviour. Such an approach can provide a compromise for schools and psychologists in meeting their obligations to 'build services around the needs of children and young people and to deliver their outcomes most efficiently and effectively' (Department for Education and Skills and Department of Health, 2006, p. 2).

This study adds support to the body of literature on cognitive behavioural group interventions for adolescents with disruptive behaviour. The results presented provide further empirical evidence for professionals such as educational psychologists working with young people using cognitive behavioural approaches in a group modality. Further research, with different age groups and demographic populations along with concurrent parent programmes is indicated.

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