An evaluation of the 'Circle of Friends' intervention used to support pupils with autism in their mainstream classrooms

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Abstract

This study is an evaluation of the 'Circle of Friends' (CoF) intervention used to support five pupils with a diagnosis of autism (the focus pupils) in their mainstream classrooms. Relevant theory and existing research is outlined before the study is described. A single case experimental design is used to evaluate the impact of the CoF intervention on the focus children's level of social inclusion (calculated from peer ratings). Results suggest that the CoF whole class meeting had an initial positive impact on all focus children's levels of peer acceptance and rejection. During the course of weekly CoF meetings, however, results suggest that this level of change was not maintained. For four of the five focus children, levels of peer acceptance and rejection generally returned to levels comparable to those observed prior to the start of the intervention. The study also reports some changes in measures taken before and after the CoF intervention. For four out of the five cases, a positive change in the focus children's happiness was observed. For three out of the five cases generally positive changes in adults' ratings of the focus children's behaviour were observed. In an attempt to understand how the CoF intervention works, attributions made by peers about one of the focus children's behaviour were explored before and after the CoF intervention though no clear overall change following the intervention was found. The results reported are examined in relation to the theory and research outlined in the Literature Review and the design, measures and procedures described in the Methodology. Limitations of the research are discussed and implications for practice and future research outlined.

1 Introduction

Before embarking on educational psychology training, the author taught in a special school for four years. The experience prompted her to wonder what it would be like if the pupils at the special school attended their local mainstream schools. The parents of one pupil with autism once asked the author for her view on the idea of their son attending a mainstream school. This raised questions not only about how the pupil with autism would respond to a mainstream setting but also about how mainstream peers would respond to the pupil. These questions, consonant with those raised in literature around inclusive practice, will be explored in the Chapter 2.

With increasingly inclusive practice meaning that more and more pupils with significant additional needs now attend mainstream schools, this thesis was born out the author's questions about how well these pupils with additional needs are accepted and included by their mainstream peers. While working as a trainee educational psychologist (EP), the author was introduced to the 'Circle of Friends' (CoF) intervention and became interested in finding out more about how it could offer schools a means of supporting the relationship between a child with additional needs and his/her peers. As the majority of research which looks at CoFs has focused on pupils with social, emotional and behavioural difficulties, the researcher questioned how well CoFs could support pupils with autism.

During the course of this research project, a number of professionals the author has encountered have expressed nothing but enthusiasm for CoFs. Others have been more sceptical, have viewed CoFs as outdated and described the intervention's focus on one child's needs as uncomfortable and unhelpful. Given the continued use of the intervention by many EPs, this project aimed to provide an evaluation of the intervention for both the CoF enthusiasts and the CoF

sceptics. It also aimed to contribute to attempts to explore the psychological processes involved in the intervention by considering the hypothesis proposed by Fredrickson, Warren and Turner (2005) that CoFs work by changing peer attributions about the behaviour of the focus child.

2 Literature Review

2.1 Introduction to Chapter 2

This chapter aims to review literature relevant to this study. It will start broadly by considering the needs of pupils with autism and the context of inclusive practice. It will then explore experiences of pupils with additional needs in mainstream schools and consider relationships between pupils with additional needs and their peers. This will include looking at research which explores factors associated with peer rejection and peer acceptance and peer mediated interventions designed to support peer acceptance. The final part of the literature review will look more specifically at the research relating to CoFs. A systematic literature review which considers previous empirical research which has sought to evaluate the CoF intervention used to support pupils with a diagnosis of autism will be presented before literature which has attempted to explore the psychological processes involved in the CoF intervention is outlined. The literature review will close with conclusions and an introduction to the research questions and hypotheses.

2.2 Autism

'Although we [people with Asperger's syndrome] communicate with others, wires seem to get crossed and they get the wrong messages. The same goes the other way. Other people's interactions and communication with us somehow get distorted in transit.'

Luke Jackson (2002, p. 21), author with Asperger's syndrome, aged thirteen

'I think for most neuro-typical individuals relationships are based upon mutuality, social priority and wanting others in their life. My need for 'others' is based upon

what I need! By this I mean that I relate to other people when it is in my interest to do so.'

Wendy Lawson (2001, p. 71), author with autism

Luke Jackson and Wendy Lawson describe the 'difficulty making sense of the world' experienced by people with autism (Batten, Corbett, Rosenblatt, Withers, Yuille, 2006, p. 5). The descriptions bring to life the 'qualitative impairment in social interaction' described by the Diagnostic and Statistical Manual of Mental Health Disorders (DSM IV, The American Psychiatric Association, 1994) as characteristic of Asperger's syndrome and autism.

Although Asperger's syndrome and autism are currently classified by DSM IV as two separate categories of pervasive developmental disorders (with Asperger's Syndrome, unlike autism, associated with no clinically significant general delay in language and cognitive development), both can be described as autistic spectrum disorders (ASD). For the purpose of this study, the term 'autism' will be used to describe all autistic spectrum disorders, including Asperger's syndrome.

In attempting to understand the nature of the difficulties associated with autism, Wing and Gould (1979) propose the concept of the 'triad of impairment' – the three areas of ability affected by autism:

- Social communication
- Social relating
- Social imagination

Wing's 1988 description of an 'autistic continuum', later revised to an 'autistic spectrum' (1996), highlights the way in which the characteristics of the triad of impairment can present themselves in different ways in different people and on a continuum from mild to severe. Dodd (2005) notes that since the idea of a triad of impairment, a number of additional features of autism have been considered – namely sensory sensitivities, cognitive aspects (including visual learning style and attention difficulties) and empathy impairments (including difficulties with theory of mind and difficulties interpreting moods and behaviour in other people). In response to discussion about these additional features of autism, Dodd (2005) suggests that Leo Kanner's description of autism as a 'complex disorder of brain development affecting many functions' (p.33) remains appropriate and accepted.

2.3 Inclusion

2.3.1 Changes over time

Although figures vary greatly depending on local provision (Humphrey and Parkinson, 2006), Barnard, Broach, Potter and Prior suggested in 2002 that approximately half of children with a diagnosis of autism in the United Kingdom are educated in mainstream settings. Humphrey and Lewis (2008) suggest that the increasing number of pupils with autism who are taught in mainstream schools is the result of two interconnected factors – the growing momentum for mainstream inclusion of all children with special educational needs and the realisation that grouping pupils with autism together is not always in the best interests of the pupils.

The increase in the inclusion of children with special educational needs reported by Humphrey and Lewis (2008) is reflected in legislative changes. The Special

Educational Needs and Disability Act (2001, Section 316) now states that pupils with a statement of special needs must be educated in a mainstream school unless this is incompatible with the wishes of parents or the provision of efficient education for other children. This, along with prior changes in legislation, has led to a dramatic increase in the number of pupils with additional needs who attend mainstream schools (as documented in statistical records - for example, the House of Commons Education and Skills Committee, Third Report, 2006).

Some supporters of inclusive practice argue that research evidence can identify and quantify the benefits of mainstream education, compared to specialist provision, for children with special educational needs (Buckley, Bird, Sacks and Archer, 2006; Lindsay, 2007). Nakken and Pijl (2002), however, suggest that findings are mixed. Their review of fourteen studies which considered the impact of placement on the development of social contacts (between pupils with sensory, motor and/or mental disabilities and their classmates without disabilities) suggested that while some studies report significant differences between settings, others report no effect. In considering academic, rather than social benefits of inclusive practice, Hegarty (1993) summarises a major international review of the literature on integration for the Organisation for Economic Co-operation and Development (OECD) and suggests research has failed to establish a clear-cut advantage in either direction. As Nakken and Pijl (2002) and Lindsay (2003) acknowledge, and Thomas (1997) warns, methodological problems involved in comparing non-comparable groups receiving different kinds of education means research can provide only a crude pointer to the success or appropriateness of inclusion (Thomas, 1997, p.104).

Thomas (1997) suggests arguments for inclusion should not focus on empirical evidence but on philosophical and ethical principles of equality. He states:

'the true cost of segregation is the stigmatisation and alienation of those people who would otherwise have been able and willing to take a fuller part.'

Thomas (1997, p.104)

2.3.2 Inclusion in practice

Despite visible changes in the number of pupils with additional needs now attending mainstream schools, Humphrey and Lewis (2008) propose that the process of supporting the learning and participation of pupils with special educational needs in mainstream schools is not clearly understood.

Avramidis, Bayliss and Burden (2000) suggest the successful inclusion of a pupil with additional needs in a mainstream school requires school staff to be receptive to the principles and demands of inclusion. In their survey of 81 primary and secondary school teachers in England, Avramidis *et al.* (2000) report that although teachers were found to be generally positive about the overall idea of inclusion, they highlighted the need for more support, resources, training and time. Avramidis *et al.*'s findings are consistent with those described by Scruggs and Mastropieri (1996) whose meta-analysis of surveys completed by 10,560 teachers found only one-third of teachers felt they had sufficient time, skills, training and resources for implementing inclusive programmes. Similarly, Dockrell and Lindsay (2001) and responses to the Audit Commission's consultation (Peacey, Dockrell and Peart, 2002) describe teachers reporting a lack of knowledge and skills in the area of inclusive practice.

Tashie, Shapiro-Barnard and Rossetti (2006) write critically about some of the strategies used by teachers to support pupils with additional needs in

mainstream classroom, describing some strategies as 'hurting them [pupils with additional needs] socially' (p.3). They argue, for example, that removing a child from the classroom for additional tuition and providing one-to-one adult support can contribute to a pupil's isolation and serve as a barrier to them building positive relationships with peers. Tashie *et al.* (2006) suggest these practices teach peers to see a child as a visitor rather than an actual member of the class community – someone who is not part of the 'pool of potential friends' (p.20).

2.3.3 Experiences of inclusion

Luke Jackson (2002) writes poignantly about his experience of school life saying:

'when I started school I struggled to understand what was going on, but one thing I did understand was the most of the kids were pretty mean to me'.

Luke Jackson (2002, p.135), author with Asperger's syndrome, aged 13

Negative experiences of school for pupils with autism are documented by others. Humphrey and Lewis (2008) spoke to twenty young people with Asperger's syndrome who attended secondary schools in England and reported that bullying and teasing had been experienced by nearly all them. Similarly, using information gathered from parent questionnaires, Batten *et al.* (2006) report that over 40 per cent of the children with autism and 59 per cent of the children with Asperger's syndrome whose parents they had spoken to, had been bullied at school.

Higher rates of bullying among children and young people with additional needs, compared to those without additional needs, have been reported by the National Children's Bureau (2007), Norwich and Kelly (2004) and Thompson, Whitney

and Smith (2007). Humphrey and Lewis (2008) argue that the nature of the difficulties faced by pupils with autism places them at particularly high risk of bullying. Batten *et al.* (2006) explain that children with autism may not be able to understand the motives of other children and may not have the social skills to handle difficult situations. In addition, Whitney, Nabuzoka and Smith (1992) note the social communication difficulties experienced by pupils with autism mean they may spend more time on their own, so tend to be less well socially integrated, and lack the protection against bullying which friendships can provide.

Bullying fits with Ochs, Kremer-Sadlik, Solomon and Sirota (2001) description of 'negative inclusion' through 'rejection' or 'scorn'. Ochs *et al.* (2001) identify a second description of 'negative inclusion' - 'neglect', a form of negative inclusion also relevant to the experiences of pupils with autism. In looking at the peer networks of seven adolescents with autism and their mainstream peers, Locke, Ishijima, Kasari, and London (2010), for example, report that the pupils with autism were either isolated or on the periphery of the group. Similarly, Daniel Tammet (2006), an author with Asperger's syndrome, recalls his feelings of isolation at school and writes about 'gradually becoming more and more aware of his 'loneliness'' (p.95).

In considering descriptions of negative inclusion through neglect (Ochs *et al.*, 2001), it is important to acknowledge the different views expressed by those with autism about being on their own or being left on their own. While Daniel Tammet (2006) writes about his experience of wanting to be part of a peer group and Bottroff (1998) writes about his experience of people with autism wanting social interactions, Luke Jackson (2002) describes not being upset

about being alone. Similarly, Marc Fleisher (2001) writes about his experience of a mainstream primary school saying 'I always had a sense of isolation, having no desire to mix in with the other children' (p.324). The differing views illustrate the complex task of supporting the social inclusion of pupils with autism; they may want to feel included but may not always want to mix with others.

In providing a summary of experiences of inclusion reported by pupils with additional needs, it is also important to consider positive accounts. Humphrey and Lewis's (2008) study of the views and experiences of twenty secondary school-aged young people with Asperger's syndrome included one pupil's description of peer support saying 'I do have friends who very often stick up for me' (p.35). Fredrickson (2010) notes that a number of studies, most commonly focusing on pupils who have severe learning difficulties, have described the development of positive and caring relationships between peers and a classmate with special educational needs (Evans, Salisbury, Palombaro, Berryman and Hollowood, 1992; Staub, Schwartz, Gallucci and Peck, 1994).

In order to explore the observations that both positive and negative relationships can develop between pupils with additional needs and their peers, the literature review will now outline research which looks at factors associated with peer acceptance and peer rejection.

2.4 Inclusion, peer rejection and peer acceptance

2.4.1 Rejection and acceptance

Early research suggests that from a young age, children distinguish between typically developing peers and peers with additional needs or atypical behaviour, and make clear preferences for particular pupils (Guralnick, 1986 and Peterson, 1982). Peterson (1982), for example, considered the preferences

made by pre-school-aged children for peers with Down syndrome and for typically developing peers. Through classroom and playground observation, Peterson (1982) reported that, overall, children were observed to prefer like peers (i.e. typically developing children chose to interact with typically developing peers, and children with Down syndrome chose to interaction with peers who also had Down syndrome).

In more recent research Guralnick, Connor, Hammond, Gottman, and Kinnish (2005) looked at the nature of interactions between children with developmental delay and their peers and found, like Peterson (1982), that typically developing children preferred to interact with typically developing peers. In addition to looking at behaviour, Guralnick *et al.* (1994) investigated children's views of their peers using sociometric ratings. This involved asking pupils to place a photo of each of their peers in one of three boxes - a box with a drawing of a happy face on it for children 'you really like to play with a lot', a box with a neutral face on it for children 'you kinda like to play with', and the third box with a sad face on it for children 'you don't like to play with'. Using this measure, Guralnick *et al.* (1994) reported that children with developmental delay were less accepted by peers than their typically developing counterparts.

Much research with school-aged pupils which has investigated the relationship between pupils with additional needs and their peers has focused on the use of sociometric measures like the one used by Guralnick *et al.* (1994). Taylor (1982) explains that such measures involve asking pupils to nominate or rate their peers as friends or preferred partners for various activities and using the nominations to calculate measures of acceptance and rejection.

Juvonen (1991) used a sociometric measure with 299 Finnish pupils in their final year of primary school. He asked pupils to nominate three classmates whom they would like to have in their group while on a class trip (positive nominations) and three pupils whom they would not like to have in their group (negative nominations). This information was considered alongside perceptions of deviance (pupils were asked to identify three classmates who they thought were 'most different' from other children). The author reported that the more a pupil was perceived by classmates as deviant, the more likely s/he was to be rejected by his/her classmates.

In a more recent study, Chamberlain, Kasari and Rotheram-Fuller (2007) looked at responses provided by 398 pupils, including 17 pupils with Asperger's syndrome, who attended mainstream primary schools in America. Pupils in the study were asked to sort classmates into two groups – those they like to 'hang out' with ('buddies') and those they didn't like to 'hang out' with. The number of buddy nominations was then used as a measure of acceptance. The authors reported the pupils with Asperger's syndrome were less accepted than their typically developing peers.

Fredrickson, Simmonds, Evans and Soulsby (2007) summarise findings from studies which look at the social inclusion of pupils with additional needs and conclude:

'research on the acceptance and rejection of pupils with special educational needs has consistently reported that higher proportions of included children have lower social status and that they are less accepted and more rejected than their mainstream classmates'.

Fredrickson *et al.* (2007, p.106)

2.4.2 The impact of behaviour characteristics and perceived responsibility

Evidence suggests that peers' thoughts and ratings about a child with additional needs are influenced by the nature and visibility of the child's additional need. In Juvonen's (1991) study, children who displayed aggressive, antisocial, or hyperactive behaviours were rated as least attractive and least liked by peers, and children who were 'physically handicapped', 'mentally retarded', and 'socially withdrawn' were rated as the most preferred deviant groups. Similarly, Sigelman and Begley (1987) found that children who were given descriptions of four hypothetical peers (aggressive, learning disabled, obese and physically disabled) rated the aggressive child most negatively and the physically disabled child most positively.

Using sociometric ratings with 179 pupils, including 36 with learning disabilities, Nabuzoka and Smith (1993) found a more complex relationship between aggressive behaviour, additional needs and peer ratings. While for typically developing children, peer sociometric ratings were related to teacher reports of aggressive behaviour (i.e. the more aggressive the teacher rated a child, the more rejected s/he was by his/her peers), this was not the case for the pupils with learning difficulties. Fredrickson and Furnham (2004) also report different patterns of peer acceptance and rejection for peers with additional needs compared to typically developing peers. They found that while rejection for typically developing children was associated with high levels of negative social behaviour (such as aggression) and low levels of positive social behaviour (such as co-operation), rejection for pupils with additional needs was not always associated with high levels of anti-social behaviour.

In considering the different patterns of sociometric ratings observed for typically developing peers and peers with additional needs, Sigelman and Begley (1987) and Juvonen (1991) propose that a child's level of peer acceptance and rejection is dependent on the level of responsibility peers perceive the child with additional needs has for his/her behaviour.

Juvonen (1992) investigated this idea and found that the degree to which peers perceived hypothetical children or actual classmates to be responsible for their own behaviour was predictive of peers' interpersonal affect (anger and sympathy) as well as how liked or disliked the real or hypothetical child was.

Sigelman and Begley (1987) also investigated this idea by exploring children's responses to descriptions of four hypothetical children. In this study, children were either given no causal information about the hypothetical child's needs, told that each problem had a controllable cause, or told that each problem had an uncontrollable cause. With cautions about drawing conclusions from discussions about hypothetical pupils, Sigelman and Begley (1987) reported that the nature of a hypothetical child's problem had an impact on the degree of influence that the information about the causality had on evaluations made about the child. They reported that the physically disabled child was liked regardless of the causal information provided but that for the hypothetical aggressive child, low responsibility translated into more positive peer evaluations.

2.4.3 Attribution theory

In explaining the impact that perceived responsibility has on peers' thoughts and feelings about a child with additional needs, Juvonen (1992) suggests that attribution theory (Weiner, 1993) offers a conceptual representation for

describing the relationship between perceptions of others and social reactions. Fredrickson (2010) too proposes that attribution theory provides a framework for understanding the different peer responses to pupils with additional needs documented in literature.

Attribution theory (Weiner, 1993) states that perceived responsibility (the degree to which an individuals can or can't control their behaviour) influences affective responding (for example, anger or sympathy) which, in turn, influences behavioural intentions (for example, the degree of willingness to provide social support). Within the context of attribution theory, research has examined the impact of interventions which aim to change peer attributions about a child with additional needs. Before considering such research, it is important to note the complexities of research which looks at changing and measuring attributions.

Kelly (1987) notes that studying attributions involves understanding the pattern of human attributions – both the logical and unbiased processes and the less logical biased ones. The 'fundamental attribution error' (Ross, 1977), the observed tendency for people to attribute cause to the person rather than the situation, is a classic example of the less logical conclusions drawn from human behaviour. Although the fundamental attribution error is well illustrated, Gilbert and Malone (1995) explain that the cause of such biased thinking is poorly understood.

Kelly (1987) also notes that the task of measuring attributions is difficult. He warns that most research which involves attempts to modify and measure attributions relies on measuring the impact of causal information on affect or behaviour (for example, liking or helping) rather than measuring the attributions

themselves. He points out that in such cases, it can only be assumed that any change in affect or behaviour was mediated by a change in attribution.

2.4.4 Changing attributions about pupils with autism

In considering the attributions made about children with autism, Gray's (1993) description of the particular social challenge posed by behaviour associated with autism is central. Gray (1993) reported that information gathered from 32 parents of children with autism illustrates the 'uniquely stigmatising aspects' linked to the extremely disruptive nature of autistic symptoms: the normal physical appearance of children with autism, and the lack of public knowledge and understanding about the nature of autism (p.102). Given that research suggests that pupils whose additional needs are less visible are at risk of peer rejection (Juvonen, 1991; Newberry and Parish, 1987) and attribution theory suggests that thoughts, affect and behaviour are linked to perceived responsibility, research which considers the impact of sharing information with peers about a child with autism will be considered next.

Positive outcomes associated with the sharing of information about a child's autism have been reported in several studies. Ochs *et al.* (2001) looked at pupils with autism in mainstream schools in California where peers had been given different levels of information about the pupils' difficulties. Information given to peers ranged from peers not being told about a child's autism, being involved in classroom discussion about disability generally and being involved in discussion about a specific child's autism. The researchers reported that the pupils whose diagnosis had been most fully disclosed received better social support within the classroom and during playground activities than pupils whose diagnosis had not been shared. They describe a particularly stark contrast

between a girl whose diagnosis was not known to peers or school staff and two boys whose parents were very actively involved in giving information to classmates about their sons, including explaining (in child friendly language) their sons' support needs, the reasons for their needs and how best to help them. The authors note that while the girl was observed to encounter negative reactions from peers, the two boys typically received caring responses from classmates who appeared to make a consistent collective effort to involve and include them. Although the authors note the small sample size and ethnographic nature of observations and video recording, they propose that the level of positive inclusion experienced by the pupils in their study appeared to vary in relation to disclosure practices.

Frederickson *et al.* (2007) provide further evidence of the benefits of open discussion with peers about a child's needs. The authors describe an evaluation of a special school and mainstream school inclusion initiative which involved 'peer preparation' – a peer group package of workshop activities aimed at promoting supportive interactions between pupils with additional needs and their mainstream peers. The 'peer preparation' initiative involved providing peers with descriptive and explanatory information about pupils' special educational needs. The authors tracked 14 pupils with additional needs (12 of whom had autism), as they transferred from a full-time special school placement to a full-time mainstream placement, and looked at peer group inclusion, social behaviour, bullying and pupils' feelings of belonging at school. The authors report that all the pupils who transferred to mainstream schools experienced positive social outcomes with no peer group rejection.

Swaim and Morgan's (2001) study which looked at the impact of providing peers with different kinds of information about a child with autism produced less positive results. This study involved showing 233 primary aged pupils a video of a child presenting typically autistic behaviour. Pupils were provided either with descriptive information (information about the child which did not mention or explain of autism) or descriptive and explanatory information (the child in the video was identified as autistic and information about autism provided in addition to descriptive information). The authors reported that peer responses towards the child in the video and willingness to engage with the child did not differ between the two groups. This study clearly contradicts other findings and fails to support the hypothesis, based on attribution theory, that providing peers with causal information about a child's needs results in more positive perceptions and behaviour.

Campbell, Ferguson, Herzinger, Jackson and Marino (2004) attempted to refute Swaim and Morgan's (2001) findings by using a similar procedure but improving the statistical power (conducting a larger scale study involving 576 children and using a within-subjects design). They report that pupils who received both descriptive and explanatory information showed a more positive attitude and more positive behavioural intentions towards the child with autism than pupils given only descriptive information. This was only the case, however, for younger pupils (not pupils aged 10-11) and this difference was greater for girls than boys.

As well as considering what research tells us about the impact of providing peers with information about a child's autism, it is important to reflect on what young people with autism have to say. Marc Fleisher (2001), writing about his

teenage years, says 'people who do not know about the condition can unwittingly make things much worse' (p.338). Views gathered by Humphrey and Lewis (2008) during interviews with pupils with autism, however, highlight feelings that any level of disclosure can provide a barrier to being considered 'normal'. One pupil commented, for example, 'I'd rather they not know because then I wouldn't be treated differently and that's fine' (p.40), while another said, 'people in my class know about my autism at school that's why they likely pick on me.' (p.34).

It is also important to mention the reservations felt by some adults about the process of discussing pupils' needs. Sapon-Shevin (2007) writes about the awkwardness many adults display around talking about differences. She suggests adults can find talking about differences with children particularly difficult and choose to 'shelter' children from 'life's harsher realities' (p.46).

Having explored the factors associated with peer rejection and peer acceptance, this literature review will next consider the CoF intervention. The CoF intervention will be outlined and previous studies which have sought to evaluate it will be summarised. The processes involved in the CoF intervention, and their links to peer acceptance and peer rejection, will also be explored.

2.5 The CoF intervention

2.5.1 Peer support interventions

Fredrickson, Warren and Turner (2005) note that a growing awareness of the positive or negative impact peers can have on pupils with additional needs has led to an increasing interest in peer support interventions.

The literature on peer interventions used to support pupils with additional needs is vast. It includes evaluations of a number of interventions including co-

operative learning, peer mentoring and tutoring, conflict resolution schemes, peer counseling and more specific interventions designed to support pupils with autism (for example, Goldstein, Kaczmarek, Pennington, and Shafer, 1992; Kamps, Potucek, Lopez, Kravits, and Kemmerer, 1997). Newton and Wilson (2005) note that the CoF, like all other peer support interventions, provides an opportunity to involve pupils in sharing the responsibility for solving problems – a task typically given to teachers rather than pupils. As Tashie *et al.* (2006) highlight, pupils are in a uniquely helpful position to support another child.

2.5.2 The CoF intervention: background

Newton and Wilson (2005) describe the CoF intervention as a means of 'mobilising' peers around a vulnerable young person to provide support and engage in problem solving with the person in difficulty.

The CoF approach originated in Canada and North America in the late 1980s. Perske and Perske (1988) report the approach rose out of the support circle formed around Judith Snow, an adult with a physical disability. Initially, the CoF intervention was used to support the inclusion of adults with disabilities in their local communities but has since been developed to support the inclusion of pupils with special educational needs in their local mainstream schools. The CoF approach has been used in the United Kingdom with children of varying ages with a range of additional difficulties. It was promoted as an example of good practice in the DfEE Circular 10/99 *Social Inclusion: Pupil Support* and endorsed more recently by the DCFS (2008) publication *Bullying Involving Children with Special Educational Needs and Disabilities*.

Whitaker, Barratt, Joy, Potter and Thomas (1998) note the misleading nature of the term 'Circle of Friends' and suggest the purpose of the approach is to alter

understanding and encourage support rather than to establish friendships (although they recognise that closer relationships might be fostered in the process). In contrast, Smith and Cooke (2000), refer to the 'circle of intervention' as a means of developing a network of friends. Although a full discussion of the discrepancies in literature related to whether the supportive relationships developed through the CoF intervention qualify as 'friendships' is beyond the scope of this study, it seems likely that whether the CoF is seen as building 'friendships' is entirely dependent on how friendship is defined.

2.5.3 Setting up a CoF

Guidance on how to set up and run a CoF is plentiful (for example, Newton and Wilson, 2003; Schlieder, 2007; Taylor 1997). To gain a better understanding of the procedure typically used by EPs in the UK, Fredrickson *et al.* (2005) completed a survey via the electronic communication network for EPs in UK (EPNET) in 2003. The authors argue the components of the CoF described by Taylor (1997), and used in Fredrickson *et al.'s* (2005) study, are typical of EP practice at the time. These components, also described by Newton and Wilson (2003) in more detail, are summarised below:

- *Establishment of prerequisites*

  This involves gaining the commitment of the school management, consent from the parents of the focus child and agreement from the focus child himself/herself.

- *Whole class meeting to set up the CoF*

  Taylor (1997) suggests this session is best led by an outsider, for example an EP. The focus child agrees not to be present for this session in the hope that this provides peers with the opportunity to talk more freely and honestly about

the situation. After ground rules are established, the focus child's strengths and areas of difficulty are discussed and the focus child's experiences at school are explored. Taylor (2007) describes doing this through questioning while Newton and Wilson (2003) propose using an exercise in which pupils are encouraged to consider key people in their lives and then think about how they would feel and act without these people. The purpose of this exercise is to elicit empathy with the focus child's situation. Classmates are then asked to think of ways they could support the focus child. Volunteers for the CoF group are sought.

- *Initial meeting of the CoF*

  Taylor (1997) suggests this take place the same day as the whole class meeting. The volunteers, focus child and an adult 'circle facilitator' are present. The class discussion is summarised for the focus child and targets are identified. Actions for the coming week are agreed.

- *Weekly meetings of the CoF*

  The circle meets weekly to review the targets and strategies agreed the previous week. The volunteers, focus child and an adult 'circle facilitator' are present. Future targets are planned and strategies indentified through group problem solving.

Variations from this prescribed format are well documented. They include making a more social focus to weekly meetings (Schlieder, 2007), the use of circle sessions for the explicit teaching of games (with the focus child) or information sharing about the needs of the focus child (without the focus child) (Bozic, Croft and Mason-Williams, 2002), changes to the content of the whole

class session (Maines and Robinson, 1998) and not identifying the focus child to peers (Barrett and Randall, 2004; Shotton, 1997).

The changes proposed by Barrett and Randall (2004) and Shotton (1997) highlight the sensitive nature of the CoF process described by Taylor (1997) and Newton and Wilson (2003) which involves open discussion about the focus child in their absence. Shotton (1997) warns that this may not be appropriate for pupils who are socially neglected and who are sensitive to their feelings of isolation. They note that setting up a CoF in the way described by Taylor (1997) and Newton and Wilson (2003) for these pupils might be 'an insurmountable ordeal which they may not want to face and which may in fact heighten their feelings of isolation further' (p.23).

2.5.4 Setting up a CoF for a child with autism

Gus (2000) writes about using an adapted version of the CoF approach when setting up a circle for a young person with autism. This involved replacing the whole class exercise, which encourages pupils to think about relationships in their lives, with a discussion about autism. This included providing peers with a description of the triad of impairments, its incidence, its cause (and what was not the cause) and a description of how people with autism are like people without autism. Citing Gus (2000), Fredrickson *et al.* (2005) describe a similar adaptation to the CoF intervention which included adding an age-appropriate description of autism to the whole class meeting.

Research which has attempted to evaluate the impact of the intervention used specifically to support a focus child with autism will be considered next. This will take the form of a systematic literature review.

2.6 Systematic literature review

A systematic literature review of research (1992-2009) which considers the impact of a CoF intervention used to support a pupil with a diagnosis of autism was conducted.

2.6.1 Rationale and aims for the systematic literature review

Despite a large body of research which has aimed to evaluate the use of the CoF intervention with pupils with emotional and behavioural difficulties (Frederickson and Turner, 2003), pupils who have difficulties forming and maintaining relationships (Smith and Cooke, 2000) and pupils identified as being socially neglected (Shotton, 1998), fewer attempts have been made to evaluate the use of the CoF intervention to support pupils with autism.

Kayla and Avramidis (2005) point out, however, that because the CoF intervention systematically uses the social networks that operate within the classroom to create an environment that supports the 'vulnerable' child, it is particularly well suited for the needs of children with autism whose social deficits represent a major barrier to their successful inclusion into mainstream schools. The *National Autism Plan for Children* (NAPC, 2003) also supports the use of the CoF intervention with pupils with autism and describes it as an example of a good practice programme of peer support.

The researcher aimed to gain a better understanding of the evidence base for the use of the CoF approach with pupils with autism by undertaking a systematic literature review of existing research.

2.6.2 Systematic literature review research question

What does research say about the impact of the CoF intervention when it is used to support a child or young person (aged 2-19) with autism?

2.6.3 Methods used for the systematic literature review

User involvement

The methodology for the review followed the procedures described by the Evidence for Policy and Practice Information and Coordinating Centre (EPPI-Centre). In an attempt to make the process clear and replicable, the methodology is described in detail.

Identifying and describing studies

See appendix I for a flowchart which visually depicts the processes undertaken during the systematic review. First, potentially relevant papers were identified through a mixture of electronic database searching, hand searching of key journals and searching using general search engines on the internet. As recommended by Fink (1997), search terms inputted as key words into electronic databases were identified with the support of the thesaurus tool provided by the databases used. See appendix II for a list of search terms used and appendix III for a detailed description of searching strategies. Once potentially relevant papers were identified, titles and abstracts were screened and studies which did not relate to the review question were excluded. Full copies of the remaining relevant studies were then obtained and considered in relation to the following inclusion and exclusion criteria.

Studies which met all of the following criteria were included:

- They were based on empirical research
- They focused on measuring the impact of the implementation of a CoF
- They included a focus child with a diagnosis of autism
- They included a focus child aged between 2 and 19
- They focused on a CoF intervention implemented in a nursery/school setting
- They were written in English

Studies which met any of the following criteria were excluded:

- They were based on secondary research, theoretical discussion or personal opinion
- They did not include measures of the impact of the implementation of a CoF
- They did not include a focus child with a diagnosis of autism
- They did not include a focus child aged between 2 and 19
- They focused on a CoF intervention not implemented in a nursery/school setting
- They were not written in English

The first three inclusion/exclusion criteria were defined based on the purpose of the review and the review question. The fourth and fifth criteria were added in an attempt to obtain research which related to work with pupils with autism in educational settings. The final inclusion/exclusion criterion was added to reflect the author's native language. As the CoF intervention evolved relatively recently, no inclusion/exclusion criteria relating to the date of the studies were included.

The studies identified as meeting the inclusion criteria were described briefly in relation to their setting (country and type of school in which the study was located), participant characteristics (number and age), intervention characteristics (person delivering CoF intervention, number of volunteers and number of sessions), study design, measures used and outcomes.

In-depth review

A systematic map of the studies identified as meeting the inclusion criteria was created in order to aid the in-depth review, (see appendix IV). This was then used to support the construction of a brief summary of each study and a commentary on the quality of the methodology employed. The outcomes of the results were then synthesised, conclusions drawn and implications for further practice highlighted.

2.6.4 Results of the systematic literature review

Results of searching and screening process

In total, the electronic searches identified 631 potentially relevant studies. The subsequent screening of the abstracts and titles of these studies excluded 618 studies on the grounds that they were not related to the areas of interest or were duplicates. This left 13 potential studies. No additional studies were identified through hand searches of relevant journals. Full copies of the 13 relevant studies were obtained. The identified papers were screened using the inclusion and exclusion criteria described. Six studies which met the inclusion criteria were identified.

Characteristics of included studies

The six studies which met the inclusion criteria were completed between 1992 and 2005. Five of the studies were undertaken in the UK and one was completed in the USA. The studies included pupils of varied ages with the youngest participant described as aged 3 years, 10 months and the eldest described as pupils in year 10.

The studies involved participants with a diagnosis of autism to differing degrees – two studies involved small samples of pupils all of whom had a diagnosis of autism, two studies included one participant with a diagnosis of autism and two studies involved just one participant.

Details of the nature of the CoF intervention varied across studies. Three studies explicitly stated they used a CoF approach, two used Taylor's (1997) guidelines, while the others claimed to use an 'adapted' CoF approach.

The designs of the studies varied dramatically from a case study design to a more rigorous randomised control trial. In total, the designs used were pre-post (and follow-up) single group design, post only single group design, pre-post randomised control trial, multiple baseline design, case study and action research (which included a comparison pupil).

The measures used to consider the impact of the CoF intervention focused both on the impact of the intervention on the focus child and the impact on the focus child's peers. This included gathering self-reported qualitative data (from the focus pupils, peers and adult facilitators) and using quantitative data (the number of interactions involving the focus child and peer ratings of the focus child's level of social acceptance and rejection).

Results of quality assurance

EPPI-Centre guidance (2007) states that considering the 'weight of evidence' of each study contributes to the review's findings. For the studies identified, therefore, the trustworthiness of the results (judged on the quality of the study within the accepted norms for undertaking the particular type of design in the study), the appropriateness of the use of the study design for addressing the systematic review's research question (methodological quality) and the appropriateness of focus of the research for answering the review question (topic relevance) will be considered.

In terms of trustworthiness and methodological quality, the researcher recognised that the inclusion criteria employed did not limit the review to studies with a particular research design. This means that studies identified involved designs with mixed degrees of methodological rigour. Only three studies include a comparison group/person (one a randomised control trial, one a multiple baseline approach and one a comparison between two pupils' pre and post data). One subsequent study involve a comparison between data gathered pre and post intervention but do not include a comparison group. This makes the causality of any changes that occur in these two studies difficult to establish. Two study reviews data obtained after the intervention only, making conclusions about the impact of the intervention even more difficult to establish. Based on Petticrew and Roberts' (2007) list of the hierarchy of evidence which identifies randomised control trials as the design of highest 'methodological quality', it would have been beneficial to consider stricter inclusion/exclusion criteria which ensured that studies considered for the in-depth review were all of a rigorous nature. Due to the small number of studies identified, however, this was not

possible. It is important therefore, that the limitations of the designs used by the studies reviewed are acknowledged.

In terms of appropriateness of the focus, it is necessary to point out that three of the studies do not involve a strictly CoF intervention but used 'adapted' versions. In drawing conclusions, therefore, differences in the intervention used must be kept in mind.

The methodological quality and the topic relevance associated with the research identified for the in-depth review suggests that there is a great deal of heterogeneity amongst the studies. This means some studies appear significantly more trustworthy, of higher methodological quality and of more topic relevance than others. These studies, particularly the single case experimental design and the randomised control trial design, could be considered as providing more 'heavily weighted' evidence.

2.6.5 Results of the systematic literature review: In-depth results

Review of studies

The searching and screening process identified the following six studies:

- Whitaker, Barratt, Joy, Potter and Thomas (1998)

Whitaker *et al.* (1998) considered the impact of six CoFs implemented for six pupils with a diagnosis of autism in years 3-6. Five of the pupils attended mainstream schools in the UK and one attended a school for pupils with moderate learning difficulties in the UK. An Autism Outreach teacher and member of school staff led weekly CoF meetings which involved between three and 17 sessions. Qualitative data was gathered after the intervention using

interviews, questionnaires and discussion with the focus children, circle leaders, circle members and parents. The researchers reported positive qualitative feedback from circle leaders, circle members and parents including perceived changes in the focus children's level of social integration. All circle facilitators rated the intervention as 'valuable' or 'very valuable'. It is important to acknowledge that the study's post-only single group design (i.e. the lack of pre-intervention data and/or a comparison group) and the nature of self-reported qualitative data make firm conclusions about the impact of the intervention difficult to draw.

- Haring and Breen (1992)

Haring and Breen (1992) considered the impact of a social support network intervention which included group meetings which followed a CoF framework. The study involved two focus pupils, one of whom had a diagnosis of autism, in a junior high school in the USA. A multiple baseline design, involving observation over two months, was employed. The frequency of interactions involving the focus pupils, the number of opportunities for interaction and the appropriateness of social interactions were analysed over the observation period. Results suggested that the intervention was successful in increasing the quantity and quality of interactions involving the focus child with autism. Although the multiple baseline design provided a clear picture which suggested changes observed were linked to the implementation of the intervention, the data pertinent to the focus of this systematic review relates only to one pupil.

- Fredrickson, Warren and Turner (2005)

Fredrickson *et al.* (2005) investigated the impact of the CoF intervention with 14 primary-aged children in mainstream schools in the UK, one of whom had a diagnosis of autism. A pre-post and follow-up single group design was used. Data collected involved peers completing a sociometric rating scale and a measure which rated the focus child's disruptive behaviour at four points in time. Individual case consideration of the data obtained in relation to the focus child with autism indicated that peer acceptance scores increased and peer rejection scores decreased after the intervention. The researchers also reported that peers perceived a positive change in the focus child's behaviour after the intervention. Results from the follow-up phase suggested the proportion of classmates who rated the focus child's behaviour as disruptive and the level of rejection scores had risen only slightly. As with the previous study, the data relevant to this systematic review relates only to one pupil.

- Kalyva and Avramidis (2005)

Kalyva and Avramidis (2005) completed a small-scale randomised control trial which looked at the efficacy of a CoF intervention in improving the communication of pre-school children with autism. Five children with a diagnosis of autism, aged between 3.10 and 4.7 years old, participated in the study – three in the intervention group (i.e. they were each the focus child of a CoF) and two in the control group. The CoF sessions were run by class teachers over three months and involved five peers for each focus child. Pre and post intervention and follow-up data was gathered for all pupils. This involved an observation schedule which recorded the number of initiations and responses made by the participants during circle time. Statistical analysis of the data

revealed that children in the intervention group had significantly lower unsuccessful response and initiation rates and significantly higher successful response and initiation rates post-intervention and at follow-up, compared to pupils in the control group. In considering these results, questionable appropriateness of a small group design involving pupils whose needs may have been very different, must be considered.

- Gus (2000)

Gus (2000) completed a case study involving one year 10 pupil with autism in a mainstream school in the UK. The researcher explains that a CoF approach was adapted to meet the needs of the pupil involved. The CoF intervention involved one session only in which the focus child's classmates discussed the needs of the child. Post intervention questionnaires, completed by peers, and a follow-up questionnaire, completed by the teacher, were considered. The researcher reports that pupil questionnaires indicated increased understanding of the focus child's needs and more positive attitudes towards the focus child following the intervention while the teacher questionnaire suggested a perceived improvement in the focus child's happiness following the intervention. It is important to acknowledge that the study involved no pre-intervention data and/or a comparison group, the use of a CoF intervention which was not run in the same way as the interventions in the other studies described and only involved one pupil.

- Bozic, Croft and Mason-Williams (2002)

Bozic *et al.* (2002) adopted an action research approach to their study involving one pupil, aged eight, who attended an autism base within a mainstream school.

The authors describe the use of an adapted version of the CoF approach in which the circle members attended additional practical sessions in which they were taught games they could play with the focus child on the playground. Outcomes of the study include positive qualitative feedback from peers, parents of the focus child and the teacher about the process. The focus child was reported to have improved play skills and improved ability to maintain joint attention. The authors also report pre and post measures of 'popularity' using a sociometric questionnaire about playtime behaviour and note that the focus child's 'popularity' score increased following the intervention more than that of a matched comparison pupil. Given that the adapted version of the CoF intervention included additional interaction sessions, and the sample size of only one, it is difficult to draw conclusions about the impact of the CoF intervention.

Synthesis of results

The heterogeneity of the studies makes synthesis of the results difficult. The small samples involved in most of the studies, the lack of pre-post designs/and or control groups, and the differences in the way the intervention was applied in the different studies makes it hard to draw conclusions about the causality of observations made after the implementation of a CoF approach. The one aspect that all studies shared was the positive reports of the impact of the implementation of a CoF approach used with pupils with a diagnosis of autism. The results suggest the potential impact a CoF approach could have on both objectively observable and quantifiable behaviour (for example, the number of social interactions involving the focus child) and more qualitative perceptions of aspects of social integration and inclusion.

2.6.6 Findings and their implications

Strengths and limitations of the systematic literature review

The systematic review process provided a means to undertake a transparent assessment of available research. The systematic approach employed in accordance with the EPPI-Centre guidance and procedures meant a careful attempt was made to identify and consider all studies relevant to the review.

Criticisms of the systematic review methodology focus on concerns about the effectiveness of the methodology. Hammersley (2001) notes that the model for producing systematic reviews is far from infallible. Although the technique seeks to provide an exhaustive and unbiased review of research, this is difficult to achieve in practice. In relation to this study particularly, the search undertaken searched key electronic data bases and journals only.

Summary of principal findings and implications for future research

The systematic literature review identifies the gaps and shortcomings in current research evidence relating to the use of CoF approach used with pupils with autism. Although the review demonstrates the potential of the CoF intervention with pupils with autism, in order to provide evidence which could be considered rigorous enough to guide practice, further research which draws a causal link between outcomes and the CoF intervention is necessary. It is within this context that this research was planned. Before introducing the study's research questions, this literature review will consider research which has sought to understand the processes, rather than simply the outcomes, associated with the CoF intervention.

2.7 Understanding the CoF intervention

Among the studies summarised in the systematic literature review are some attempts by the researchers to explain, or understand, how the CoF intervention works. Most explanations focus on the CoF involving a change in peer perceptions, understanding and behaviour. Whitaker *et al.* (1998), for example, comment that the CoF brought about positive attitudes, greater understanding of the focus child's difficulties and a reduced tendency to blame the focus child. Similarly, Gus (2000) writes that as a result of the intervention pupil understanding, behaviour and attitudes towards the focus child improved.

2.7.1 The CoF intervention: proposed theoretical frameworks

James and Leyden (2010) suggest that two general theories have been proposed as underpinning the CoF intervention – social constructivism and social competence. In considering the two theories, James and Leyden (2010) warn that both offer 'useful insights into CoF, but are not necessarily grounded in data, and consequently lack detail and depth' (p.54).

Newton and Wilson (2003), following Mallory and New (1994), suggest the CoF approach is underpinned by social constructivism. From this perspective, attitudes, behaviour and relationships are not viewed as constant but are seen as the product of the social context – i.e. the product of interactions between groups of people. Newton and Wilson (2003) point out that unlike interventions which adopt a 'within child' approach - for example social skills training - the CoF intervention views a problem held by one person as the product of all those involved in that person's life. From this perspective, the CoF intervention provides peers with the opportunity to reconstruct their perception of the focus

child and renegotiate their understanding of the child's behaviour. For the focus child, the CoF provides the opportunity to reconstruct their own self-perception.

Fredrickson and Turner (2003) suggest the CoF intervention is underpinned by an adapted version of Dodge, Pettit, McClasky, and Brown's (1986) model of social competence – see appendix V. They suggest that this model elaborates on earlier attempts to describe interactions between personal and environmental variables and behaviour, for example Lewin's B=f(P,E) equation where behaviour (B) is a function of personal characteristics (P), environmental factors (E) and the interaction between the two. Fredrickson and Turner (2003) describe the model of social competence as illustrating the circular chains of causality and interactions between individual and environmental influences. The model suggests that characteristics of a social situation influence a child's perceptions of, and judgements about, their own and others' behaviour (stage 1). Cognitive factors (for example, the child's perception and understanding of the situation) and their skills in problem solving then lead them to select appropriate behaviour (stage 2) and execute this behaviour (stage 3). The impact of this behaviour on the child's acceptance or rejection by their classmates is dependent on how their classmates interpret the behaviour (stage 4). The classmates' responses to the behaviour (stage 5) then act cyclically as cues which the child will process within the context of the ongoing social situation back at stage 1. In terms of the CoF intervention, Fredrickson and Turner (2003) suggest that all stages of the model are addressed by elements of the CoF – i.e. that the approach aims to change peer perceptions and judgements about a social situation involving the focus child, alter how peers behaviour and impact on how this behaviour is then perceived.

Although James and Leyden (2010) describe the two proposed theoretical underpinnings as opposing and note the lack of evidence and detail in both, both theories highlight the social process at the heart of the CoF intervention and go some way to describing how the intervention works.

In their recent exploration of the CoF intervention, James and Leyden (2010) use a grounded theory approach to investigate the core psychosocial processes which underpinned the successful use of the intervention. Their findings further illustrate the process of change in peer perception and behaviour as central to the intervention by identifying the core psychological process involved in the approach as the progression from a 'closed' to a more 'open' social system (p.56). They explain that prior to the intervention the peer network was effectively 'closed' to the focus child and that the child's lack of skills and their challenging behaviour made attempts to enter or re-open the peer network difficult. James and Leyden (2010) explain that within the 'open' peer network provided by the CoF attitudes changed, new relationships were forged and new behaviour emerged.

2.7.2 The CoF intervention for pupils with autism: processes involved

Fredrickson *et al.* (2005) and Bozic *et al.* (2002) used sociometric measures to investigate the idea that the CoF works by bringing about change in peer perceptions. By looking at ratings of the focus child's acceptance and rejection over time, Fredrickson *et al.* (2005) report that it was the whole class CoF meeting which was associated with an increase in ratings of acceptance and a decrease in ratings of rejection. In fact, for Fredrickson *et al.*'s (2005) general sample (not including the participant with autism), the weekly circle meetings

produced no measurable further improvements. For the participant with autism, not only was the whole class CoF meeting seen to increase the focus child's level of social inclusion (increased acceptance and decreased rejection), but acceptance and rejection scores continued to improve during the course of the six weeks of small CoF meetings.

Based on their findings, Fredrickson *et al.* (2005) hypothesise that the whole class meeting is crucial in reminding peers of positive behaviours exhibited by the focus child and building empathy but, most importantly, in reattributing negative behaviour displayed by the focus child.

Fredrickson *et al.* (2005) explain that in the traditional CoF approach, behaviour is reattributed to an external and unstable cause - the child's lack of friends. In the adapted version of the intervention, which includes a description and explanation of autism, behaviour is reattributed to an external and stable cause - autism. Fredrickson *et al.* (2005) explain that as the condition of autism is attributed to a cause out of the focus child's control, it causes a change in attributions which results in the increased social acceptance observed in their study. Fredrickson *et al.* (2005) propose that for peers of the focus child with autism, further experience of the focus child, but minimal changes in the child's behaviour, is likely to support the attribution made that the focus child's behaviour is caused by the external, stable cause autism. The authors note that although their study included peers reporting a perceived change in the focus child's behaviour, these changes were not significant enough for peers to feel their attributions had been contradicted.

In contrast, Fredrickson *et al.* (2005) suggest that for peers of the focus children without autism (where negative behaviour is attributed to an external but

unstable cause - the lack of friends), peers offering support (i.e. seemingly reducing the cause of the behaviour) but seeing the problem remain contradicts the attribution made during the whole class meeting. The authors suggest that this may explain why no further impact from the weekly CoF meetings occurs in these CoFs.

Fredrickson *et al.*'s (2005) hypothesis that providing information to peers about a child's autism causes a change in attributions, and subsequently a change in perceptions of the focus child, is consistent with attribution theory. It is also consistent with previous research findings which report positive changes associated with sharing information about a child's autism with peers (Campbell *et al.* 2004; Frederickson *et al.*, 2007; Ochs *et al.* 2001).

2.8 An introduction to this study

2.8.1 Conclusions from the literature

The literature reviewed highlights the increasing number of pupils with autism now attending mainstream schools. Research suggests, however, that pupils with autism are more likely to be bullied and are less likely to be accepted by their peers than typically developing children. Research which has explored the nature of relationships between pupils with additional needs and their peers suggests that peer perceptions, or attributions made by peers about a child's additional needs, influence peer thoughts and feelings about the child. Research which looks at changing the attributions peers make about the behaviour of pupils with autism suggests generally positive outcomes.

Enthusiasm for peer support interventions has grown out of increasing recognition of the impact peers can have on the lives of pupils with additional needs. The CoF intervention offers one method of using peers to support a pupil

with additional needs attending a mainstream school. A systematic literature review of research evidence suggests positive outcomes associated with the intervention used to support pupils with autism but highlights the need for future research of a more rigorous nature. Exploration of the processes underlying the intervention, particularly the idea that the intervention involves changing peer attributions about the focus child's behaviour, also warrants further investigation.

2.8.2 An introduction to the research: the unique contribution

The CoF studies reviewed demonstrate researchers' attempts not only to answer the 'what works?' and 'what works and for whom under what condition?' questions which Fredrickson, Webster and Wright (1991) propose are central to the practice of EPs, but also the 'why?' question – i.e. attempts to gain a better understanding of the psychological processes underlying change (Fredrickson *et al.*, 1991). This study aims to contribute both to existing research which has attempted to evaluate the CoF intervention and to researchers' attempts to understand it.

This study aims to make two unique contributions to existing research. Firstly, it aims to contribute to the limited body of research which has attempted to evaluate the use of the CoF intervention to support a pupil with autism in a mainstream school. Given the methodological characteristics of the existing research, this study uses a single case experimental design with five pupils in an attempt to draw more definite conclusions about the impact of the intervention on the social inclusion of the focus children (using ratings of peer acceptance and rejection). This part of the study builds on the work of Fredrickson *et al.* (2005) but uses a larger sample of pupils with autism and an arguably more rigorous design (single case experimental design). The impact of the intervention on the focus children's experience at school (through their

ratings of happiness at school) and teacher ratings of the focus children's behaviour are also considered.

The second part of the study aims to explore Fredrickson *et al.*'s (2005) proposed idea that outcomes associated with the CoF used with pupils with autism are linked to a change in peer attributions about the focus child's behaviour. No previous research has explored this hypothesis. This involves presenting and discussing data collected through interviews conducted with a small sample of peers about one of the focus child's behaviour. Comparisons about attributions made before and after the CoF intervention will be discussed.

The researcher hopes that evaluation and exploration of the CoF intervention used to support pupils with autism will contribute to both a stronger evidence base and a better understanding of the approach. These aims will be explored through the following research questions:

2.8.3 Main research question and hypothesis

Research question one

Does a CoF intervention have a positive impact on the social inclusion of pupils with autism in mainstream classrooms?

Hypothesis one

The CoF intervention will increase focus children's level of peer acceptance and decrease focus children's level of peer rejection.

Null hypothesis one

There will be no change in the focus children's level of peer acceptance and rejection following the CoF intervention.

2.8.4 Research sub-questions and hypotheses

In addition, the following sub-questions are proposed:

Research question two

If the CoF is seen have a positive impact on the social inclusion of pupils with autism, which part of the intervention (the whole class meeting or the subsequent weekly circle meetings) is associated with change?

Hypothesis two

Focus children's level of peer acceptance will increase and focus children's level of peer rejection will decrease following the whole class meeting. The level of peer acceptance will continue to increase and the level of peer rejection will continue to decrease during the course of subsequent weekly CoF meetings.

Null hypothesis two

Focus children's level of peer acceptance will increase and focus children's level of peer rejection will decrease following the whole class meeting. The level of peer acceptance will not continue to increase and the level of peer rejection will not continue to decrease during the course of weekly circle meetings.

Research question three

Is the CoF intervention associated with a change in focus children's rating of happiness in school?

Hypothesis three

Focus children's rating of happiness in school will be higher after the CoF intervention than before the intervention.

Null hypothesis three

There will be no change in focus children's rating of happiness at school after the CoF intervention.

Research question four

Is the CoF intervention associated with a perceived change in focus children's behaviour?

Hypothesis four

The teachers' and circle facilitators' perception of the focus children's strengths and difficulties will change – in particular, adults will report lower scores on the difficulties scale and higher scores on the prosocial scale after the CoF intervention.

Null hypothesis four

There will be no change in the adults' perceptions of the focus children.

Research question five

Is any change observed associated with a change in attributions made by peers about the focus child's behaviour?

Hypothesis five

Changes in social inclusion ratings will coincide with a change in attributions made by peers about the focus child's behaviour. After the CoF intervention, peers will attribute the focus child's behaviour more to an external cause – autism.

Null hypothesis five

There will be no change in the attributions made by peers about the focus child's behaviour.

3 Methodology

3.1 Introduction to Chapter 3

This chapter aims to provide a clear account of the study's methodology alongside a description of the rationale behind the methodological decisions made. The chapter will start with an outline of the paradigms prominent within psychological and educational research. The epistemological standpoint adopted by this study will then be discussed before the study's design and details of implementation are described and justified. Ethical considerations are outlined and issues of reliability and validity addressed.

3.2 Real world research

Cohen, Manion and Morrison (2009) claim that research provides a way for people to make sense of the environment around them and the experiences they have had. They suggest that research offers a means for achieving this because it is:

- systematic and controlled
- empirical (i.e. based on experience, observation or experiment)
- self-correcting (i.e. careful methodology attempts to protect the researcher from making errors and public scrutiny of procedures and results ensures that incorrect results are identified).

Robson (2002) highlights the difficulties involved in research, like this study, which focuses on investigating people in real life situations. He points out the carefully controlled conditions associated with laboratory research are not feasible and suggests 'real world research', challenges the researcher to say something sensible about a complex messy situation (p.4).

3.2.1 Real world research: Evaluation studies

This study takes the form of an evaluation. Mertens (1998) describes evaluation as:

'the systematic investigation of the merit or worth of an object (program) for the purpose of reducing uncertainty in decision making.'

Mertens (1998, p.219)

In considering the purpose of evaluations, Robson (2002) highlights the difference between evaluations which focus on 'outcome' and those which focus on 'process'. He notes that traditional views of evaluation, evident from Merten's (1998) definition, focus on evaluating outcomes. Evaluating outcomes involves questioning how far an intervention or practice meets its objectives or goal. In contrast, process evaluations are concerned with answering 'how?' or 'what is going on?' questions. Robson (2002) suggests that process evaluation can provide a useful complement to outcome evaluation.

This study involves both outcome and process evaluation. It focuses on the outcome of the CoF intervention whilst it also attempts, through exploration of attributions, to consider the processes involved in the CoF intervention.

3.2.2 Ontology, epistemology and methodology

'Ontological assumptions give rise to epistemological assumptions; these, in turn, give rise to methodological considerations; and these, in turn, give rise to issues of instrumentation and data collection.'

Hitchcock and Hughes (1995, p.21)

As Hitchcock and Hughes (1995) explain, in order to determine the most appropriate method for a study, it is necessary to consider what ontological, and subsequent epistemological, standpoint is adopted by the researcher.

3.2.3 Conceptions of reality: ontology and epistemology

Ontology focuses on the nature of the social phenomena being studied (Cohen, *et al.*, 2009). Epistemology relates to the basis of knowledge, how it can be acquired and how it can be communicated. Mertens (1998) describes two key opposing paradigms to research, each with its own ontological and epistemological assumptions, – the positivist paradigm and the interpretative/constructionist paradigm. These will be briefly described before the ontological and epistemological standpoint adopted for this study is described.

3.2.4 The positivist paradigm

The positivist paradigm is based on the ontological assumption that one reality exists. Positivists view the researchers' job as discovering this reality. They believe that the social world can be studied in the same way as the natural world by manipulating one variable and considering the impact on another variable (Mertens, 1998).

Critics of the positivist paradigm question whether experimental methods appropriate to the order and regularity of the natural world can be applied to real world research given the complexity of human nature and behaviour.

3.2.5 The interpretative/constructionist paradigm

The constructivist paradigm rejects the positivist ontology that there is one objective reality and suggests, instead, that there are 'multiple, socially constructed realities' (Mertens, 2010, p.11). Knowledge is seen as personal, subjective and unique. Constructivist researchers, therefore, rely on methods which allow them to gain information, often in a more qualitative form, about the multiple perspectives or multiple realities – for example interviews.

The post-positivist paradigm rose out of tension between the positivist and the interpretative/constructivist paradigms (Robson, 2002).

3.2.6 The post positivist paradigm

Post-positivism maintains a commitment to the positivist idea that one reality exists but acknowledges that this reality will be known only 'imperfectly' and 'probabilistically' (Robson, 2002, p.27) due to the possible effects associated with the researcher. Post-positivists recognise that the values of the researcher, for example, are likely to impact on the outcome of the research. A post-positivist stance is adopted in this study in order to explore measurable features of applied contexts.

3.2.7 Mixed methods

In keeping with a post-positivist approach, this research focuses mainly on quantitative data but also includes some qualitative data. Although qualitative and quantitative methodologies are often associated with competing paradigms (quantitative methods traditionally with the positivism paradigm and qualitative methods with the interpretative/constructivist paradigm), Todd, Nerlich and McKeown (2004) suggest that the divide between the two approaches is more imagined than real.

Todd *et al.* (2004) propose that quantitative and qualitative approaches serve different but compatible purposes. They suggest that quantitative research involves measuring peoples' thinking or behaviour while qualitative methods involve gaining a better understanding of human thinking and acting.

This research involves both qualitative and quantitative methods on the grounds described by Todd *et al.* (2004). As noted earlier, this study involves an evaluation of outcomes and an evaluation of process. Assessing outcomes of the CoF intervention is well suited to quantitative methods while investigating how the CoF process works is more suited to the use of qualitative methods.

3.3 Methodological considerations for this study

3.3.1 Stakeholders

In planning the research, the following stakeholders were considered:

- The University of Nottingham
- The Development and Research (D&R) Collaborative Programme in Educational Psychology
- The Psychology Service which employed the researcher at the time of the study
- The Autism Outreach team based in the local authority in which the researcher worked at the time of the study
- The schools which participated in the study
- The researcher - a working trainee EP and doctoral student
- The wider community of educational and psychological research.

3.3.2 Consideration of stakeholder requirements

During the planning phase of the research, careful discussion with the University of Nottingham and the Psychology Service which employed the researcher ensured that the research met expectations set out by both parties.

3.3.3 Stakeholder requirements – The University of Nottingham

The University of Nottingham's participation in The Development and Research (D&R) Collaborative Programme in Educational Psychology required the study to take the form of intervention-based research which focused on outcomes for young people and included the use of the Strengths and Difficulties Questionnaire.

3.3.4 Stakeholder requirements – The Psychology Service and Autism Outreach Service

The Psychology Service was keen for the researcher to complete a piece of work which was relevant to the service. An evaluation of the CoF intervention fulfilled this purpose given the researcher's observation that EPs in the service talked a lot about using the intervention in their day to day practice. When this observation was shared with the Autism Outreach team during the planning phase of the project, the head of the service commented that he felt the CoF intervention was outdated and queried how often it was really used. In response to this query, all EPs in the local authority were asked to complete a short questionnaire during a team meeting.

3.3.5 The relevance of the CoF intervention to local authority EPs

14 EPs (out of a total of 20) completed a brief questionnaire about their use of and views on the CoF intervention. See appendix VI for a copy of the questionnaire. The findings are summarised below.

- When asked whether or not EPs had be involved in setting up a CoF intervention over the last three years:
    - Six EPs (43%) answered 'yes'
    - A further six EPs (43%) said they had provided information about the intervention but had not been directly involved in setting up a CoF
    - A further two EPs (14%) said they had facilitated setting up a CoF but not in the last three years.

  In total, therefore, 12 EPs (86%) had either used, or recommended, the CoF intervention as part of their practice in the last three years.
- When asked more specifically about their practice with pupils with autism, two of the six EPs who had recently facilitated setting up a CoF, had done so for a pupil with autism (14% of the total number asked).

- When asked whether they would consider being involved in setting up a CoF intervention for a pupil with autism in the future, 10 EPs (71%) answered 'yes'. A further two EPs (14%) said they would recommend the intervention for a pupil with ASD but felt their workload would not permit them to be directly involved in the setting up.

In summary, responses provided in the questionnaire confirmed that the CoF remains an intervention used, or recommended, by EPs in the local authority in which the researcher worked. Responses also suggested that a high proportion would consider setting up, or recommending, the intervention for pupils with autism.

3.3.6 Stakeholders and time scale

The time frame for the research was determined by the researcher working to complete a doctorate over three years. The research was undertaken during the second and third year of study while the researcher was working for a local authority as a trainee EP. In discussion with staff at the Psychology Service, it was agreed that the data collection would be completed during the summer term of the researcher's second year of study.

3.4 The study

The study aimed to address the following research questions:

3.4.1 Research questions

1. Does a CoF intervention have a positive impact on the social inclusion of pupils with autism in mainstream classrooms?
2. If the CoF is seen have a positive impact on the social inclusion of pupils with autism, which part of the intervention (the whole class meeting or the subsequent weekly circle meetings) is associated with change?
3. Is the CoF intervention associated with a change in focus children's rating of happiness in school?

4. Is the CoF intervention associated with a perceived change in focus children's behaviour?

5. Is any change observed associated with a change in attributions made by peers about the focus child's behaviour?

3.4.2 Study Variables

The independent variable was the CoF intervention.

The dependent variables were:

- The social inclusion of the focus children
- The happiness of the focus children at school
- Adult perception of the focus children's behaviour
- Peer attributions about a focus child's behaviour

3.4.3 Study design

The study employed a single case experimental design. Five cases were involved.

3.4.4 Rationale behind the design employed – single subject research

While many researchers make inferences about the relationship between variables by comparing aggregated data from groups of individuals, the utility of single subject research has been recognised by many - Barlow and Knock (2009), Horner, Carr, Halle, McGee, Odom and Wolery (2005), Kratochwill, (1977), Lundervold and Belwood (2000) and Perrin (1998). Skinner (1966) describes the nature of idiographic research strategies saying:

'... instead of studying a thousand rats for one hour each or a hundred rats for ten hours each, the investigator is more likely to study one rat for a thousand hours'.

Skinner (1966, p.21)

Single subject research strategies were identified as well suited to this project because of its focus on a small number of pupils with autism. Small participant numbers were anticipated in the planning phase given the chosen inclusion criteria for the target population and nature of the intervention. Horner *et al.* (2005) explains that single subject research strategies are particularly appropriate to research, which like this study, involves low incidence or heterogeneous populations for whom comparisons between groups would not be appropriate

3.4.5 Designing the study: Using a single case experimental design

'Single case (N=1) designs offer a scientifically credible means to objectively evaluate practice and conduct clinically relevance research in practical settings.'

Lundervold and Belwood (2000, p.92)

Single case experimental designs involve the continuous assessment of some aspect of human behaviour over a period of time and within separate phases of a study (Cohen *et al.* 2008). In the planning phase of this study, McCormick's (1995) description of the following key features of a single case experimental design was used to guide the study design:

- The personalised evaluation of data
- Standard measurement procedures
- The establishment of a baseline
- The manipulation of variables
- Repeated measurement throughout an intervention
- Assessment of maintenance
- Analysis of visual data displayed in graphs.

A single case experimental design was chosen because it offered an experimental design which focused on the individual and which, as Lundervold

and Belwood (2000) note, is a recognised means of evaluation. A single case experimental design was also identified as well suited to the research's purpose - specifically research question two - as it allowed any changes in the dependent variable during the period of intervention to be tracked.

3.4.6 The use of an AB design

The study involved an AB design. Consistent with the guidance provided by McCormick (1995), data was collected during a baseline phase (A) and an intervention phase (B). The baseline phase allowed the researcher to gather information about the natural behaviour under study (Barlow, Hersen and Nock, 2009) and served a predictive function in that it was presumed to predict how the behaviour would continue in the absence of the intervention (Rizvi and Nock, 2008). The intervention phase allowed any changes that occurred following the introduction of the intervention to be observed. Barlow *et al.* (2009) note that 'with some major reservations' changes observed between the phases can be 'attributed to the effects of treatment' (p.137).

3.4.7 Alternative single-case experimental designs considered

The 'B design', which involves the absence of a baseline phase (A), was discounted on the grounds that this design does not allow any observed changes in behaviour over time to be attributed to the intervention (Kazdin, 1978).

The 'ABA' and 'ABAB' designs were discounted on the grounds that the removal of the intervention and a return to a baseline phase these designs involve was not possible in this study. As the CoF intervention aims to alter thinking and understanding, the researcher acknowledged that the effect of the intervention could not be fully removed.

In acknowledging the 'major reservations' (Barlow *et al.* 2009, p.137) associated with assuming changes in an AB design are the direct result of the intervention

(discussed further when issues of reliability and validity are considered), a multiple baseline design was initially planned for this study. This design involves the introduction of the intervention at different points in time to different baseline conditions (Robson, 2002). Initially a multiple baseline across participants design was planned (see appendix VII for a timeline). This would have involved varying the length of the baseline (A) phase for each case. If a change in the case to which the intervention was applied (but not the other cases at that time) was observed, the researcher would have had a stronger case for arguing a causal relationship between the intervention and the change observed.

Due to difficulties experienced by the researcher and schools in gaining consent from the parents of the pupils involved, the planned timeline was unsuccessful and an AB design was adopted.

3.4.8 The length of phase A (baseline)

In planning the length of phase A, the importance of ensuring a baseline phase which is long enough to obtain a stable picture was recognised alongside the ethical issues associated with extending a baseline phase for longer than necessary (Barlow and Hersen, 1984). The researcher's own timescale and length of the summer term provided further practical restrictions on the length of the baseline phase. Barlow and Hersen (1973) suggest that a minimum of three measures in the baseline phase is appropriate. The initial plans for a multiple baseline design involved baseline phases of three, four, five, six or seven weeks. In practice, baseline data was collected for three weeks (one case) or four weeks (four cases).

3.4.9 The length of phase B (intervention)

In planning the length of the intervention phase, previous evaluations of the CoF intervention and the researcher's own time scale were considered. While Bozic *et al.* (2002) and Fredrickson *et al.* (2005) describe a six week intervention period, Fredrickson *et al.* (2005) recommend a six to ten week period. With this

guidance, and practical limitations on the researcher's timescale, phase B was eight weeks.

3.4.10 Additional data

In addition to continuous measures obtained during phase A and phase B, some additional data was gathered at two points in time (at the start of phase A and at the end of phase B). The collection of 'pre' (before the intervention) and 'post' (after the intervention) data in a single case experimental designs has been documented by many – for example, McClean, Grey and McCracken (2007) and Campbell, Wilson, McCann, Kernahan and Rogers (2007).

While the researcher acknowledged the limitations of measures taken at two points in time only (discussed further when issues of reliability and validity are considered), the repeated measurement of all dependent variables over time was not felt appropriate for practical reasons. The data collected at two points in time, therefore, served to provide further information about any changes illustrated by the continuous measures obtained.

3.5 Participants

3.5.1 Focus pupil inclusion criteria

The target population of the study was pupils who met the following five inclusion criteria:

1. The pupil has a diagnosis of an Autistic Spectrum Disorder.
2. The pupil had been identified by an EP or Autism Outreach teacher as someone who would benefit from a CoF intervention.
3. The pupil is part of a mainstream classroom.
4. The pupil is in Key Stage Two (aged seven, eight, nine or ten).
5. The pupil attends a school in the Local Authority in which the researcher was working.

3.5.2 Rationale for inclusion criteria one and two

The first two criteria relate to the purpose of the study – i.e. the research's aim to evaluate the CoF intervention used with pupils who have a diagnosis of autism.

3.5.3 Rationale for inclusion criterion three

The third criterion was identified in order to focus on the inclusion of pupils with autism within mainstream schools. The researcher hoped to focus on the CoF's potential to offer a response to the increasing expectation for pupils with autism to be taught in mainstream classes.

The implementation of the CoF within specialist provision was considered but discounted. The researcher's experience of teaching in a special school, and further discussion with heads of two specialist provisions, suggested that implementing the CoF within a specialist setting could be difficult in terms of the level of understanding, capacity to empathise and problem solving skills required by classmates.

3.5.4 Rationale for inclusion criterion four

The fourth criterion was identified in an attempt to narrow the age range with which the CoF was evaluated. The researcher acknowledged that the primary classroom provided a natural, consistent peer group in which the CoF could be easily implemented. Although Newton and Wilson (2005) do not specify a minimum age for which the CoF is appropriate, to ensure that the classmates involved had the level of understanding required for the whole class meeting and the level of problem solving skill required for the circle meetings, the researcher focused specifically on pupils in Key Stage Two.

3.5.5 Rationale for inclusion criterion five

The final criterion was chosen for practical reasons. As the researcher worked with local stakeholders, participants were identified within the researcher's Local Authority.

3.5.6 Participant identification and selection: focus pupils

Focus pupil participants were identified by Autism Outreach teachers or EPs. The researcher presented a summary of the research's aims during an Autism Outreach team meeting and an EP team meeting and requested that teachers and EPs identify pupils they were aware of who met the inclusion criteria. The researcher highlighted that the CoF, in accordance with the usual features of the approach, involved talking about focus child without him/her being present. It was suggested, therefore, that a CoF was most appropriate for pupils whose additional needs were already apparent to their classmates and which the CoF would acknowledge, rather than point out.

Initially, one participant was identified by an Autism Outreach teacher and eight participants were identified by EPs. Of these nine pupils, two were discounted because they did not meet the inclusion criteria (one was in Year Two and one attended a specialist unit for pupils with autism within a mainstream classroom). Parental consent was sought for the remaining seven pupils (see ethical considerations for further information about consent procedures). All parents gave their consent. Next, consent from the focus pupils was sought. Six of the seven pupils agreed to be part of the project and have a CoF set up for them. At this stage, one of the six potential focus pupils changed schools. As the CoF intervention relies on the classmates having spent some time with the focus child, in discussion with parents and the child, this pupil's participation in the study was discontinued. In total, therefore, five focus pupils were identified for the study. All of these five pupils had been identified by their school's link EP.

The sample of focus pupil participants could be seen as a convenience sample. The sample used fits Robson's (2002) description of a convenience sample because pupils selected were the 'the nearest and most convenient participants' (p.265) identified. The use of a convenience sample means that it is not possible to assume that the focus pupils are representative of the target population (i.e. all those who meet the inclusion criteria).

3.5.7 Participant selection and identification: other participants

In addition to the focus pupils who met the criteria specified, the study involved focus pupils' peers, the focus pupils' teachers and the adults involved in running the CoF. Please see ethical considerations for further information about consent procedures related to these participants.

3.5.8 Number of participants

The following table provides the number of participants involved in the study:

Table 3.1: Number of participants involved in the study

Participants	Number of participants (*N*=)
Focus children	5
Classmates	127
Teachers	5
Circle facilitators	5
Total	**142**

3.5.9 Participant characteristics

For each case, characteristics of the focus child, their classmates, their teachers and the circle facilitator are described below.

Case A

Focus child (child A)	The focus child involved in case A was aged nine at the start of the project. Child A has a diagnosis of autism. School staff described child A's main area of need as his difficulty developing social skills and building a friendship group. They noted that child A had a 'tendency to show anger' in situations he finds difficult. They explained that child A has had a very difficult year following the death of his father. Child A has received involvement from the Youth Inclusion Support Programme (YISP) in the form of a counsellor.
Classmates	23 of child A's classmates agreed to participate in the study (10 boys and 13 girls). Their parents gave consent for them to be part of the study. One classmate chose not to participate in the study. His parents had not provided consent either.
Class teacher	Child A's teacher was female. She worked four days a week. She had been working directly with child A since the start of the academic year (i.e. for approximately eight months).
Circle facilitator	The circle facilitator was chosen by the headteacher. The circle facilitator was female. She worked as a lunchtime supervisor and on occasional mornings and afternoons to support pupils with additional needs within lessons. She had previously been involved in setting up and running small group work sessions. At the start of the project, the circle facilitator reported that she knew child A but had not previously worked directly with him.

Case B

Focus child (child B)	The focus child involved in case B was aged ten at the start of the project. Child B has a diagnosis of Asperger's syndrome. School staff described child B's main areas of need as his

	difficulty developing friendships, maintaining concentration and reacting calmly when anxious, frustrated or cross.
Classmates	All 25 of child B's classmates agreed to participate in the study (12 boys and 13 girls). Their parents gave consent for them to be part of the study.
Class teacher	Child B's teacher was male. He worked full time as child B's class teacher. He had been working directly with child B since the start of the academic year (i.e. for approximately eight months).
Circle facilitator	The circle facilitator was chosen by the class teacher. The circle facilitator was female. She worked full time in child B's class, primarily with child B. She had previous experience running small group work sessions.

<u>Case C</u>

Focus child (child C)	The focus child involved in case C was aged nine at the start of the project. Child C has a diagnosis of autism. School staff described child C's main areas of need as his difficulties with social interactions (particularly eye contact) and controlling his emotions. Child C has a statement of special educational needs which specifies 25 hours of support from a learning support assistant.
Classmates	26 of child C's classmates agreed to participate in the study (13 boys and 14 girls). Their parents gave consent for them to be part of the study. Five pupils choose not to participate in the study (their parents had provided consent).
Class teacher	Child C's teacher was female. She worked part time (three days) as child C's class teacher. She had been working

	directly with child C since the start of the academic year (i.e. for approximately eight months).
Circle facilitator	The circle facilitator was chosen by the school SENCo. The circle facilitator was female. She worked full time as a learning support assistant in child C's class, primarily with child C. She had previous experience running small group work sessions.

Case D

Focus child (child D)	The focus child involved in case D was aged ten at the start of the project. Child D has a diagnosis of autism. School staff described child D's main areas of need as difficulties engaging in interactional play with other children, difficulties with unstructured time and difficulties with noise levels. Child D has a statement of special educational needs which specifies 25 hours of support from a learning support assistant.
Classmates	All 30 of child D's classmates agreed to participate in the study (11 boys and 19 girls). Their parents gave consent for them to be part of the study.
Class teacher	Child D's teacher was female. She worked full time as child D's class teacher. She had been working directly with child D since the start of the academic year (i.e. for approximately eight months).
Circle facilitator	The circle facilitator was chosen by the school SENCo. The circle facilitator was female. She worked full time in child D's class, primarily with child D. She had previous experience running small group work sessions.

Case E

Focus child (child E)	The focus child involved in case E was aged ten at the start of the project. Child E has a diagnosis of autism. School staff described child E's main areas of need as difficulties with social interaction (particularly interrupting conversations and making noises), difficulties developing his emotional intelligence and presentation of inappropriate and obsessional behaviour.
Classmates	All 23 of child E's classmates agreed to participate in the study (15 boys and 8 girls). Their parents gave consent for them to be part of the study.
Class teacher	Child E's teacher was male. He worked full time as child E's class teacher. He had been working directly with child E since the start of the academic year (i.e. for approximately eight months).
Circle facilitator	The school SENCo identified herself as the circle facilitator. She had previous experience running small group work sessions. She had not worked directly with child C before but was aware, in her role as SENCo, of his needs.

3.5.10 Summary of participants

Focus children

All focus children involved in the study were boys with a diagnosis of an autistic spectrum disorder (four a diagnosis of autism and one with a diagnosis of Asperger's syndrome). Two focus pupils had a statement of special educational needs.

Classmates

The vast majority of classmates invited to be involved in the project gave their consent (a total of 127 pupils out of the potential 133 classmates). Of the classmates involved, 61 were boys and 66 girls.

Teachers

Three of the five teachers involved in the study had full time responsibility for their class. Of the two teachers who shared class responsibility with a second teacher, one worked four days a week and one worked three days a week. Three of the five teachers were female; two were male.

Circle facilitators

Four of the circle facilitators were learning support assistant assistants (three worked primarily to support the young person identified as the focus child, one worked a dinner supervisor). One of the circle facilitators was the school's SENCo. All circle facilitators were female and had previous experience running sessions with groups of children.

3.6 The intervention

Please see appendix VIII for a detailed description of each part of the CoF intervention implemented. In summary, the CoF intervention followed the guidance provided by Newton and Wilson (2005) and described in the literature review. One key amendment was made to the CoF intervention described by Newton and Wilson (2003). This involved the addition of step 8 to the whole class meeting – i.e. discussion about the nature of the focus child's difficulties.

Based on the description provided by Fredrickson *et al.* (2005), and Gus (2000), the researcher explained that there were some ways in which the focus child thinks differently and their brain works differently. The researcher explained that this meant that the focus child finds some things harder than other children - particularly making and keeping friends, understanding how other people think

and feel, understanding what people say and how they say it and adapting when things change. Links between this description of the focus child's needs and the difficulties peers had identified at the start of the session were made. The word autism was not included in the description. The researcher's decision not to use the term autism in this study was because none of the focus children identified to be part of the project was aware of their diagnosis. Discussion with classmates about their diagnosis, therefore, was not appropriate in ethical terms.

This amendment to the usual CoF procedure was discussed by the researcher with EP and co-author of Newton and Wilson (2003), Derek Wilson. Derek Wilson confirmed that the adaptation described was an appropriate amendment which tailored the CoF to supporting a focus child with autism.

3.6.1 Delivery of the CoF intervention

The whole class meetings and first circle meetings were delivered by the researcher. In addition to using the guidance provided by Newton and Wilson (2003), the following activities supported the researcher's delivery of the intervention:

- Training undertaken at the University of Nottingham on the delivery of the CoF intervention (provided by EP Julia Hayes, Inclusion Creativa)
- Discussion with Derek Wilson (EP and co-author of Newton and Wilson, 2003)
- Discussion with a number of EPs who had previously delivered the intervention.

The weekly circle meetings were delivered by a member of school staff. Each circle facilitator was provided with clear written guidelines about the format of the circle meetings and information about the facilitator role (see appendix VIII). The researcher worked with each circle facilitator to talk through this guidance and emphasise the idea that the circle facilitator's role was to guide the children

in generating their own ideas rather than to add their own. All circle facilitators were provided with the researcher's telephone number and offered phone supervision.

3.6.2 Piloting the CoF invention

In her role as a trainee EP with case work responsibilities, the researcher set up four pilot CoFs. Three of these CoFs were set up for pupils who did not have a diagnosis of autism (the traditional CoF procedure was used). One CoF was set up for a pupil who had a diagnosis of autism (amendments described were piloted).

Piloting the intervention allowed the researcher to establish the following:

- A clear procedure for introducing and explaining the CoF intervention to school staff and parents.
- Answers to questions and concerns likely to be raised by those involved.
- Written guidance to support the circle facilitators.
- Confidence and fluency delivering the whole class meeting and the initial circle meeting.

3.6.3 Intervention integrity

The integrity of the CoF intervention was considered a potential threat to the study's validity (discussed further when issues of reliability and validity are considered). In order to reduce this potential threat, the researcher delivered all the whole class and initial circle meetings and followed standard procedures.

In order to reduce the potential threat to the integrity of the parts of the CoF intervention which were not delivered by the researcher, circle facilitators were provided with guidance and asked to complete the 'treatment integrity checklist' (created by the researcher) in order to assess the degree to which the circle facilitators followed the guidance provided. The researcher observed the third

circle meeting and also completed the checklist. The treatment integrity checklist describes the key features of the weekly CoF meeting (see appendix IX) and was constructed with a fellow trainee EP who was also completing her doctoral study on the CoF intervention. In order to validate that the checklist accurately reflected the features of the CoF intervention, the checklist was reviewed by EP colleagues with experience and knowledge of the CoF intervention (Julia Hayes and Derek Wilson).

The outcomes from the treatment integrity checklists were reviewed in order to assess the treatment integrity. With 17 identified criteria for each session, the researcher's observations from one session had a possible total of 17 points. Over the course of seven sessions, the circle facilitators' observations had a possible total of 119. The results, along with associated percentages are presented below.

Table 3.2. Results of the CoF treatment integrity checklist completed by circle facilitators and the researcher

Case	Circle facilitator ratings		Researcher ratings	
	Number of items met	% fidelity	Number of items met	% fidelity
A	117	98%	17	100%
B	110	94%	15	88%
C	119	100%	16	94%
D	117	98%	17	100%
E	119	100%	16	94%

Reviewing the ratings from the treatment integrity checklists completed suggests that the circle facilitators did generally implement the weekly CoF meetings in the prescribed manner. In considering these responses, however, the possibility that the circle facilitators may not have accurately completed the

treatment integrity checklist, and may have wanted to satisfy the researcher's aims for example, must be acknowledged.

Where deviation from the guidance was observed, this related to the use of alternative warm up exercises (where circle facilitators felt the activities described by the researcher were too time consuming) and circle facilitators adding their own ideas to the circle. Where circle facilitators reported they had added their own ideas to the circle, or this was observed by the researcher, the researcher discussed the importance of allowing the circle members to generate their own ideas with the circle facilitator. For the circle facilitator working with focus child B, a second observation and further discussion was provided in an attempt to support the circle facilitator with the difficulties she described, and the researcher observed, in facilitating the problem solving process without adding her own ideas.

3.7 The measures used

The study involved the following four dependent variables:

- The social inclusion of the focus children
- The happiness of the focus children at school
- Perceptions of the focus children's behaviour
- Peer attributions about one focus child's behaviour

The rationale for selecting each variable, the measure used and the administration and scoring procedures related to the each measure are described below.

3.7.1 Measuring the dependent variable 1: The Social Inclusion Survey (SIS)

The Social Inclusion Survey (SIS), Fredrickson and Graham (1999), was chosen to measure the focus children's level of social inclusion. The SIS is a

sociometric assessment which looks at how well a pupil is accepted by peers. It is intended for use with pupils aged seven and above.

The SIS consists of two questionnaires – The LITOW (Like to Work) questionnaire and the LITOP (Like to Play) questionnaire. Each questionnaire contains a space for the names of each of the pupils in the class. Beside each space four circles are presented - one containing a question mark and the others containing a smiling, a sad and a neutral face. On the LITOW (Like to Work) questionnaire pupils are asked to tick a face which shows how much they like to 'work with' each of the pupils listed. On the LITOP (Like to Play) questionnaire pupils are asked to tick a face which shows how much they like to 'play with' each of the pupils listed. Like Fredrickson *et al.*'s (2005) study, this study focused on perceptions of the focus child in a social situation so involved the LITOP questionnaire. Please see appendix X for a copy of the SIS.

3.7.2 Rationale for employing the SIS

As the authors of the SIS note, the questionnaire is a quick, easy and unobtrusive way of gaining information about a pupil's level of social acceptance without singling the pupil out. It is well suited to evaluating strategies put into place to support pupils identified as socially 'rejected'. Unlike other measures of social inclusion (for example, asking pupils to nominate three peers they would most/least like to play it), the SIS involves gaining a rating about a particular child from every peer. The standardised nature of the SIS ensures a level validity and reliability can be guaranteed (see Fredrickson and Furnham, 1998, for further details).

3.7.3 Administration and scoring the SIS

The SIS was administered on a whole class basis weekly. It was administered by the researcher on the first occasion and by class teacher on subsequent occasions. The SIS administration script was read to participants. Teachers were asked to administer the SIS on the same day, at the same time, each

week. The first SIS completed by classmates in the intervention phase was administered after the whole class meeting but before the initial circle meeting. The second SIS completed by classmates in the intervention phase was administered one week after the whole class meeting and initial circle meeting. Subsequent SISs were completed at weekly intervals throughout the period of the weekly circle meetings.

To score the SIS, the numbers of smiling, sad and neutral faces ticked by classmates in relation to the focus child were tallied for each set of questionnaires completed each week. Guidelines provided by Fredrickson *et al.* (2005) were then used to calculate the focus child's level of acceptance and rejection. The focus child's level of social acceptance was calculated by dividing the number of smiling faces by the total number of sad, happy and neutral faces. The focus child's level of social rejection was calculated by dividing the number of sad faces by the total number sad, happy and neutral faces.

3.7.4 Considerations about how to analyse SIS scores

Disagreement about the analysis of data from single case experimental designs is well documented (Ballard, 1983; Crosbie, 1993; Houle, 2009; Kazdin, 1978; Kratochwill, 1977; Parker and Brossant, 2003; Perrin, 2005; Rizvi and Nock, 2008; Scruggs, Mastropieri and Casto, 1987; Urwin and Ballinger, 2005). In order to determine how best to analyse levels of social inclusion obtained from the SIS, a review of single case experimental design data analysis procedures was conducted. A brief summary of key procedures is provided below.

3.7.5 Visual analysis

Visual analysis of single case experimental designs involves the graphic presentation of data and a visual search for patterns of change. Perrin (1998) and Kazdin (1984) describe three visual principal change factors which can be indicative of change related to the introduction of an intervention. Perrin (1984) defines these as follows:

- **Variability**: the degree of fluctuation in data points.
- **Trend**: the direction in which data points are progressing. Trend may be accelerating or decelerating.
- **Level**: the disparity between data points in one phase and those in another. An abrupt rise or fall in data points indicates a change in level.

3.7.6 Limitations of visual analysis

While visual analysis dominates publication (Parker and Brossant, 2003; Parker, Brossant, Callicott, Long, Garcia de Alba and Baugh, 2005; Parker, Shannan Hagan-Burke and Vannant, 2007), limitations of the approach must be acknowledged.

Parsonson and Baer (1978) caution that findings from visual analysis should be sufficiently tangible so that 'no reasonable person would dispute the outcome' (p.119). Kratochwill (1978) notes, however, that where baseline data includes trend or excessive variability, visual analysis is difficult. Given these complications, it seems unsurprising that many researchers have reported low or modest levels of agreement between researcher's conclusions about the same graphs (De Prospero and Cohen, 1979; Harbst, Ottenbacher and Harris, 1991; Owen-DeSchryver's, 1997).

Ballard (1983) suggests that the most challenging argument against visual analysis is that it is inappropriate where autocorrelation is a property of the data. Autocorrelation is the correlation between data points separated by different time intervals (Kazdin, 1976). While Houle (2009) reports conflicting findings about the extent to which autocorrelation occurs in behavioural data, Perrin (2005) warns,

'what appears to be a clear pattern of changes across treatment, using visual analysis alone, may actually have been quite predictable because of inherent correlation.'

Perrin (2005, p.451)

As Barlow *et al.* (2009) note, underestimating the impact of autocorrelation increases the possibility of a type one error (the chance that the null hypothesis is rejected when it should be accepted) – i.e. that a natural trend in the data is misinterpreted as the impact of an intervention.

3.7.7 Statistical analysis

Parker, Hagan-Burke and Vannest (2007) propose that statistical analysis in single case experimental designs fits with the increasing emphasis, in the world of education and psychology, on reporting intervention efficacy with objective and statistically reliable outcomes. Statistical analysis is seen as a particularly helpful tool where complex patterns of the data make visual analysis difficult (Lundervold and Belwood, 2000).

Although the appeal of statistical analysis is clear, implementing meaningful statistical analysis is plagued with difficulties. There is no general consensus as to the appropriate statistical approach for the analysis of data obtained from a single case (Lundervold and Belwood, 2000) and recognition that different approaches to analysis provide different outcomes (Norbakhsh and Ottenbacker, 1994). Kazdin (1978) notes that as statistical techniques for single case experimental designs are not taught to graduates and statistical procedures are rarely published (Parker and Brossant, 2003), a number of inappropriate applications of statistical tests have already entered the literature.

3.7.8 Statistical analysis techniques

In an attempt to understand whether, and what, statistical analysis would be appropriate for the study, a number of potential statistical procedures were investigated.

Conventional t and F tests

T and F tests are usually used for between-group analysis (Barlow *et al.*, 2009). When applied to single case experimental designs, they involve comparing observations in each phase of the experiment. As many note (Houle, 2009; Jayaratne, Tripodi and Talsma, 1988), the use of these tests is problematic because data from single case experimental designs violates the assumptions associated with these procedures - the independence of data and normal distribution of data.

Interrupted time-series analysis (ITSA)

Interrupted time-series analysis (ITSA) is a technique which involves controlling a variety of potential types of autocorrelation before assessing change (Barlow *et al.*, 2009). The procedure was identified as not suitable for this study because it requires a large number of data points (at least 50, Houle, 2009)

Percentage of non-overlapping data (PND)

This method of analysis, developed by Scruggs *et al.* (1987), involves calculating the number of data points in the treatment phase which exceed the highest data point in the baseline phase. It is criticised for comparing data in the intervention phase with a single point in the baseline phase which, unless a stable baseline with no variability and no trend is established, is problematic (Scruggs and Mastropieri, 1996).

Effect size

Statistical calculation of effect size aims to provide an objective measurement of the strength of a change (Manolov and Solanas, 2008). Manolov and Solanas

(2008) explain, however, that the possible presence of autocorrelation has influenced the lack of consensus about the optical effect size calculations in single case research. Manolov and Solanas (2008) report that the most frequently used formulas, such as standardized mean differences (eg. Cohen's d, Hedge's g) and correlations (n^2 and R^2), were developed for group designs and focus solely on the average level in the baseline and treatment conditions. Cohen (1998) reports additional difficulties associates with the interpretation of effect size by explaining that as effect sizes are highly dependent on the analytic technique used, interpreting the significance of outcomes obtained is difficult.

3.7.9 Analysis of SIS scores

After reviewing potential analysis techniques, visual analysis was identified as the most appropriate and meaningful approach for the analysis of SIS outcomes in this study. The researcher identified that visual analysis would allow consideration of the impact of the intervention over time on acceptance scores, rejection scores and the relationships between acceptance and rejection scores – i.e. consideration of whether there was any change after the introduction of the CoF intervention and whether any change was maintained over time. Visual analysis was used in this way by Fredrickson *et al.* (2005) to analyse data from four points in time. Graphs for visual analysis were constructed using Microsoft Excel (as recommended and described by Carr and Burkholder, 1998).

In accordance with guidance provided by Kazdin (1984) and Perrin (1984), change factors for each graph were considered through visual analysis of the variability, level and trend of lines of acceptance and lines of rejection in phase A and phase B. In addition to using narrative descriptions, in an attempt to provide an element of objectivity to the analysis, quantitative descriptions of variability, level and trend and the mean acceptance and rejection ratings for each phase were added.

Guidance provided by Harbst *et al.* (1991) was used to quantify variability, level and trend. Standard deviation was used as a measure of variability (i.e the degree of variation from the mean). This was calculated using Microsoft Excel. The slope of the trendline (the least squares linear regression) was used as a measure of trend. This was only quoted where a visible trend was observed. The slope of the trendline was calculated using Microsoft Excel by inserting a trendline onto each line in each phase and considering the slope reported in the trendline's equation. The change in level was calculated as the difference between the last data point in phase A and the first data point in phase B.

The use of statistical analysis, considered in addition to visual analysis, was discounted for a number of reasons. Visual inspection of the study's graphs revealed variability in the baseline phases which meant that the calculation of the PND was not identified as an appropriate. Visual inspection of the study's graphs also revealed further variability and trend in the intervention phase which meant that effect size calculations were not felt to be meaningful. Overall, the researcher acknowledged that any numerical index associated with change in acceptance or rejection levels would not meaningfully provide evidence of how the acceptance and rejection level changed during the intervention phase and how the acceptance and rejection levels related to each other. Visual analysis was deemed to offer a fuller, clearer picture than any statistical analysis.

3.7.10 Measuring the dependent variable 2: The SchoolChildren's Happiness Inventory

The SchoolChildren's Happiness Inventory (SCHI), Ivens (2007), provides a measure of subjective well-being based on a child's experience in school over the previous week. The questionnaire is designed to be completed by children aged eight to 15 and consists of a 30 item scale containing somatic, affective, social and work-related items (15 positive and 15 negative). Pupils are asked to rate whether they 'agree a lot', 'agree a little', 'disagree a lot' or disagree a little' in relation to each item. Please see appendix XI for a copy of the SCHI.

3.7.11 Rationale for employing the SCHI

The SCHI was chosen as the most appropriate measure for the study because it focuses specifically on subjective feelings associated with environmental influences. As the questionnaire's author notes, this makes the SCHI useful for assessing a change in environmental variables, such as the impact of an intervention. Alternative variables which relate to the focus children's social experience of school, for example feelings of loneliness and isolation, were considered but discounted on the basis that if a decrease in these variables was observed, this could not be assumed to be a positive change for the focus child (as discussed in the literature review, Daniel Tammet, 2006; Bottroff, 1998; Luke Jackson, 2002; Marc Fleisher, 2001). The questionnaire's simplicity, and alterative administration procedure, meant that it is suitable for pupils with a wide range of needs. The standardised nature of the SCHI ensures a level of validity and reliability can be guaranteed (see Ivens, 2007, for further details).

3.7.12 Administration and scoring of the SCHI

An adult familiar to the focus child was asked to complete SCHI with the focus child one week before the start of the CoF intervention. The same adult was asked to complete SCHI with the focus child one week after the end of the CoF intervention.

The adult was given the instructions provided by the SCHI's author. They were asked to use either the standard or alternative administration procedure as appropriate. Instructions included asking the focus child to complete a number of sample items to ensure that they had a good understanding of the task. In accordance with the guidance provided by Ivens (2007), each item on the questionnaire was scored between one and four. Total scores were calculated.

3.7.13 Measuring the dependent variable 3: The Strengths and Difficulties Questionnaire (SDQ)

The Strengths and Difficulties Questionnaire (SDQ), Goodman (1997), is a widely used brief behavioural screening questionnaire. Three versions of the SDQ are available – one for completion by parents/carers or teachers of pupils aged three or four, one for completion by parents/carers or teachers of pupils aged 4-16 and a self report version for 11-16 year olds. This study involved the questionnaire for parents/carers or teachers of pupils aged 4-16. It contains 25 items which the adult is asked to rate as 'not true', 'somewhat true' or 'certainly true' in relation to a child's behaviour. The items relate to psychological attributes on five subscales: prosocial behaviour, conduct problems, hyperactivity and emotional problems. Please see appendix XII for a copy of the SDQ.

3.7.14 Rationale for employing the SDQ

The SDQ was identified as a simple, quick measure of the focus child's behaviour. As the questionnaire covers a range of psychological attributes it was identified as suitable for gaining information about the wide range of strengths and difficulties which may characterise the focus children. The SDQ was chosen in order to provide data which could be aggregated as part of the Development and Research (D&R) Collaborative Programme. The standardised nature of the SDQ ensures a level of validity and reliability can be guaranteed (see Goodman, 1997, for further details).

3.7.15 Administration and scoring of the SDQ

The focus children's class teachers and the circle facilitators were asked to complete the SDQ one week before the start of the CoF intervention and one week after the end of the CoF intervention. Goodman's (1997) standard instructions were provided at the top of each questionnaire.

Each questionnaire was scored by inputting responses online (www.sdqscore.org). This generated a score for each of the five scales and a 'total difficulties' score.

3.7.16 Measuring the dependent variable 4: The Coding Scheme of Perceived Causality

The Coding Scheme of Perceived Causality (CSPC), Elig and Frieze (1979), is an instrument used for analysing open-ended or free-response data generated by asking pupils why they believe success or failure events have occurred. The standard procedure involves presenting a child with scenarios and asking why they think events in the scenarios happened. The authors note, however, that alternative procedures, involving asking a child to recall real situations, and then think about why events happened, can be used. The CSPC describes how responses can be coded along three dimensions - perceived location of a cause (internal, external or mutual), perceived stability of a cause (stable or unstable) and perceived intentionality (intentional, unintentional or mediate). For this study, pupils were asked specifically to recall situations involving the focus child and responses were coded along the dimension of perceived location of cause.

3.7.17 Rationale for employing interview and using the CSCP

Identifying a means of exploring peer attributions about a focus child's behaviour posed a number of challenges. Many measures of attributions identified by the author involve a child considering attributions about events they had, or could, experience themselves rather than events involving another child – for example, the 'Children's attributional style questionnaire' (Thompson, Kaslow, Weiss and Nolen-Hoeksema, 1998) and the 'Things that Happen to Me' questionnaire (Dell Fitzgerald and Asher, 1987)

Given that the researcher aimed to focus on attributions made specifically about the focus child's behaviour, the CSCP was identified as a tool which could be adapted for this purpose. The coding of responses along the dimension of

perceived location of the cause fit the study's aim to explore whether attributions changed from internal to external. Please see appendix XIII for details of the interview conducted using an adapted version of the CSPC.

3.7.18 Interview procedures and the use of CSPC

One focus child, child E, was randomly selected to be the focus of a series of interviews. Interviews were undertaken with six of focus child E's classmates. In order to consider the attributions of those most likely to be affected by the intervention, the pupils who made up child E's CoF group were involved (these were predicted by the teacher before the set up of the CoF intervention).

All six pupils were individually interviewed by the researcher one week before the CoF was set up and one week after the final circle meeting. Each interview involved asking the child to recall a recent situation in which things had gone well/ not so well for the focus child. The child was encouraged to talk about situations which involved the focus child in a social, rather than academic, situation in order to focus on attributions most likely to be affected by the CoF intervention. The child was then asked to talk about why they thought the situations they described had happened.

All interviews were recorded using a dictaphone and then transcribed. Excerpts from each interview which related to the perceived cause of the focus child's behaviour in an unsuccessful situation were extracted. These were coded by the researcher along the perceived location of cause dimension- i.e. coded as 'internal', 'external' or 'mutual'. Inter-rater reliability was established by asking an EP colleague to code all excerpts in the same way. Using guidance provided by Robson (2002) on the calculation of Cohen's Kappa (K), inter-rater agreement of 0.42 was calculated. Fleiss (1981) equates Cohen Kappa ratings of 0.4 - 0.6 as 'fair'

Given the researcher's adaptations to the CSPC interview procedure, piloting the interview format with children was identified as desirable. The pupils

involved in the pilot CoFs were considered to be involved in this piloting. The researcher felt that for the three pupils involved in the pilot CoFs who didn't have a diagnosis of autism, questions about the reasons for their behaviour (when there was not the possibility of an external cause of autism) may be particularly sensitive and therefore seem undesirable to the focus child's parents and teachers. The pilot CoF for a pupil with a diagnosis of autism was set up before the interview procedure had been finalised.

As an alternative to piloting the CSPC interviews with children, the researcher met with four primary school teachers during the planning phase to share the interview procedure and refine the wording of questions. Discussion involved identifying prompting questions which teachers felt would be likely to support pupils who might find the interview questions difficult.

3.8 Ethical considerations

In planning and undertaking this research, the researcher ensured that the design and implementation of the study adhered to the professional and ethical standards required of practising EPs and researchers. The following published guidelines were considered:

- BPS *Guidelines for Minimum Standards of Ethical Approval in Psychological Research* (BPS, 2004)
- Health Professions Council (HPC) *Standards of Conduct, Performance and Ethics* (HPC, 2008)
- University of Nottingham (UoN) *Code of Research Conduct and Research Ethics* (University of Nottingham, 2009).

Approval from the University of Nottingham Ethics Committee was also obtained. A summary of the specific ethical considerations which relate to this study are presented below.

3.8.1 Informed consent

Informed consent was gained from all participants.

Consent from school staff

Autism Outreach teachers and EPs who identified potential focus pupils were asked to contact the pupils' schools, explain a little bit about the project and gain their agreement to be contacted by the researcher. A handout describing the project was provided for teachers and EPs to share with school staff (see appendix XIV). The researcher telephoned and met with school staff to discuss what participating in the study would mean for school staff and gain their consent to be involved.

Consent from the focus child's parents

Letters to the focus children's parents were sent out by school staff (on school headed paper). The letters clearly explained the nature of the CoF intervention, provided details of a website which could be used as a further source of information and provided the researcher's and school's contact details should parents wish to discuss the project further. See appendix XV for a copy of the letter.

Consent from the focus child

Consent from the focus children was sought by a member of school staff (an adult identified as someone the focus child would feel comfortable with). The adult identified was provided with guidance to support them in explaining the project and the CoF intervention (see appendix XVI). This guidance clearly explained what having a CoF and being involved in the project would entail. Focus pupils were asked to complete a consent form (see appendix XVI).

Consent from classmates' parents

Letters to the classmates' parents were sent out by school staff (on school headed paper). The letters clearly explained the nature of the CoF intervention

and the potential benefits associated with participating in a CoF before requesting parental consent for their child to participate in the project. The researcher's and school's contact details were provided should parents wish to discuss the project further. See appendix XVII for a copy of the letter.

Consent from classmates

Consent from classmates was sought during a whole class introductory session led by the researcher. Classmates were told a little bit about the CoF intervention (but not who the intervention was designed for), explained what participating in the study would involve and given the opportunity to ask questions. They were asked to complete a consent form (see appendix XVIII).

Consent for interviews

For case E, additional consent was gained in relation to the interviews completed. Consent for the researcher to undertake these interviews was first sought from the focus child's parents (as the interviews would be about their child) – see appendix XIX for a copy of the letter sent to child E's parents. Consent was then sought from parents of the classmates chosen to be involved (see appendix XX) and the pupils themselves (see appendix XXI)

3.8.2 Right to withdraw

As consent was gained, all participates were informed of their right to withdraw from the study. Adults working with the focus child and classmates were reminded to allow participants to withdraw from the study at any time.

3.8.3 Confidentiality

As consent was gained, participants were told their responses to the questionnaires and interviews would remain confidential.

3.8.4 Honesty and integrity

Participants were not deceived at any point in the study. In particular, the focus children and their parents were made aware that if they agreed for the CoF to be set up, this would include a whole class discussion about the focus child in which the focus child would not be involved.

3.8.5 No withheld intervention

All five pupils identified as pupils who would benefit from the intervention received the intervention.

3.8.6 Good communication

The researcher met regularly with school staff at the start of the project to make practical arrangements related to administering questionnaires and setting up of the CoF. Staff were provided with researcher's contact details and a summary of the researcher's expectations– see appendix XXII. The researcher liaised with school staff, through email/telephone contact, throughout the intervention. This involved providing reminders to staff to complete the weekly SIS. The researcher visited school staff at the end of the project to collect completed questionnaires and thank those involved in the study for their participation.

Parents involved in the study were provided with the researcher's contact details and informed that they were able speak to the researcher should they have any questions or concerns. Parents of the focus children were telephoned by the researcher after the whole class meeting and first circle meeting had taken place. This provided parents with feedback about the start of the intervention and an opportunity for them to ask questions.

Participants were informed that following the completion of the research project, they would be provided with a summary of findings and given the opportunity to contact the researcher should they wish to discuss findings further.

3.8.7 Acting in the best interests of participants, minimising harm to participants

Risk associated with the CoF intervention

The researcher recognised the CoF's power to change the focus child's social environment significantly. Using the inclusion criteria, focus pupils were carefully selected in order to ensure that only pupils identified as likely to benefit from the intervention were invited to be part of the study.

The researcher recognised the potential distress which could to be caused by the exclusion of the focus child from the whole class meeting. This feature of the CoF intervention was explained to all those involved when consent was gained.

The researcher recognised the potential distress which could to be caused by sharing feedback about the whole class meeting with the focus child during the first circle meeting. This feature of the CoF intervention was explained to the focus child when consent was gained. Feedback from the whole class meeting was shared sensitively and carefully with the focus child by the researcher.

Risk associated with the measures used

The researcher recognised the potential for distress associated with classmates completing the SIS (for example, classmates talking about how they rated each other). In order to minimise this, as part of the instructions to the SIS, pupils were asked to keep their answers to themselves.

Ethical guidelines were particularly carefully considered in relation to the CSPC interviews conducted with classmates. The focus child's parents, classmates' parents and classmates were made aware of the planned content of the interviews when their consent was gained. The sensitive nature of interviews was acknowledged at the start of the interview. In the hope of gaining a balanced view of the focus child, questions about positive, as well as negative, aspects of the focus child's behaviour were included.

3.9 Considerations of reliability and validity

This section will focus on considerations of reliability and validity. This will include details of potential threats to the study's reliability and validity as well strategies employed in order to maximise the study's reliability and validity.

3.9.1 Issues of reliability

Reliability refers to the extent to which a measuring device, or a whole research project, would produce the same results if used on different occasions with the same object (Robson, 2002, p.151). Mertens (1998) describes the dangers of unsystematic errors which threaten the reliability of a measure or study. These unsystematic errors are ways in which outcomes are affected, in a random way, by variables unrelated to the independent variable(s).

In order to minimise potential sources of unsystematic error in this study, a number of strategies were employed. Firstly, standardised measures were used where possible (the SIS, SDQ and SCHI). These measures included standardised instructions, items and scoring. Secondly, as questionnaires were all completed on more than one occasion, attempts were made to ensure that the conditions of administration at the two points in time were kept the same. For the SCHI, this meant that the adult who completed the survey with the child on the first occasion was asked to work with the child on the second occasion. For the SIS, teachers were asked to administer the questionnaire at a set time and day each week.

Despite attempts to minimise potential sources of unsystematic error, a number of sources remain. As the measures used all involve people expressing their thoughts and feelings, it is possible that factors related to the participants (for example, their mood during the completion of the questionnaires) impacted on the outcomes obtained. For the CSPC, additional unsystematic errors related to the non-standard interview procedure and the interpretation required in coding responses must be acknowledged. The degree of difference in the way in which

responses were coded by a second rater highlights the subjective nature of the coding process.

3.9.2 Issues of Validity

Validity refers to the degree to which what is observed or measured is the same as what was purported to be observed or measured (Robson, 2002, p,153). Issues of internal and external validity must be considered.

Issues of internal validity

Internal validity relates to the question of whether results obtained can be attributed to the impact of the intervention. Kratochwill (1992) describes a number of strategies which improve the validity of single case experimental designs. These are described below along with a summary of the strategies employed and a description of the remaining threats to validity.

Table 3.3 Summary of strategies employed by the researcher to strengthen the study's validity, and remaining potential threats to validity

Method of increasing validity	Relevance to this study
Research is based on observational data.	**Attempts to maximise validity** Data related to three of the dependent variables (the focus children's social inclusion, the focus children's happiness and perceptions of the focus children's behaviour) were gained through responses to standardised questionnaires. **Remaining concerns** Data from all measures is open to biases associated with self-reported data – particularly demand characteristics. The study of attributions, through interviews, involved the researcher coding interview responses. This coding is

	open to biases associated with the subjectivity of interpreting qualitative data.
Repeated measurements are taken across all phases of the experiment.	**Attempts to maximise validity** The SIS was completed weekly over a baseline and intervention phase. **Remaining concerns** The SCHI, SDQ and CSPC interviews were completed only once in the baseline phase and once in the intervention phase.
The study is based on direct intervention.	**Attempts to maximise validity** The study involved the planned implementation of the CoF intervention.
Target behaviour is a problem for a long duration and unlikely to change without the intervention.	**Attempts to maximise validity** Research suggests that pupils with additional needs can experience long term social exclusion. **Remaining concerns** Baseline data about the focus child's level of social inclusion was collected over a relatively short period. This makes it difficult to draw conclusions about the duration of the levels of social acceptance and rejection observed before the start of the CoF intervention. Measures of the focus children's happiness, perceptions of the focus children behaviour and attributions made about the focus child's behaviour were gathered at one point in time only before the CoF intervention was implemented. This makes it difficult to draw conclusions about the duration of the levels of happiness, ratings of

	behaviour and nature of attributions observed before the start of the CoF intervention.
Treatment is applied to several people who differ on a variety of characteristics.	**Attempts to maximise validity** The study involved five cases. Focus pupils involved in the study shared a diagnosis of autism but had varied needs. **Remaining concerns** Focus pupils were observed to have varied needs though detailed descriptions of their varied characteristics were not obtained.
The procedure is standardised, formalised in written form and monitored to ensure it is implemented according to plan.	**Attempts to maximise validity** The CoF intervention delivery followed a standard, documented procedure. The whole class meetings and first circle meetings were delivered by the researcher in order to ensure that these followed the standard format. School staff delivering the weekly circle meetings were given clear instructions about the procedure and asked to complete a treatment integrity checklist. The majority of responses to treatment integrity checklist suggested that the agreed procedure was followed. The researcher observed a circle meeting with the purpose of ensuring that the agreed procedure was being followed. **Remaining concerns** Completed treatment integrity checklists noted that three cases used their own, rather than standard, warm up exercises.

	Completed treatment integrity checklists, and observed sessions, suggested that one circle facilitator experienced particular difficulties refraining from making contributions to the weekly CoF meetings.
Multi-outcome measures are used to strengthen evidence of the effectiveness of an intervention.	**Attempts to maximise validity** The study involved four dependent variables. **Remaining concerns** Repeated measurements taken across all phases of the experiment were only collected in relation to one variable.
Generalisation of an effect is demonstrated through the use of a multiple baseline design.	**Attempts to maximise validity** A multiple baseline design was originally planned for the study. **Remaining concerns** The length of the baseline periods for the social inclusion did not vary enough to enable the design to be described as a multi-baseline design. An AB design was used.

Consideration of Kratochwill's (1992) guidance illustrates that while a number of features of the design, notably the repeated collection of data using the SIS and the presentation of multiple cases, strengthens the research's internal validity, the internal validity of data collected at two points in time only (for the SCHI, SDQ and CSPC) is weak. As Cohen *et al.* (2009) describe, changes over time may be influenced by the following variables:

- **History***:* The effect of previous exposure to variables that affect results, other than the independent variable.
- **Maturation***:* The effect of time passing between the administration of measures.

- **Statistical regression**: This involves participants that have very high or low scores at pre-tests being more likely to obtain a score that is closer to the mean score at post-test. This can give a misleading picture of increases or decreases in post-test scores.

- **Testing**: The administration of measures can make subjects more sensitive to the aims of the research.

Issues of External Validity (Generalisability)

External validity, or generalisability, relates to the extent to which the findings of the study are more generally applicable outside the specifics of the situation studied (Robson, 2002, p.93). Robson (2002) notes that a study with good external validity involves the author making a persuasive case that the participants studied are representative of the target population. As noted earlier, this study involves a small and non-homogenous sample. Making a persuasive case that the outcomes observed can be generalised, therefore, is not possible.

This study, however, did not aim to achieve external validity. As Robson (2002) notes 'sometimes one is interested in a specific finding in its own right' (p.106). The researcher's intention for this study was to provide an in-depth look at the impact of the intervention for five pupils which would add to the limited existing body of research and inspire future research.

4 Results

4.1 Introduction to Chapter 4

This chapter aims to present the findings relevant to the study's research questions. Findings associated with each research question will be presented for each case (with the exception of research question five for which data was only gathered in case E). Questions one and two will be presented together as data collected from the SIS relates to both questions.

The chapter starts with a summary of how the findings related to each question will be presented for each case. Findings for each case are then presented. The chapter closes with a summary of all the findings (across the five cases) associated each research question.

4.1.1 Question One: Does the CoF intervention have a positive impact on the social inclusion of pupils with autism in mainstream classrooms?

4.1.2 Question Two: If the CoF is seen to have a positive impact on the social inclusion of pupils with autism, which part of the intervention (the whole class meeting or the subsequent weekly circle meetings) is associated with change?

In relation to questions one and two, a graph showing the focus child's level of acceptance (indicated in blue) and rejection (indicated in red), as rated by peers, over time will be presented. Levels of acceptance and rejection will be shown as the proportions of accepted and rejected ratings made by peers (as described in Chapter 3 and used by Fredrickson, Warren and Turner, 2005) so range from 0 to 1.

Analysis of the graph will take the form of a description of the variability, trend and level associated with the acceptance ratings in phase A and phase B,

followed by a description of the variability, trend and level associated with the rejection ratings in phase A and phase B. The mean acceptance and rejection ratings for each phase will also be provided (rounded to two decimal places).

The description of variability will involve the researcher commenting on the degree of fluctuation in the data points and providing the standard deviation associated with ratings in each phase (rounded to two decimal places). A low standard deviation will indicate that data points were close to the mean, whereas a higher standard deviation will indicate that the data points are spread out over a larger range.

The description of trend will involve the researcher commenting on whether a trend in the data points is visible in each phase. Where a trend is observed, the slope of the trendline will be provided (rounded to two decimal places).

The description of level will involve the researcher commenting on whether there is a difference/what the difference is between the last point in phase A and the first point in phase B.

Following analysis of the graph, a summary of findings will be provided. This will involve the researcher highlighting key observations and describing the relationship between acceptance and rejection levels over time. Interpretation of findings in relation to the research questions will be provided in preparation for further discussion in the final chapter.

4.1.3 Question Three: Is the CoF intervention associated with a change in focus children's rating of happiness in school?

The focus child's scores on the SCHI completed before and after the CoF intervention will presented in a table. The difference between the scores obtained at the two points in time will also be presented. Interpretation of the findings in question three will be provided in preparation for further discussion in the final chapter.

4.1.4 Question Four: Is the CoF intervention associated with a perceived change in focus children's behaviour?

Two tables will be presented. The first will show the focus child's scores on each scale of the SDQ as rated by the class teacher before and after the CoF intervention. The difference between the scores obtained at the two points in time will also be presented. The second table will show the focus child's scores on each scale of the SDQ as rated by the circle facilitator before and after the CoF intervention. Interpretation of the ratings provided by the class teacher and circle facilitator will be summarised and considered in relation to question four in preparation for further discussion in the final chapter.

4.1.5 Question Five: Is any change observed associated with a change in attributions made by peers about the focus child's behaviour?

Numerical values associated with attributions (coded using the scale from the CSPC) expressed before and after the CoF intervention will be presented before illustrative examples of the types of attributions made at each point in time are provided. Interpretation of the numerical ratings and illustrative examples are provided in preparation for further discussion in the final chapter.

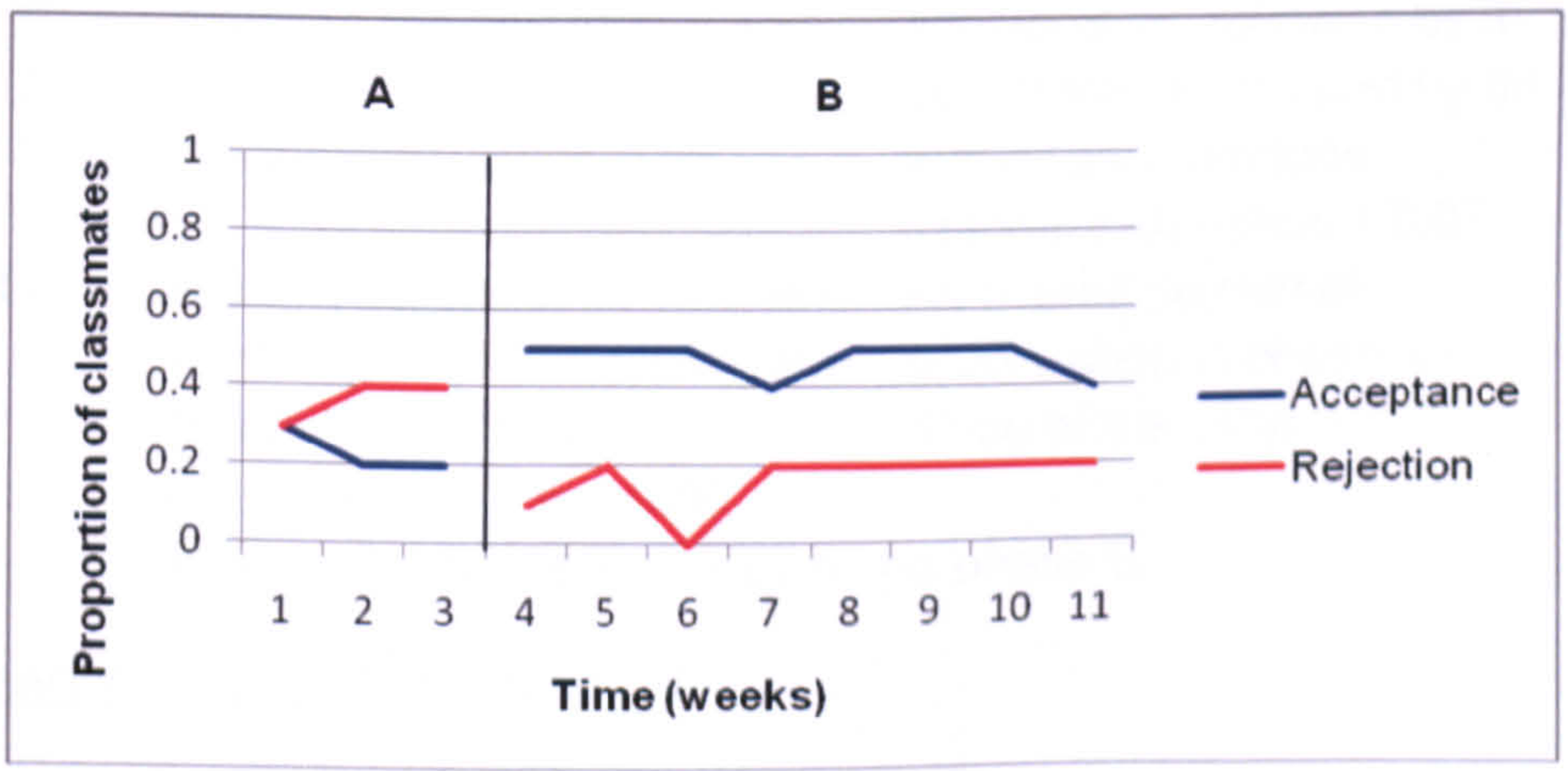
4.2 Case A

4.2.1 Question One: Does the CoF intervention have a positive impact on the social inclusion of pupils with autism in mainstream classrooms?

Question Two: If the CoF is seen to have a positive impact on the social inclusion of pupils with autism, which part of the intervention (the whole class meeting or the subsequent weekly circle meetings) is associated with change?

The graph below shows focus child A's level of acceptance and level of rejection as rated by his classmates. See appendix XIII for details of raw scores.

Graph 4.1: Child A's level of acceptance and rejection over time as rated by his classmates (*N*=23) using the SIS (Fredrickson and Graham, 1999).



Analysis of graph 4.1

Level of acceptance

	Phase A	Phase B
Mean	0.27	0.48
Variability	Some varability with levels of acceptance ranging from 0.2 to 0.3. Standard deviation = 0.06.	Minimal variability with levels of acceptance ranging from 0.4 to 0.5. Standard deviation = 0.05.
Trend	A slight deceleration between the first and subsequent data points is observed. Slope of trendline = - 0.5.	No clear overall trend.
Level	A 0.3 rise between phase A and phase B.	

Level of rejection

	Phase A	Phase B
Mean	0.37	0.16
Variability	Some variability with levels of rejection ranging from 0.3 to 0.4. Standard deviation 0.06	Some variation, including an acceleration, followed by a deceleration, followed by an further accelerations. Standard deviation = 0.07.
Trend	A slight acceleration between the first and subsequent data points is observed. Slope of trendline = 0.05.	An overall pattern of acceleration is observed. Slope of trendline = 0.02.
Level	A fall of 0.3 between phase A and phase B.	

Summary of findings from graph 4.1

Graph 4.1 shows a rise in acceptance levels and a fall in rejection levels between phase A and phase B. The mean acceptance level is higher in phase B than phase A and the mean rejection levels is lower in phase B than in phase A. While levels of rejection exceed or equal levels of acceptance in phase A, levels of acceptance exceed or equal levels of rejection in phase B. The final data points in phase B shows acceptance levels to have decreased slightly and

acceptance levels to have increased slightly during phase B. The final level of acceptance in phase B, however, remains higher than acceptance levels in phase A and the final level of rejection in phase B remains lower than rejection levels in phase A.

In relation to question one, graph 4.1 suggests the CoF had a positive impact on focus child A's level of social inclusion. In relation to question two, graph 4.1 suggests that the change in acceptance and rejection levels lessened during the course of the weekly CoF meetings though levels of acceptance in phase B remained higher than in phase A and levels of rejection in phase B remained lower than in phase A. Overall, graph 4.1 suggests that a positive change in focus child A's level of social inclusion was observed following the whole class CoF meeting and that the size of this change reduced during the course of the weekly circle meetings.

Question Three: Is the CoF intervention associated with a change in focus children's rating of happiness in school?

The table below presents child A's scores on the SCHI at two points in time.

Table 4.1: Child A's scores on the SCHI (Ivens, 2007) completed before and after the CoF intervention

Time	Score
PRE	75 (low)
POST	108 (high average)
Difference	**+ 33**

Summary of findings from table 4.1

Child A's post score on the SCHI exceeds the pre score by 33 points. In relation to question three, these scores suggest there was a positive change in the focus child's rating of happiness in school after the CoF intervention.

4.2.2 Question Four: Is the CoF intervention associated with a perceived change in focus children's behaviour?

The table below presents child A's teacher's scores on the SDQ at two points in time.

Table 4.2: Teacher ratings of child A's behaviour on the SDQ (Goodman, 1997) completed before and after the CoF intervention

Time information collected	Total difficulties score	Emotional Symptoms Scale	Conduct Problem Scale	Hyperactivity Scale	Peer problem Scale	Prosocial scale
PRE	30	7	5	9	9	0
POST	20	6	3	6	5	3
Difference	- 10	- 1	- 2	- 3	- 4	+ 3

Summary of findings from table 4.2

All scores provided by child A's teacher on the negative scales (emotional symptoms, conduct problems, hyperactivity and peer problems) after the CoF intervention are lower than those provided before the CoF intervention. The score on the single positive scale (prosocial) is higher after the CoF intervention than before the CoF intervention.

The table below presents child A's circle facilitator's scores on the SDQ at two points in time. Unfortunately, items not completed on the questionnaire mean it is not possible to calculate a score for the hyperactivity scale or a total difficulties score.

Table 4.3: Circle facilitator ratings of child A's behaviour on the SDQ (Goodman, 1997) completed before and after the CoF intervention

Time information collected	Total difficulties score	Emotional Symptoms Scale	Conduct Problem Scale	Hyperactivity Scale	Peer problem Scale	Prosocial scale
PRE	-	5	1	-	6	5
POST	5	1	0	2	2	7
Difference	**-**	**- 4**	**- 1**	**-**	**- 4**	**+ 2**

Summary of findings from table 4.3

All scores provided by child A's circle facilitator on the negative scales (emotional symptoms, conduct problems and peer problems) after the CoF intervention are lower than those provided before the CoF intervention. The score on the single positive scale (prosocial) is higher after the CoF intervention than before the CoF intervention.

Summary of findings from tables 4.1 and 4.2.

Overall, scores on the SDQ for focus child A suggest that the teacher and circle facilitator perceived fewer difficulties and greater prosocial behaviour from the focus child after the CoF intervention compared to before the CoF intervention. In relation to question four, this suggests that there was a positive change in adults' perceptions of the focus child's behaviour after the CoF intervention.

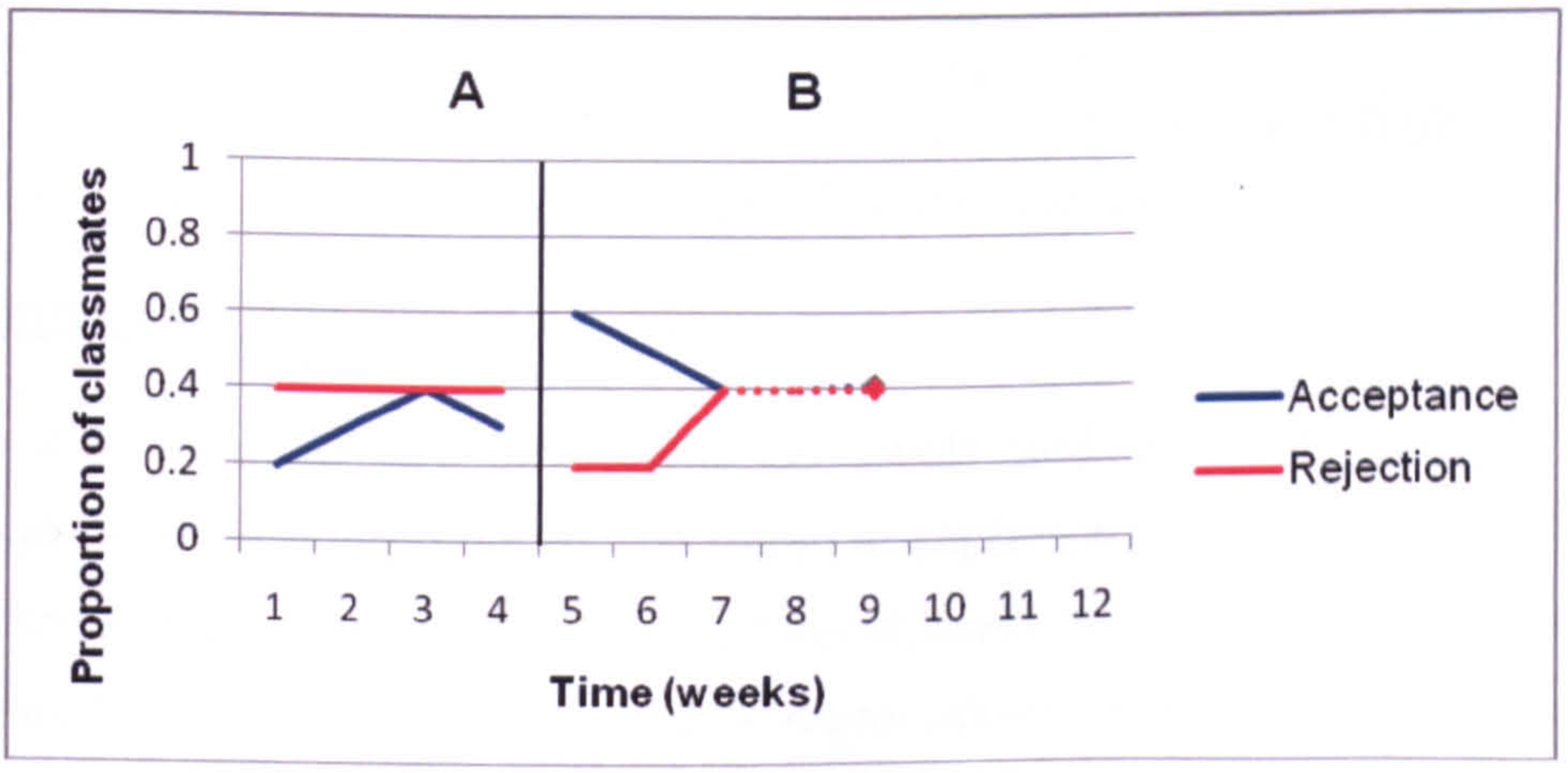
4.3 Case B

4.3.1 Question One: Does the CoF intervention have a positive impact on the social inclusion of pupils with autism in mainstream classrooms?

Question Two: If the CoF is seen to have a positive impact on the social inclusion of pupils with autism, which part of the intervention (the whole class meeting or the subsequent weekly circle meetings) is associated with change?

The graph below shows focus child B's level of acceptance and level of rejection as rated by his classmates. Unfortunately, data was not collected for weeks 8, 10, 11 and 12. See appendix XXIII for details of raw scores.

Graph 4.2: Child B's level of acceptance and rejection over time as rated by his classmates (*N*=25) using the SIS (Fredrickson and Graham, 1999).



Analysis of graph 4.2

Level of acceptance

	Phase A	Phase B
Mean	0.3	0.48
Variability	Some variability with levels of acceptance ranging from 0.2 to o.4. Standard deviation = 0.08.	Levels of acceptance range from 0.6 to 0.4. Standard deviation = 0.09.
Trend	A general acceleration is observed. Slope of trendline = 0.04.	An initial deceleration is observed. Slope of trendline = - 0.05.
Level	A rise of 0.3 between phase A and phase B.	

Level of rejection

	Phase A	Phase B
Mean	0.4	0.3
Variability	No variation.	Levels of rejection range from 0.2 to 0.4 Standard deviation = 0.11.
Trend	No trend.	A general acceleration is observed. Slope of trendline = 0.07.
Level	A fall of 0.2 between phase A and phase B.	

Summary of findings from graph 4.2

Graph 4.2 shows a rise in acceptance levels and a fall in rejection levels between phase A and phase B. The mean acceptance level is higher in phase B than phase A and the mean rejection level is lower in phase B than in phase A. Whereas levels of rejection exceed or equal levels of acceptance in phase A, levels of acceptance exceed levels of rejection at the start of phase B. Three weeks into phase B, however, levels of rejection and acceptance equal each other. Conclusions about the impact of the intervention over time are difficult to draw due to the lack of data in phase B. Available data suggests that acceptance levels generally decelerate and rejection levels generally accelerate

over time. The final data point shows rejection and acceptance levels as equal – the same situation depicted in the third week of the baseline phase.

In relation to question one, graph 4.2 suggests that the CoF had a positive impact on the focus child B's level of social inclusion. In relation to question two, graph 4.2 suggests the change in acceptance and rejection levels was not maintained during the course of the weekly circle meetings. Overall, graph 4.2 suggests that while a positive change in focus child B's level of social inclusion was observed following the whole class CoF meeting, this change was not maintained during the course of the weekly CoF meetings.

4.3.2 Question Three: Is the CoF intervention associated with a change in focus children's rating of happiness in school?

The table below presents child B's scores on the SCHI at two points in time.

Table 4.4: Child B's scores on the SCHI (Ivens, 2007) completed before and after the CoF intervention

Time	Score
PRE	48 (very low)
POST	73 (low)
Difference	**+ 25**

Summary of findings from table 4.4

Child B's post score on the SCHI exceeds the pre score by 25 points. In relation to question three, these scores suggest there was a positive change in the focus child's rating of happiness in school after the CoF intervention.

4.3.3 Question Four: Is the CoF intervention associated with a perceived change in focus children's behaviour?

The table below presents child B's teacher's scores on the SDQ at two points in time.

Table 4.5: Teacher ratings of child B's behaviour on the SDQ (Goodman, 1997) completed before and after the CoF intervention

Time information collected	Total difficulties score	Emotional Symptoms Scale	Conduct Problem Scale	Hyperactivity Scale	Peer problem Scale	Prosocial scale
PRE	21	6	3	9	3	3
POST	8	1	2	4	1	4
Difference	**- 13**	**- 5**	**- 1**	**- 5**	**- 2**	**+ 1**

Summary of findings from table 4.5

All scores provided by child B's teacher on the negative scales (emotional symptoms, conduct problems, hyperactivity and peer problems) after the CoF intervention are lower than those provided before the CoF intervention. The score on the single positive scale (prosocial) is higher after the CoF intervention than before the CoF intervention.

The table below presents child B's circle facilitator's scores on the SDQ at two points in time.

Table 4.6: Circle facilitator ratings of child B's behaviour on the SDQ (Goodman, 1997) completed before and after the CoF intervention

Time information collected	Total difficulties score	Emotional Symptoms Scale	Conduct Problem Scale	Hyperactivity Scale	Peer problem Scale	Prosocial scale
PRE	14	1	2	7	4	1
POST	11	0	2	6	3	4
Difference	**- 3**	**- 1**	**0**	**- 1**	**- 1**	**+3**

Summary of findings from table 4.6

Scores provided by child B's circle facilitator on three out of the four negative scales (emotional symptoms, hyperactivity and peer problems) after the CoF intervention are lower than those provided before the CoF intervention. There is no change in the score on the conduct problem scale before and after the CoF intervention. The score on the single positive scale (prosocial) is higher after the CoF intervention than before the CoF intervention.

Summary of findings in tables 4.5 and 4.6

Overall, scores on the SDQ for focus child B suggest that the teacher and circle facilitator perceived fewer difficulties and greater prosocial behaviour from the focus child after the CoF intervention compared to before the CoF intervention. In relation to question four, this suggests that there was a positive change in adults' perceptions of the focus child's behaviour after the CoF intervention.

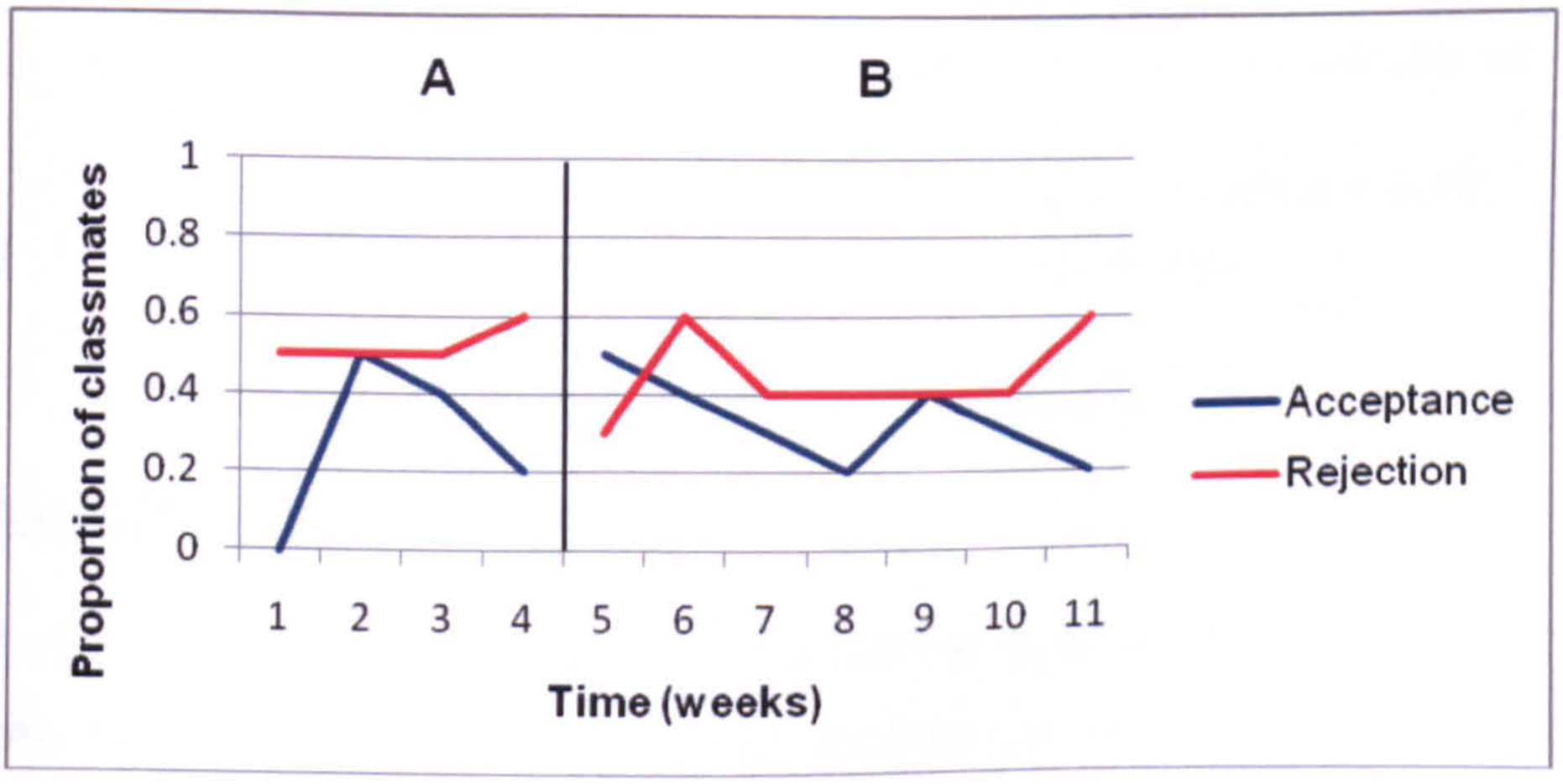
4.4 Case C

4.4.1 Question One: Does the CoF intervention have a positive impact on the social inclusion of pupils with autism in mainstream classrooms?

Question Two: If the CoF is seen to have a positive impact on the social inclusion of pupils with autism, which part of the intervention (the whole class meeting or the subsequent weekly circle meetings) is associated with change?

The graph below shows focus child C's level of acceptance and level of rejection as rated by his classmates. See appendix XXIII for details of raw scores.

Graph 4.3: Child C's level of acceptance and rejection over time as rated by his classmates (*N*=26) using the SIS (Fredrickson and Graham, 1999).



Analysis of graph 4.3

Level of acceptance

	Phase A	Phase B
Mean	0.28	0.46
Variability	Large variation with levels of acceptance ranging from 0 to 0.5. Standard deviation = 0.22.	Some variation with a period of deceleration followed by an acceleration and a second period of deceleration. Standard deviation = 0.22.
Trend	No clear trend.	A general deceleration is observed. Slope of trendline = - 0.04.
Level	A rise of 0.4 between phase A and phase B.	

Level of rejection

	Phase A	Phase B
Mean	0.53	0.46
Variability	Minimal variation with rejection levels ranging from 0.5 to 0.6. Standard deviation = 0.05.	Some variation with an acceleration followed by a deceleration, followed by an acceleration. Standard deviation = 0.12.
Trend	A slight accelaration. Trend of slopeline = 0.03.	No clear trend.
Level	A fall of 0.3 between phase A and phase B.	

Summary of findings from graph 4.3

Graph 4.3 shows a rise in acceptance levels and a fall in rejection levels between phase A and phase B. Mean acceptance level is higher in phase B than phase A and the mean rejection level is lower in phase B than in phase A. Large variability acceptance levels in phase A, however, do not provide a clear picture of focus child C's baseline level of social inclusion. This makes conclusions about change between phase A and phase B difficult to draw. While acceptance levels exceed rejection levels at the start of phase B, after one week a deceleration in acceptance levels and an acceleration in rejection levels mean

rejection levels overtake acceptance levels. Rejection levels remain higher than or equal to acceptance levels for the rest of phase B as acceptance levels show an overall deceleration.

Graph 4.3 does not provide a clear answer to question one as the variability in phase A makes comparisons between phase A and phase B difficult. In relation to question two, graph 4.3 suggests that while a positive situation for the focus child occurred after the whole class meeting (levels of acceptance exceeded levels of rejection in the first week of the intervention phase), this situation was not maintained. For the remainder of the intervention period, rejection levels exceeded or equalled acceptance levels. Overall, graph 4.3 suggests any positive impact the CoF may have had was not maintained during the course of the weekly CoF meetings.

4.4.2 Question Three: Is the CoF intervention associated with a change in focus children's rating of happiness in school?

The table below presents child C's scores on the SCHI at two points in time.

Table 4.7: Child C's scores on the SCHI (Ivens, 2007) completed before and after the CoF intervention

Time	Score
PRE	76 (low)
POST	79 (low average)
Difference	**+ 3**

Summary of findings from table 4.7

Child C's post score on the SCHI exceeds the pre score by 3 points. In relation to question two, these scores suggest there is a positive change in the focus child's rating of happiness in school after the CoF intervention.

4.4.3 Question Four: Is the CoF intervention associated with a perceived change in focus children's behaviour?

The table below presents child C's teacher's scores on the SDQ at two points in time.

Table 4.8: Teacher ratings of child C's behaviour on the SDQ (Goodman, 1997) completed before and after the CoF intervention

Time information collected	Total difficulties score	Emotional Symptoms Scale	Conduct Problem Scale	Hyperactivity Scale	Peer problem Scale	Prosocial scale
PRE	15	8	0	3	4	4
POST	17	6	2	5	5	8
Difference	**+ 2**	**- 2**	**+ 2**	**+2**	**+ 1**	**+ 4**

Summary of findings from table 4.8

The score provided by child C's teacher on one of the four negative scales (emotional symptoms) after the CoF intervention is lower than that provided before the CoF intervention. Scores on the other three negative scales (conduct problems, hyperactivity and peer problems) after the CoF intervention are higher than those provided before the CoF intervention. The score on the single positive scale (prosocial) is higher after the CoF intervention than before the CoF intervention.

The table below presents child C's circle facilitator's scores on the SDQ at two points in time.

Table 4.9: Circle facilitator ratings of child C's behaviour on the SDQ (Goodman, 1997) completed before and after the CoF intervention

Time information collected	Total difficulties score	Emotional Symptoms Scale	Conduct Problem Scale	Hyperactivity Scale	Peer problem Scale	Prosocial scale
PRE	10	3	0	4	3	5
POST	14	3	0	6	5	4
Difference	**+ 4**	**0**	**0**	**+2**	**+ 2**	**- 1**

Summary of findings from table 4.9

Scores provided by child C's circle facilitator on two of the four negative scales (hyperactivity and peer problems) after the CoF intervention are higher than those provided before the CoF intervention. There is no change in scores on the other two negative scales (conduct problems and emotional symptoms) before and after the CoF intervention. The score on the single positive scale (prosocial) is lower after the CoF intervention than before the CoF intervention.

Summary of findings of tables 4.8 and 4.9

Ratings provided by child C's teacher and circle facilitator and did not show a clear overall pattern of change. Child C's teacher and circle facilitator reported a perceived rise in the focus child's peer problems and hyperactivity after the CoF intervention compared to before the CoF intervention. The class teacher also reported a rise in the focus child's conduct problems though the circle facilitator reported no change in this area. The class teacher reported a perceived reduction in the focus child's emotional symptoms while the circle facilitator reported no change in this area. The class teacher reported a rise in prosocial behaviour while the circle facilitator reported a slight reduction in this area.

In relation to question four, responses provided by child C's teacher and circle facilitator suggest different answers. For the teacher, results suggest a positive change in perceptions of some aspects of the focus child's behaviour (emotional symptoms and prosocial behaviour) but a negative change in perceptions of other aspects (conduct problems, hyperactivity and peer problems) after the CoF intervention. For the circle facilitator, results suggest a negative change (hyperactivity, peer problems and prosocial behaviour) or no change (emotional symptoms and conduct problems) in perceptions of the focus child's behaviour after the CoF intervention.

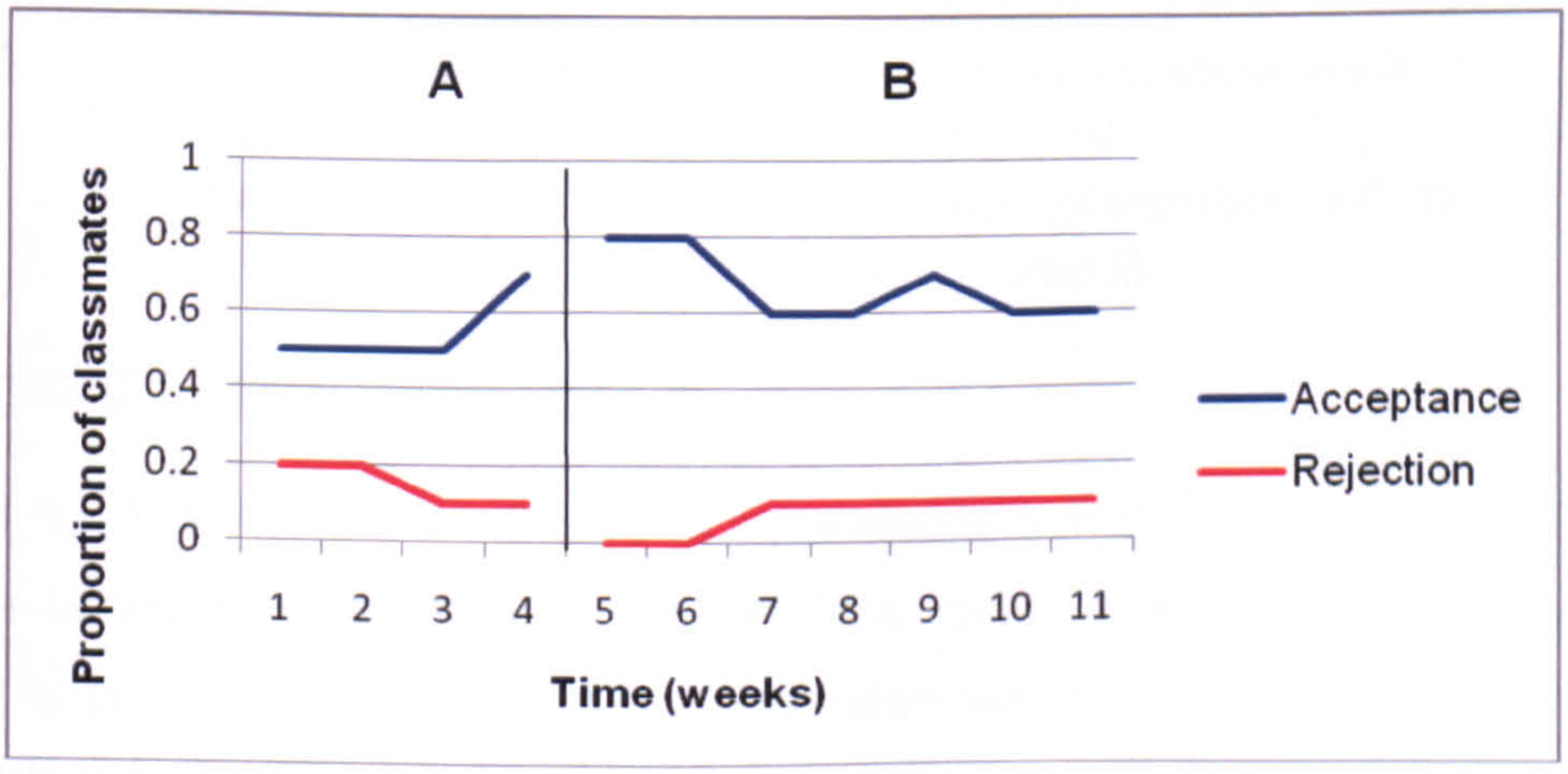
4.5 Case D

4.5.1 Question One: Does the CoF intervention have a positive impact on the social inclusion of pupils with autism in mainstream classrooms?

Question Two: If the CoF is seen to have a positive impact on the social inclusion of pupils with autism, which part of the intervention (the whole class meeting or the subsequent weekly circle meetings) is associated with change?

The graph below shows focus child D's level of acceptance and level of rejection as rated by his classmates. See appendix XXIII for details of raw scores.

Graph 4.4: Child D's level of acceptance and rejection over time as rated by his classmates (*N*=30) using the SIS (Fredrickson and Graham, 1999).



Analysis of graph 4.4

Level of acceptance

	Phase A	Phase B
Mean	0.55	0.66
Variability	Some variability with acceptance scores ranging from 0.5 to 0.7. Standard devisation = 0.1.	Minimal variability with one acceleration in an overall trend of deceleration. Standard deviation = 0.09.
Trend	No clear trend.	An overall deceleration is observed. Slope of trendline = - 0.03.
Level	A rise of 0.1 between phase A and phase B.	

Level of rejection

	Phase A	Phase B
Mean	0.15	0.08
Variability	Minimal variability with rejection levels ranging from 0.1 to 0.2. Standard deviation = 0.06.	Minimal variability with rejection levels ranging from 0 to 0.1. Standard deviation = 0.05.
Trend	A small deceleration is observed. Slope of trendline = - 0.04.	A small acceleration is observed. Slope of trendline = 0.02.
Level	A fall of 0.1 between phase A and phase B.	

Summary of findings from graph 4.4

Graph 4.4 illustrates a small rise in acceptance ratings and a fall in rejection ratings between phase A and phase B. The mean acceptance level is slightly higher in phase B than phase A and the mean rejection level is slightly lower in phase B than in phase A. The pattern of acceptance levels exceeding rejection levels in phase A is continued throughout phase B. While the difference between acceptance levels and rejection levels is increased at the start of phase B, acceptance levels decelerate slightly and rejection rates accelerate

slightly during phase B. By the final data point, acceptance and rejection levels in phase B are comparable to those observed in phase A.

In relation to question one, graph 4.4 suggests the CoF had a slight positive impact on the focus child D's level of social inclusion though acceptance levels were already high and rejection levels low before the intervention was introduced. In relation to question two, graph 4.4 suggests this change was not maintained during the course of the weekly circle meetings. Overall, graph 4.4 suggests that while a positive change in the focus child's level of social inclusion was observed following the whole class CoF meeting, this change was not maintained during the course of the weekly circle meetings.

4.5.2 Question Three: Is the CoF intervention associated with a perceived change in the focus child's rating of happiness in school?

The table below presents child D's scores on the SCHI at two points in time.

Table 4.10: Child D's scores on the SCHI (Ivens, 2007) completed before and after the CoF intervention

Time	Score
PRE	96 (average)
POST	91 (average)
Difference	**- 5**

Summary of findings from table 4.10

Child D's post score on the SCHI is lower than his pre score by 5 points. In relation to question three, these scores suggest there was a negative change in the focus child's rating of happiness in school after the CoF intervention.

4.5.3 Question Four: Is the CoF intervention associated with a change in the focus child's behaviour?

The table below presents child D's teacher's scores on the SDQ at two points in time.

Table 4.11: Teacher ratings of child D's behaviour on the SDQ (Goodman, 1997) completed before and after the CoF intervention

Time information collected	Total difficulties score	Emotional Symptoms Scale	Conduct Problem Scale	Hyperactivity Scale	Peer problem Scale	Prosocial scale
PRE	10	3	0	2	5	9
POST	5	1	0	1	3	9
Difference	**- 5**	**- 2**	**0**	**- 1**	**- 2**	**0**

Summary of findings from table 4.11

All scores provided by child D's teacher on the negative scales (emotional symptoms, conduct problems, hyperactivity and peer problems) after the CoF intervention are lower than or equal to those provided after the CoF intervention. There is no change in the single positive scale (prosocial) before and after the CoF intervention.

The table below presents child D's circle facilitator's scores on the SDQ at two points in time.

Table 4.12: Circle facilitator ratings of child D's behaviour on the SDQ (Goodman, 1997) completed before and after the CoF intervention

Time information collected	Total difficulties score	Emotional Symptoms Scale	Conduct Problem Scale	Hyperactivity Scale	Peer problem Scale	Prosocial scale
PRE	15	8	0	2	5	7
POST	16	9	0	3	4	8
Difference	**+ 1**	**+ 1**	**0**	**+ 1**	**- 1**	**+ 1**

Summary of findings from table 4.12

The score provided by child D's circle facilitator on one of the four negative scales (peer problems) after the CoF intervention is lower than that provided before the CoF intervention. Scores on two negative scales (emotional symptoms and hyperactivity) after the CoF intervention are higher than those provided before the CoF intervention. The score on the single positive scale (prosocial) is higher after the CoF intervention than before the CoF intervention.

Summary of findings from tables 4.11 and 4.12

Scores on the SDQ for focus child D suggest that while child D's teacher perceived fewer difficulties but no change in the focus child's prosocial after the CoF intervention, child D's circle facilitator saw some positive and some negative changes in child D's difficulties and a positive change in his prosocial behaviour. In relation to question four, this suggests that there was some positive and some negative change in adults' perceptions of the focus child's behaviour after the CoF intervention.

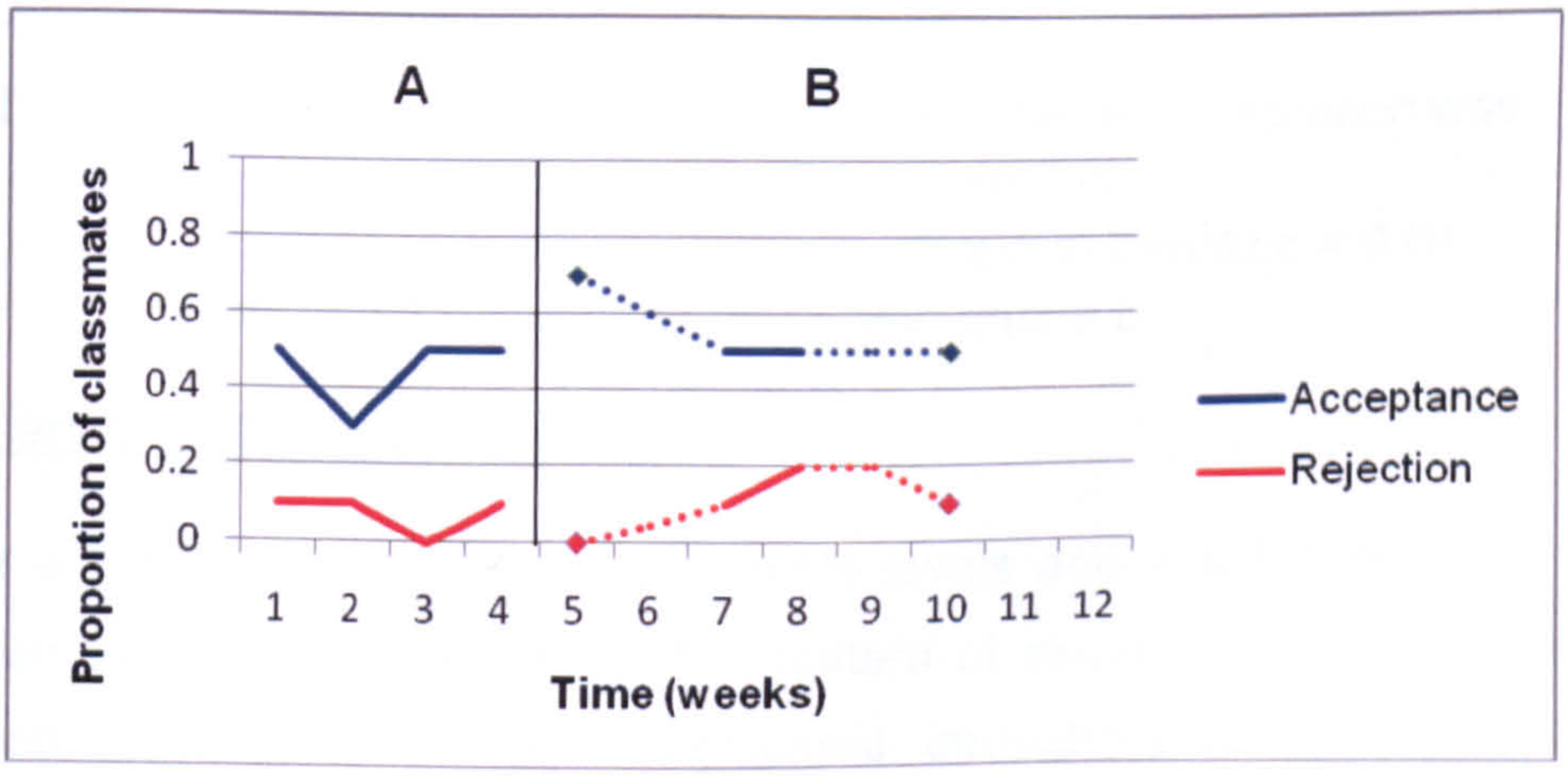
4.6 Case E

4.6.1 Question One: Does the CoF intervention have a positive impact on the social inclusion of pupils with autism in mainstream classrooms?

Question Two: If the CoF is seen to have a positive impact on the social inclusion of pupils with autism, which part of the intervention (the whole class meeting or the subsequent weekly circle meetings) is associated with change?

The graph below shows focus child B's level of acceptance and level of rejection as rated his classmates. Unfortunately, data was not collected for weeks 6, 9, 11 and 12. See appendix XXIII for details of raw scores.

Graph 4.5: Child E's level of acceptance and rejection over time as rated by his classmates (*N*=23) using the SIS (Fredrickson and Graham, 1999).



Analysis of graph 4.5

Level of acceptance

	Phase A	Phase B
Mean	0.45	0.55
Variability	Some variability with acceptance levels ranging from 0.3 to 0.5. Standard deviation = 0.1.	A trend, rather than variability, was observed. Standard deviation = 0.05.
Trend	No clear trend.	A general deceleration was observed. Slope of trendline = - 0.03.
Level	A rise of 0.2 between phase A and phase B.	

Level of rejection

	Phase A	Phase B
Mean	0.08	0.13
Variability	Minimal variability with rejection levels ranging from 0 to 0.1. Standard deviation = 0.08.	A trend, rather than variability, was observed. Standard deviation =0.09.
Trend	No clear trend.	A general acceleration was observed. Slope of trendline = 0.04.
Level	A fall of 0.1 between phase A and phase B.	

Summary of findings from graph 4.5

Graph 4.5 illustrates a rise in acceptance levels and a fall in rejection levels between phase A and phase B. The pattern of acceptance levels exceeding rejection levels in phase A is continued throughout phase B. While the difference between acceptance levels and rejection levels is increased at the start of phase B, acceptance levels decelerate and rejection rates accelerate during phase B. The mean acceptance level in phase B is higher than the mean acceptance level in phase A but the mean rejection level is also higher in phase B than in phase A. By week ten, acceptance levels are comparable to those

observed in phase A and rejection levels are slightly higher than levels observed in phase A.

In relation to question one, graph 4.5 suggests that the CoF had a positive impact on the focus child's level of social inclusion though acceptance levels were already high and rejection levels low before the intervention was introduced. In relation to question two, graph 4.5 suggests that this change was not maintained during the course of the weekly circle meetings. Rejection levels were observed to be higher during the latter part of phase B than observed in phase A. Overall, graph 4.4 suggests that while a positive change in the focus child's level of social inclusion was observed following the whole class CoF meeting, this change was not maintained during the course of the weekly circle meetings.

4.6.2 Question Three: Is the CoF intervention associated with a change in focus children's rating of happiness in school?

The table below presents child E's scores on the SCHI at two points in time.

Table 4.13: Child E's scores on the SCHI (Ivens, 2007) completed before and after the CoF intervention

Time	Score
PRE	105 (high average)
POST	114 (high)
Difference	**+ 9**

Summary of findings from table 4.13

Child E's post score on the SCHI exceeds the pre score by 9 points. In relation to question three, these scores suggest there was a positive change in the focus child's rating of happiness in school after the CoF intervention.

4.6.3 Question Four: Is the CoF intervention associated with a perceived change in focus children's behaviour?

The table below presents child E's teacher's scores on the SDQ at two points in time.

Table 4.14: Teacher ratings of child E's behaviour on the SDQ (Goodman, 1997) completed before and after the CoF intervention

Time information collected	Total difficulties score	Emotional Symptoms Scale	Conduct Problem Scale	Hyperactivity Scale	Peer problem Scale	Prosocial scale
PRE	26	7	3	10	6	3
POST	12	5	1	5	1	6
Difference	**- 14**	**- 2**	**- 2**	**- 5**	**- 5**	**+ 3**

Summary of findings from table 4.14

All scores provided by child E's teacher on the negative scales (emotional symptoms, conduct problems, hyperactivity and peer problems) after the CoF intervention are lower than those provided before the CoF intervention. The score on the single positive scale (prosocial) is higher after the CoF intervention than before the CoF intervention.

The table below presents child E's circle facilitator's scores on the SDQ at two points in time.

Table 4.15: Circle facilitator's ratings of child E's behaviour on the SDQ (Goodman, 1997) completed before and after the CoF intervention

Time information collected	Total difficulties score	Emotional Symptoms Scale	Conduct Problem Scale	Hyperactivity Scale	Peer problem Scale	Prosocial scale
PRE	19	5	3	8	3	4
POST	4	0	0	4	0	8
Difference	**- 15**	**- 5**	**- 3**	**- 4**	**- 3**	**+ 4**

Summary of findings from table 4.15

All scores provided by child E's teacher on the negative scales (emotional symptoms, conduct problems, hyperactivity and peer problems) after the CoF intervention are lower than those provided before the CoF intervention. The score on the single positive scale (prosocial) is higher after the CoF intervention than before the CoF intervention.

Summary of findings from tables 4.14 and 4.15.

Overall, scores on the SDQ for focus child E suggest that the teacher and circle facilitator perceived fewer difficulties and greater prosocial behaviour from the focus child after the CoF intervention compared to before the CoF intervention. In relation to question four, this suggests that there was a positive change in adults' perceptions of the focus child's behaviour after the CoF intervention.

4.6.4 Question Five: Is any change observed associated with a change in attributions made by peers about the focus child's behaviour?

Attributions made by peers about the focus child's behaviour before the start of the CoF intervention and after the CoF intervention are presented. Please see appendix XXIV for a copy of all extracts from the interview which relate to

attributions. Numerical values associated with attributions made (coded using the following scale from the CSPC) are compared and illustrative examples of attributions are presented. The table below shows the coding scale used to assign quantitative values to attributions made. On this scale, higher values are associated with perceived external causes of behaviour and lower values with more internal causes of behaviour.

Table 4.16: Coding scale for CSPC (Elig and Frieze, 1979)

Scale value label	Scale value code
1	**Internal** (due to factors within the child)
2	**Mutual or uncertain** (due to factors involving an interaction of the person and other people or to an uncertain cause
3	**External** (due to factors outside of the child)

The table below show the codes associated with each attribution made by each peer about the focus child's behaviour in an unsuccessful situation.

Table 4.18: Coded attributions, coded using CSPC (Elig and Frieze, 1979), made by peers before and after the CoF about focus child E's behaviour in an unsuccessful situation

Peer	PRE	POST
1	2	1
2	2	2
3	1	2
4	1	1
5	2	2
6	1	1
Total	9	9

Summary findings from table 4.18

There is no change in the sum of coded attributions made before and after the CoF intervention. Internal and mutual attributions were made by peers before and after the CoF intervention. No external attributions were made.

Looking at each peer's response at the two points in time, an overall pattern of change is not clear. For two children (peers 4 and 6), an internal attribution was made at the two points in time. For two children (peers 2 and 5) a mutual attribution was made at the two points in time. For one child (peer 1) a change towards a more internal attribution was made. For one child (peer 3) a change towards a more external attribution was made.

In relation to question five, results suggest no clear change in the pattern of attributions made about the focus child's behaviour in unsuccessful situations after the CoF intervention.

The following examples of responses provide a summary of the nature of the internal and mutual attributions made at the two points in time. The first part of the excerpt provided involves the peer describing the focus child's behaviour. The second part of the excerpt involves the peer describing why they think the event happened.

Sample responses illustrating attributions made by peers about the focus child's behaviour in an unsuccessful situation

The following excerpts illustrate the internal and mutual locations of cause to which behaviour was attributed before the start of the CoF intervention.

'Actually yeah...sometimes he embarrasses people like he hugs people. And sometimes he tries to do wrestling moves on you.' 'I think just because.. like.. to start with he didn't quite know how to ... kind of.. be with people. Now he's learning.'

Peer 3 (coded as an internal location of cause)

'Well he just persists with saying 'I'm right and you're wrong'. And because (focus child) thinks he's always right even when he's wrong.' 'There are people who like to think they are always right and I think he's one of them.'

Peer 6 (coded as internal location of cause)

'In year 4, some people came to school and kept on calling (focus child) names. That was last year, he has left now. He (focus child) called names back.' 'He gets annoyed.'

Peer 1 (coded as a mutual location of cause)

The following excerpts illustrate the internal and mutual locations of cause to which behaviour was attributed after the CoF intervention.

'Well.. he's still banging on the table with his pencil. It puts people off..... you can break the lead in the pencil too. ' 'Maybe he is finding the work hard. He works for a bit and then maybe he gets bored. Or he could be finding it difficult to concentrate.'

Peer 1 (coded as internal location of cause)

'Um... well he's still doing this drumming thing on the table. Although it's rhythmic it's annoying.' '.... I think he likes doing it and he doesn't realise that some people don't like it.'

Peer 6 (coded as internal location of cause)

'Swearing.' 'I think he just copies it. He hears it and then he has started to do it.'

Peer 3 (coded as mutual location of cause)

'Well, not really but sometimes he shouts quite loud and makes funny noises when everyone else is talking. Quite loud noises.' 'I think because everyone else is making a noise he doesn't want to be left out so he tries to make loud noises to join in.'

Peer 5 (coded as mutual location of cause)

Qualitative analysis of attributions made by peers about the focus child's behaviour in an unsuccessful situation

No responses before or after the CoF intervention involved peers identifying external causes of the focus child's behaviour in unsuccessful situations. Instead, behaviour was attributed to the child's internal qualities (not knowing 'how to be with people', thinking he's always right, getting annoyed, not realising people would find his behaviour annoying) or mutual causes (copying behaviour, joining in with noises). Both before and after the CoF intervention, peers demonstrated a careful understanding of the difficulties faced by the focus child and the way in which the focus child may think differently (for example, not realising people would find his behaviour annoying).

In relation to question five, no clear change in the qualitative nature of attributions made by peers about the focus child's behaviour was observed. An external cause of the focus child's behaviour, specifically autism, was not identified by any peers on any occasion.

4.7 Summary of findings

This summary presents findings (across all the cases) which relate to each research question.

4.7.1 Question One: Does the CoF intervention have a positive impact on the social inclusion of pupils with autism in mainstream classrooms?

For all cases, a rise in the focus child's acceptance levels and a fall in the focus child's rejection levels occurred following the CoF whole class meeting. For all cases, the focus child's mean acceptance level during the CoF intervention was higher than his mean acceptance level before the CoF intervention. For four cases, the focus child's mean rejection level was lower during the CoF intervention than his mean rejection level before the CoF intervention.

For focus pupils where rejection levels were higher than or equal to acceptance levels before the CoF intervention, this pattern was reversed after the whole class CoF meeting (i.e acceptance levels rose to be higher than rejection levels). For focus pupils where acceptance levels were higher than rejection levels before the CoF meeting, the difference between acceptance and rejection levels increased after the whole class CoF meeting.

Overall, the five cases presented suggest that the CoF had a positive impact on the focus children's level of social inclusion.

4.7.2 If the CoF is seen to have a positive impact on the social inclusion of pupils with autism, which part of the intervention (the whole class meeting or the subsequent weekly circle meetings) is associated with change?

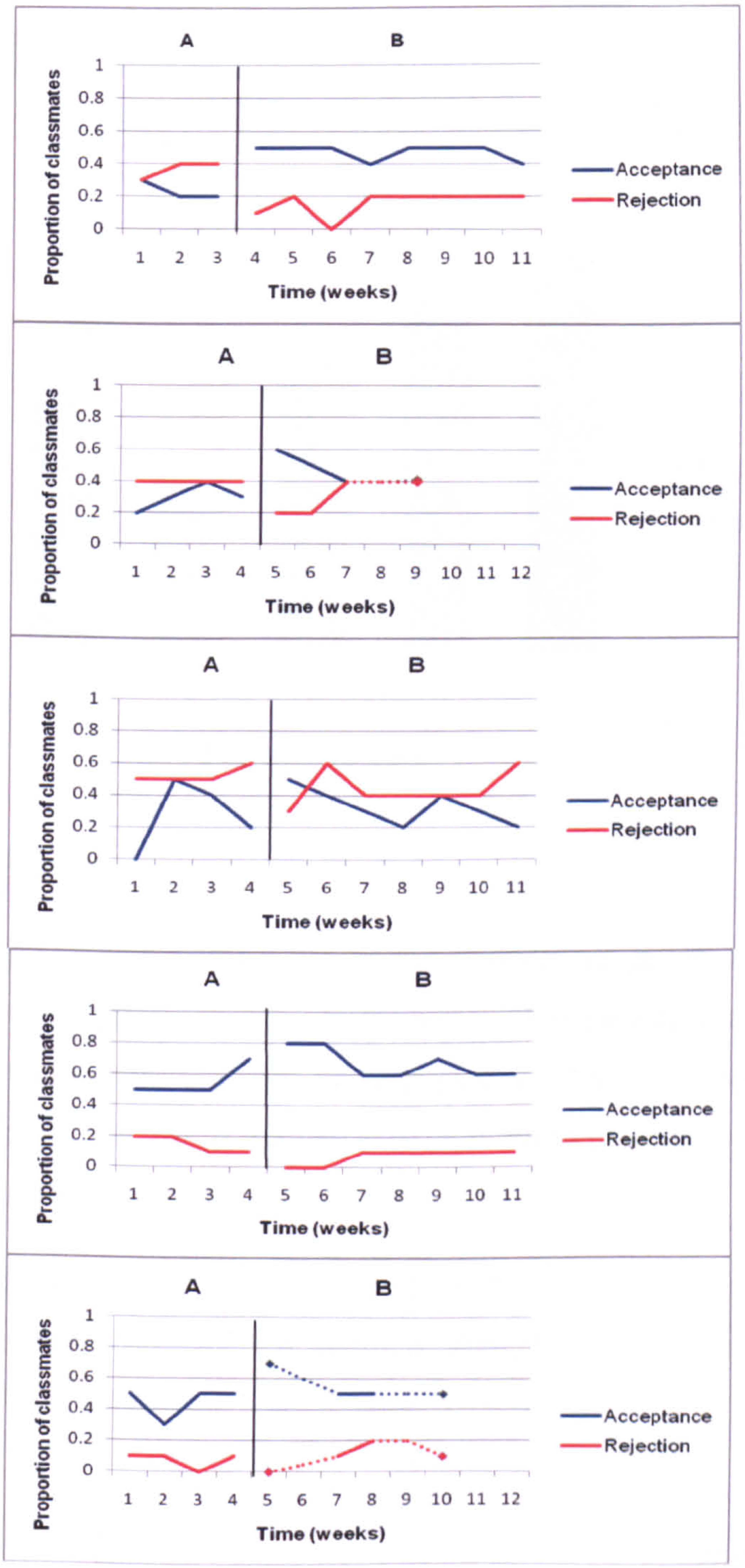
For all five cases, positive changes in the focus children's levels of acceptance and rejection observed following the whole class CoF intervention were not maintained at the same level during the course of the weekly CoF meetings.

For two cases (B and C), within three weeks of the whole class meeting, levels of rejection had accelerated and levels of acceptance decelerated to mean that levels of rejection had returned to exceeding or equaling levels of acceptance. For two cases (D and E), levels of acceptance generally decelerated and levels of rejection generally accelerated during the course of the weekly CoF meetings though the pattern of higher levels of acceptance than rejection (as seen in the baseline phase too) was maintained. For one case (case A), the change from rejection levels exceeding acceptance levels in phase A to acceptance levels exceeding rejection levels in phase B continued throughout phase B though the difference between acceptance and rejection levels lessoned over time.

For three (B, D, E) of the four cases (A, B, D, E) where a relatively clear picture of the focus children's level of acceptance and rejection before the CoF meeting was observed, the final measures of the focus children's level of acceptance in the intervention phase were comparable to those observed before the start of CoF intervention. The final measures of the focus children's level of rejection in the intervention phase were comparable to those observed before the start of the intervention in two out these three cases. For one case (D), the final measure of the focus child's level of rejection in the intervention phase was higher than the level of rejection observed before the CoF intervention. For one case (A) the final measure of the focus child's level of acceptance in the intervention phase was higher than the level of acceptance observed before the CoF intervention and the final measure of the focus child's level of rejection in the intervention phase was lower than the level of rejection observed before the intervention phase.

The graphs below provide a summary of findings related to questions one and two.

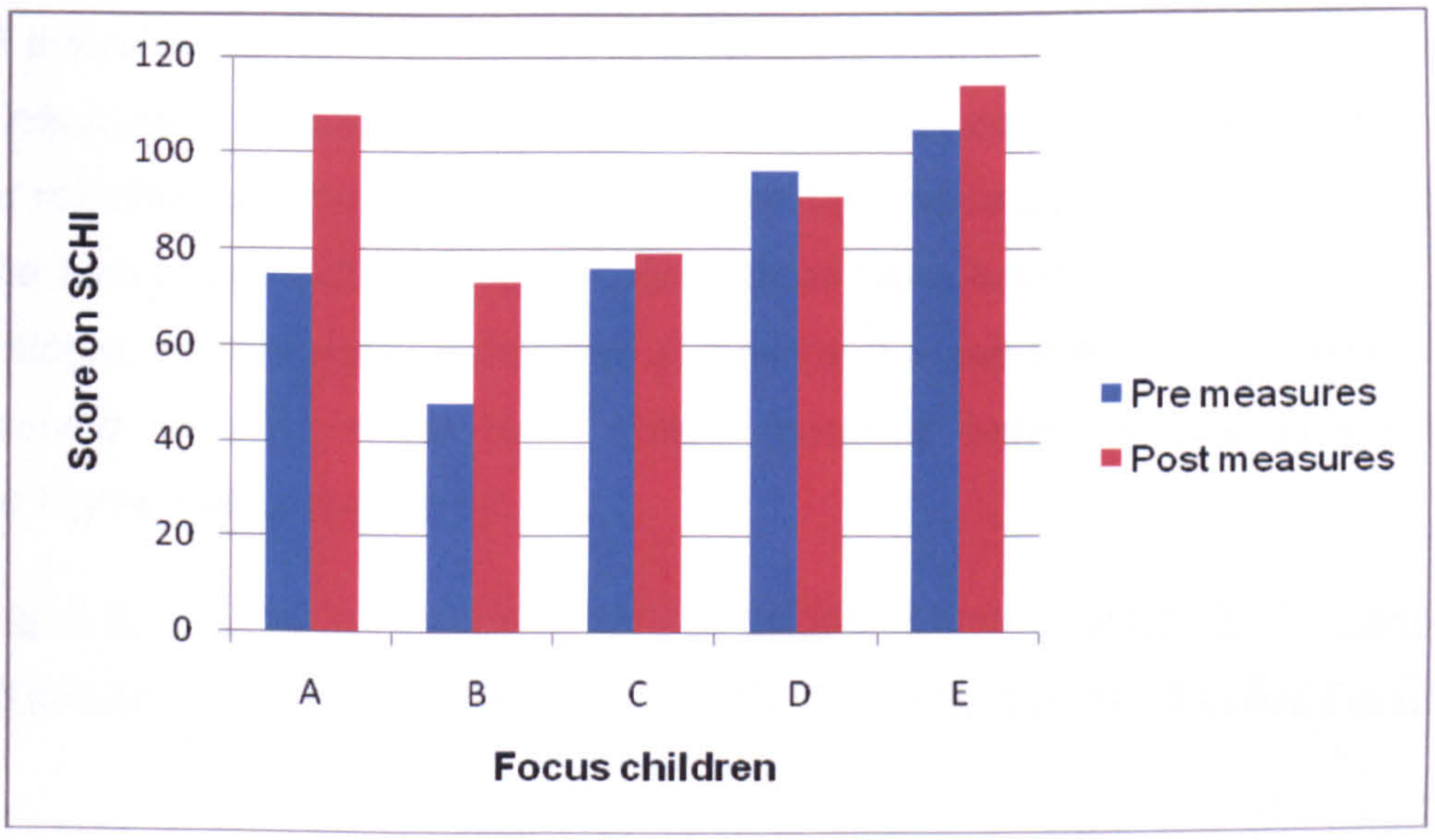
Graphs 4.1, 4.2, 4.3, 4.4 and 4.5: Summary of focus child A, B, C, D, and E's level of social inclusion over time as rated by their classmates using the SIS (Fredrickson and Graham, 1999).



4.7.3 Question Three: Is the CoF intervention associated with a change in focus children's rating of happiness in school?

The graph below shows each focus child's pre and post scores on the SCHI.

Graph 4.7: Focus child A, B, C, D and E's scores on the SCHI (Ivens, 2007) completed before and after the CoF intervention



Summary of findings from graph 4.7

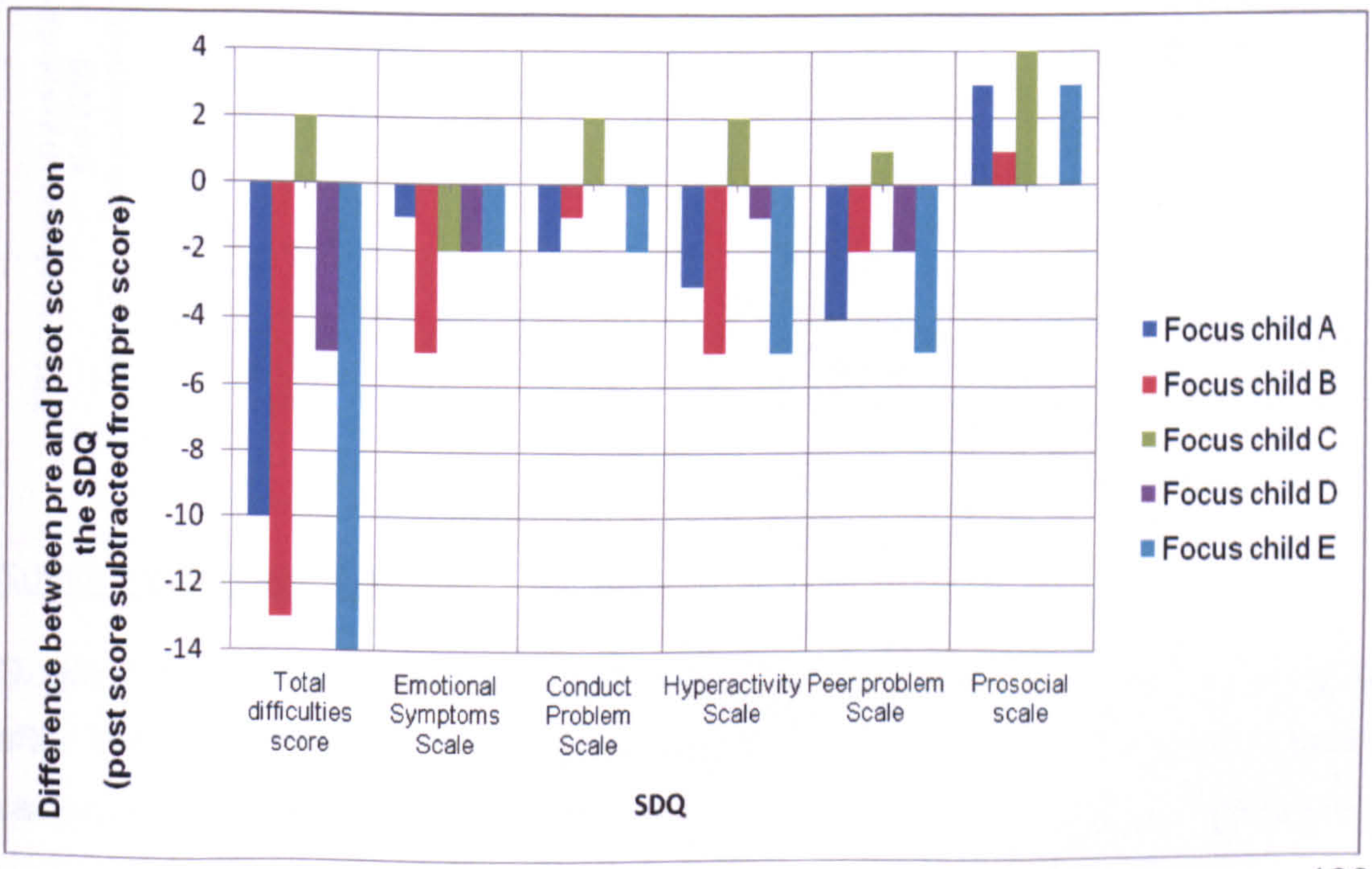
Graph 4.7 illustrates that in four out of the five cases (A, B, C, E), the focus pupils' scores on the SCHI after the CoF intervention exceed their scores on the SCHI before the CoF intervention. Increases after the CoF intervention range from 3 to 33. Child D's score before the CoF intervention exceeds his score after the CoF intervention by 5.

In relation to question two, for four out of the five focus pupils, the CoF intervention was associated with a positive change in focus children's rating of happiness in school.

4.7.4 Question Four: Is the CoF intervention associated with a perceived change in focus children's behaviour?

The graphs below illustrate the differences between scores obtained on the SDQ before and after the CoF intervention. Graph 4.8 relates to SDQs completed by teachers. Graph 4.9 relates to SDQs completed by facilitators. Difference was calculated by subtracting scores on the SDQ completed after the CoF intervention from scores on the SDQ completed b the CoF intervention. For the negative scales (emotional symptoms, conduct problems, hyperactivity and peer rejection) a change in a negative direction indicates a perceived reduction in the focus child's difficulties (i.e post scores were lower than pre scores). For the single positive scale (prosocial) a change in a positive direction indicates a perceived increase in the focus child's prosocial behaviour (i.e. post scores were higher than pre scores).

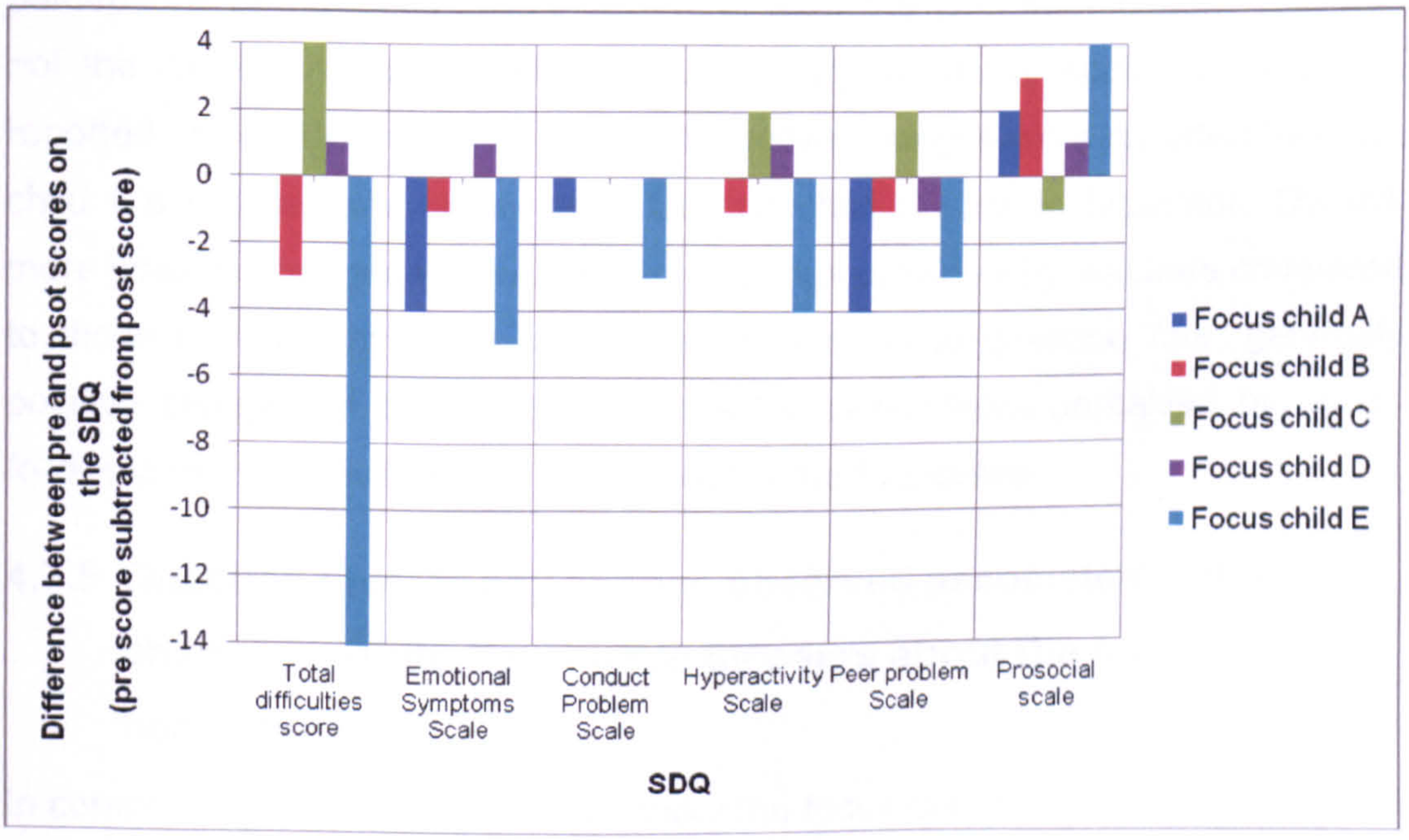
Graph 4.8: Differences between teacher ratings of focus child A, B, C, D and E's behaviour on the SDQ (Goodman, 1997) completed before and after the CoF intervention



Summary of graph 4.8

Graph 4.8 illustrates a general trend of positive change in the class teachers' ratings of the focus children's behaviour before and after the CoF intervention. For most cases, scores on negative scales are reduced (a perceived reduction in the focus child's difficulties) and a scores on the positive scale are increased (a perceived increase in the focus child's positive behaviour). Noticeably, scores on three of the four negative scales for child C suggest a perceived increase in the focus child's difficulties following post the CoF intervention.

Graph 4.9: Differences between circle facilitator's ratings of focus child A, B, C, D and E's behaviour on the SDQ (Goodman, 1997) completed before and after the CoF intervention



Summary of graph 4.9

Graph 4.9 illustrates fewer changes in the circle facilitator's ratings before and after the CoF intervention compared to the class teachers' ratings. For most cases, scores on negative scales are reduced or unchanged (a perceived

reduction in the focus child's difficulties or no perceived change) and a scores on the positive scale are increased (a perceived increase in the focus child's positive behaviour). As with the class teachers' ratings, noticeably, scores on two of the four negative scales for child C suggest a perceived increase in the focus child's difficulties following the CoF intervention and scores on the prosocial scale for child C suggest a perceived decrease in the focus child's prosocial behaviour following the CoF intervention. Scores on two of the four negative scales for child D also suggest a perceived increase in the focus child's difficulties following the CoF intervention.

Summary of graphs 4.8 and 4.9

Overall, graphs 4.8 and 4.9 suggest that there was a positive change in adults' perceptions of the focus child's behaviour after the CoF intervention. This was not the case, however, for every adult's rating on every scale. Some adults reported no changes on some scales. Negative changes were reported by focus child C's teacher and circle facilitator and child D's circle facilitator. Overall, more positive changes were observed in ratings provided by teachers compared to those provided by circle facilitators. In relation to question four, generally positive changes in the focus children's behaviour were perceived by adults following the CoF intervention in three out of the five cases.

4.7.5 Question Five: Is any change observed associated with a change in attributions made by peers about the focus child's behaviour?

In comparing the attributions made about the focus child's behaviour before and after the CoF intervention, no clear difference was observed between the number of internal, external and mutual attributions made by peers about the focus child's behaviour after the CoF intervention. The sum of coded attributions made about the focus child's behaviour in unsuccessful situations before the

CoF intervention equalled the sum of coded attributions made after the CoF intervention.

Responses before and after the CoF intervention all identified internal or mutual causes of the focus child's behaviour. At both points in time, however, these internal or mutual causes demonstrated some good understanding of the child's difficulties and the way in which the focus child may think differently though they did not directly mention the description of the child's difficulties provided in the whole class CoF meeting.

In relation to question five, interview responses demonstrated no clear change in the location of cause to which the focus child's behaviour was attributed by peers after the CoF intervention.

5 Discussion

5.1 Introduction to Chapter 5

This chapter aims to examine the study's findings in light of the theory and research presented in the Literature Review (Chapter 2) and the design, measures and procedures described in the Methodology (Chapter 3). Limitations of the study will be described and implications for practice and future research outlined. The chapter will conclude with the author's reflections on the research experience and final conclusions.

The chapter will start with a summary of the research findings. Findings related to each individual case will be presented before overall findings, across cases, are considered.

5.2 Summary of findings related to each case

5.2.1 Summary of findings: Case A

Data from child A's classmates suggests that prior to the CoF intervention child A's level of rejection exceeded or equalled his level of acceptance. Following the whole class CoF meeting, this pattern of acceptance and rejection was reversed so levels of acceptance exceeded levels of rejection. This pattern continued throughout phase B though the difference between acceptance and rejection levels lessoned over time. A positive change in child A's rating of happiness at school was observed following the CoF intervention. A positive change in adults' ratings of child A's behaviour was also observed following the CoF intervention.

5.2.2 Summary of findings: Case B

Data from child B's classmates suggests that prior to the CoF intervention child B's level of peer rejection exceeded or equalled his level of peer acceptance. Following the CoF whole class meeting, this pattern of acceptance and rejection

was reversed so that levels of acceptance exceeded levels of rejection. Conclusions about the impact of the intervention over time are difficult to draw due to missing data in the intervention phase. Available data suggests that three weeks after the CoF whole class meeting, child B's level of rejection had risen to a level which equalled his level of acceptance. A positive change in child B's rating of happiness at school was observed following the CoF intervention. A positive change in adults' ratings of child B's behaviour was also observed following the CoF intervention.

5.2.3 Summary of findings: Case C

Data collected prior to the introduction of the CoF intervention shows great variability in child C's classmates' ratings of acceptance. This makes comparisons between the baseline and intervention phase, and subsequent conclusions about the impact of the CoF, difficult to draw. Following the CoF whole class meeting, child C's level of acceptance exceeded his level of rejection for one week only. For the remainder of the intervention phase, child C's level of rejection exceeded his level of acceptance and the level of acceptance was seen to decelerate over time. A positive change in child C's rating of happiness at school was observed following the CoF intervention. Mixed results were found in relation to adults' ratings of child C's behaviour following the CoF intervention. Child C's teacher perceived a positive change in some aspects of child C's behaviour following the CoF intervention, but a negative change in other aspects of his behaviour. Child C's circle facilitator perceived no positive changes in child C's behaviour following the CoF intervention perceiving either an increase or no change in areas of difficulty and a decrease in child C's prosocial behaviour.

5.2.4 Summary of findings: Case D

Data from child D's classmates suggests that prior to the CoF intervention child D's level of peer acceptance exceeded his level of peer rejection. Following the CoF whole class meeting, a slight positive change in acceptance and rejection levels was observed. This change was not maintained during the course of the weekly CoF meetings as a deceleration in acceptance levels and a small acceleration in rejection levels resulted in levels at the end of the intervention phase which are comparable to those observed prior to the CoF intervention. A negative change in the focus child's rating of happiness at school was observed following the CoF intervention. Mixed results were found in relation to adults' ratings of child D's behaviour following the CoF intervention. Child D's teacher perceived fewer difficulties but no change in the focus child's prosocial after the CoF intervention while child D's circle facilitator saw some positive and some negative changes in child D's difficulties and a positive change in his prosocial behaviour.

5.2.5 Summary of findings: Case E

Data from child E's classmates suggests that prior to the CoF intervention child E's level of peer acceptance exceeded his level of peer rejection. Following the CoF whole class meeting a positive change in acceptance and rejection levels was observed. This change was not maintained during the course of the CoF weekly meetings. Over time, a deceleration in acceptance levels and an acceleration in rejection levels meant that by the final data point in the intervention phase, child E's acceptance level was comparable to that observed prior to the CoF intervention and child E's rejection level was higher than that observed prior to the CoF intervention. A positive change in child E's rating of happiness at school was observed following the CoF intervention. A positive change in adults' ratings of child E's behaviour was also observed.

5.3 Summary of results related to each research question

The summary of findings for cases A, B, C, D and E highlights the study's focus on the impact of the CoF intervention on five different individuals. In order to consider overall themes in the findings across the cases, however, results from all five cases will next be summarised and considered in relation to each research question and hypothesis.

5.3.1 Question One: Does a CoF intervention have a positive impact on the social inclusion of pupils with autism in mainstream settings?

Research Hypothesis

The CoF intervention will increase focus pupils' level of peer acceptance and decrease focus pupils' level of peer rejection.

Null hypothesis

There will be no change in the focus pupils' level of peer acceptance and rejection following the CoF intervention.

Key findings

For all cases, an increase in the focus child's levels of acceptance and a decrease in the focus child's level of rejection was observed following the whole class CoF meeting. For focus pupils where rejection levels were higher than or equal to acceptance levels before the CoF intervention, this pattern was reversed after the whole class CoF meeting. For focus pupils where acceptance levels were higher than rejection levels before the CoF meeting, the difference between acceptance and rejection levels increased following the whole class CoF meeting.

Possible explanations for findings

- The CoF intervention had a positive impact on the focus children's level of acceptance and rejection.

- Changes in factors in the classroom and school environment, other than the CoF intervention, had a positive impact on the focus children's level of rejection and acceptance.

- The focus children's peers were aware of the researcher's hopes for change in their ratings of the focus child and showed some bias (either deliberate or unconscious) in their ratings of the focus children.

Conclusions

As the same pattern of change (a rise in acceptance levels and a fall in rejection levels) was observed following the start of the intervention (the whole class CoF meeting) in all cases, the researcher concludes that the changes observed are the result of the CoF intervention. The possibility that changes observed are due to non CoF related factors including bias from peers in their ratings, however, cannot be discounted. The research hypothesis is accepted with caution drawn from the potential alternative explanation.

5.3.2 Question Two: If the CoF is seen to have a positive impact on the social inclusion of pupils with autism, which part of the intervention (the whole class meeting or the subsequent weekly circle meetings) is associated with change?

Research Hypothesis

Focus pupils' level of peer acceptance will increase and focus pupils' level of peer rejection will decrease following the whole class meeting. The level of peer acceptance will continue to increase and the level of peer rejection will continue to decrease during the course of weekly circle meetings.

Null hypothesis

Focus pupils' level of peer acceptance will increase and focus pupils' level of peer rejection will decrease following the whole class meeting. The level of peer acceptance will not continue to increase and the level of peer rejection will not continue to decrease during the course of subsequent weekly CoF meetings.

Key findings

For all cases, positive changes in the focus children's levels of acceptance and rejection were observed following the whole class CoF intervention but were not clearly maintained during the course of the weekly CoF meetings. Where clear patterns of acceptance and rejection were found before the CoF intervention, for three out of the four cases final measures of acceptance and rejection levels during the intervention phase are generally comparable to those observed before the CoF.

Possible explanations for findings

- The start of the CoF intervention (specifically, the whole class meeting) had a positive impact on the focus children's level of social inclusion but the impact of this meeting was not maintained over time. The weekly CoF meetings had no further impact on the focus children's level of social inclusion.

- Changes in factors in the classroom and school environment, other than the CoF intervention, resulted in the pattern of change observed.

- The focus children's peers were aware of the researcher's hopes for change in their ratings of the focus child at the start of the study and showed some bias (either deliberate or unconscious) in their ratings of the focus child at the start of the study though their awareness reduced over time.

Conclusions

For all cases, a positive change in the focus children's level of acceptance and rejection following the whole class meeting was observed but these positive changes were not clearly maintained during the subsequent weeks of CoF meetings. As the same pattern was observed in all cases, the researcher concludes that the changes observed are the result of the CoF intervention. The possibility that changes observed are due to non CoF related factors including bias from peers in their ratings, however, cannot be discounted. The null hypothesis is accepted with caution drawn from the potential alternative explanation. In this study, not only did levels of acceptance *not* continue to increase and levels of rejection *not* continue to decrease during the course of weekly CoF meetings, but levels of acceptance were seen to decrease and levels of rejection increase.

Although the study's findings suggest a positive answer to the first research question, the data in relation to question two suggests that the CoF's positive impact on the focus children's level of social inclusion was not maintained. The findings suggest, therefore, that no longer term impact of the CoF intervention was observed for the five focus pupils involved in this study.

5.3.3 Question three: Is the CoF intervention associated with a change in focus children's rating of happiness in school?

Research Hypothesis

Focus children's rating of happiness in school will be higher after the CoF intervention than before the intervention.

Null hypothesis

There will be no change in focus children's rating of happiness at school after the CoF intervention.

Key findings

For four cases, focus pupils' ratings of happiness in school were higher after the CoF intervention. For one case, the focus pupil's rating of happiness in school was lower after the CoF intervention.

Possible explanations for findings

- The CoF intervention had a positive impact on four of the focus children's rating of happiness in school but a negative impact on one focus child's rating of happiness in school.

- Changes in aspects of the focus children's experience of school, not related to the CoF intervention, had a positive impact on four of the focus children's rating of happiness in school and a negative impact on one focus child's rating of happiness in school.

- The focus children involved in the study were aware of the researcher's hopes for change in their ratings of happiness. Some pupils showed bias (either deliberate or unconscious) in their ratings.

Conclusions

The majority of focus pupils reported a positve change in their feelings of happiness in school after the CoF intervention. The possibility that changes in ratings of happiness are the result of factors not connected the CoF intervention, however, must be considered. The research hypothesis is accepted for the majority of focus children with caution drawn from the potential alternative explanations.

5.3.4 Question Four: Is the CoF intervention associated with a perceived change in focus children's behaviour?

Research Hypothesis

The teachers' and circle facilitators' perception of the focus children's strengths and difficulties will change – in particular, the adults will report lower scores on the difficulties scale and higher scores on the prosocial scale after the CoF intervention.

Null hypothesis

There will be no change in the adults' perceptions of the focus children.

Key findings

For three cases, adults generally reported a perceived positive change in the focus children's behaviour (a reduction in all, or some, areas of difficulty and an increase in prosocial behaviour) after the CoF intervention. For two cases, adults reported some positive changes in behaviour, but also some negative changes in behaviour, after the CoF intervention.

Possible explanations for findings

- The CoF intervention had a positive impact on the perceptions of adults working with three of the focus children but some negative impact on the perceptions of adults working with one focus child.
- The CoF intervention had a positive impact on three of the focus children's behaviour but a negative impact on some aspects of two focus children's behaviour.
- Changes in aspects of the focus children's experience of school had a positive impact on the behaviour of three focus children, or the perceptions of adults related to four focus children, but a negative impact on the

behaviour of two focus children, or the perceptions of adults related to these focus child.

- Some of the adults involved in the study were aware of the researcher's hopes for change in ratings of the focus child's behaviour. They may therefore have showed some bias (either deliberate or unconscious) in their ratings.

Conclusions

The majority of adults reported positive perceived changes in focus children's behaviour after the CoF intervention. The possibility that changes in ratings of behaviour are the result of factors not connected the CoF intervention, however, must be considered. The research hypothesis is accepted for the majority of focus children with caution drawn from the potential alternative explanations.

5.3.5 Question five: Is any change observed associated with a change in attributions made by peers about the focus child's behaviour?

Research Hypothesis

Changes in social inclusion ratings will coincide with a change in attributions made by peers about the focus child's behaviour. After the CoF intervention peers will attribute the focus child's behaviour more to an external cause – autism.

Null hypothesis

There will be no change in the attributions made about the focus child's behaviour.

Key findings

No difference was observed between the number of internal, external and mutual attributions made by peers about the focus child's behaviour after the CoF intervention.

Possible explanations for findings

- The CoF intervention did not change the nature of internal and external attributions made by peers about the focus child's negative behaviour.
- The CoF intervention did change the nature of attributions made by peers about the focus child's behaviour but any changes were not maintained over time and evident during interviews eight weeks after the start of the CoF intervention
- The CoF intervention did change the nature of the attributions made by peers about the focus child's behaviour but the interview procedure and coding methodology did not illustrate these changes.

Conclusions

The interviews conducted indicated no clear change in the location of cause (internal, external or mutual) to which peers attributed the focus child's negative behaviour following the CoF intervention. The null hypothesis, therefore, is accepted. Factors related to the researcher's timing and method of measuring of attributions, however, may mean that any changes which did occur were not captured in this study.

5.4 Links to previous research evidence

5.4.1 The focus pupils

Research suggests that while some pupils with additional needs experience positive relationships with peers (Evans *et al.* 1999; Staub *et al.* 1994), pupils

with autism are at higher risk of bullying (Batten *et al.*, 2006; Humphrey and Lewis, 2008; National Children's Bureau, 2007, Norwich and Kelly, 2004; Thompson *et al.*, 2007) and social isolation (Locke *et al.*, 2010) and are less accepted and more rejected than their non-autistic peers (Chamberlain *et al.*, 2007). The data gathered at the start of this study supports literature's suggestion that the experiences of pupils with autism in mainstream schools vary.

At the start of the study, the five focus children's SCHI scores varied from 48 to 105. Three pupils' scores (A, B and C) were within the 'low' or 'very low' category and two pupils' scores (D and E) were within the 'average' or 'high average' category. For the four cases where a clear picture of the focus child's level of acceptance and rejection prior to the CoF intervention was obtained, two pupils' (A and B) levels of rejection were higher than or equal to their levels of acceptance and two pupils' (D and E) levels of acceptance were higher than their levels of rejection.

Although it is not possible to make a causal link between a focus child's level of social inclusion and their happiness at school, it is of interest that the two pupils with the highest scores on the SCHI (D and E) were the pupils whose acceptance levels were higher than their rejection levels at the start of the project.

The low scores on the SCHI for focus pupils A, B and C and levels of peer rejection which exceeded or equalled levels of acceptance for focus pupils A and B at the start of this study reinforces literature's description of the negative experiences some, but not all, pupils with autism encounter in their mainstream classrooms (Tashie, 2006; Guralnick, 1986; Peterson, 1982; Guralnick *et al.*, 1994; Juvonen, 1991). The high ratings of rejection observed for focus pupils A and B could be seen to add to the evidence which illustrates the social cost of

inclusion. These findings highlight the need for intervention which aims to support the positive social experiences of pupils with autism within their mainstream classrooms.

5.4.2 Evaluating the CoF

The six studies identified in the systematic literature review which have previously sought to evaluate the CoF intervention with pupils with autism, all report positive outcomes which they attribute to the CoF intervention. This study too provides some positive outcomes (positive changes in most cases in focus pupils' ratings of happiness at school and adults' perceptions of the focus children's behaviour) though, as in previous studies, these changes are not causally linked to the CoF intervention. Where a causal link between outcomes and the CoF intervention is provided in this study (in the consideration of the focus children's levels of social inclusion), a short term impact but no longer term positive outcomes is reported.

In order to consider the study's findings in relation to previous research more carefully, each aspect of the study will be discussed within the context of previous research evidence.

5.4.3 The CoF and the focus children's level of social inclusion

Previous research reports positive changes in the focus child's popularity (Boznic *et al.*, 2002) and acceptance and rejection ratings (Fredrickson *et al.*, 2005) following a six week CoF intervention. This study's findings are not consistent with these previous findings.

This study's evaluation of the CoF intervention is built on the methodology used by Fredrickson *et al.* (2005). Like this research, Fredrickson *et al.* (2005) considered the impact of the CoF intervention on focus children's level of acceptance and rejection (as rated by peers using the SIS). They considered ratings of acceptance and rejection at four points in time (before the CoF

intervention, after the whole class CoF meeting, after the last weekly CoF meeting and one term after the last meeting). For the one pupil in their study with a diagnosis of autism, the authors report that the focus child's acceptance increased and rejection decreased following the whole class CoF meeting and that acceptance continued to increase and rejection continued to decrease during the course of six weeks of CoF meetings. This study's findings that the whole class CoF meeting had a positive impact on the focus children's acceptance and rejection ratings but that this impact was not maintained during the course of the weekly CoF meetings, are not consistent with Fredrickson *et al.*'s (2005) outcomes.

The decline in the focus children's level of social inclusion during the course of the weekly CoF meetings which was observed in this study is more consistent with the findings Fredrickson *et al.* (2005) report in relation to their non-autistic participants. For these participants with learning difficulties or social, emotional and behavioural difficulties, Frederickson *et al.* (2005) report that positive changes in the focus pupils' acceptance and rejection ratings following the whole class CoF were not maintained during the course of weekly CoF meetings and at the follow-up.

In considering this study's findings in relation to Fredrickson *et al.*'s (2005) research, potential differences between the CoF intervention implemented in this study and that used in Fredrickson *et al.*'s (2005) study were considered. As a fairly brief description of the CoF intervention is provided in Fredrickson *et al.*'s (2005) article, the researcher contacted the authors by email to seek further details. Laura Warren, who was responsible for setting up the CoF for the pupil with autism, was able to provide some additional information.

The content of the whole class meeting and the weekly CoF meetings was considered as a potential source of difference between Fredrickson *et al.*'s (2005) study and this one. Fredrickson *et al.* (2005) explain that during the

whole class CoF meeting delivered for the pupil with autism, classmates were given an age-appropriate explanation of the inherent difficulties that children with autism experience with communication and social interaction, and how these difficulties influence their behaviour. As no further details of the explanation used were documented in the article, and it was not clear whether the term 'autism' had been used, the researcher sought clarification about the nature of explanation shared with peers.

The researcher hypothesised, for example, that if Fredrickson *et al.* (2005) had included the term 'autism' in their definition, the positive outcomes they report could relate more to the explicit sharing of the focus pupil's diagnosis than to the CoF intervention. It could be that the use of the term 'autism' strengthens peers ability to reattribute the focus child's behaviour to an external cause. In correspondence, however, Laura Warren confirmed that their study, like this one, did not include the use of the term autism. She also kindly reviewed details of the format of the whole class meeting and weekly CoF meetings used in this study and confirmed that this appeared 'evidently similar' to that she implemented.

The person/people implementing the CoF was considered as an alternative potential source of difference between Fredrickson *et al.*'s (2005) study and this one. The weekly CoF meetings in Fredrickson *et al.'s* (2005) study were delivered by trainee EPs. The weekly CoF meetings in this study were delivered by school staff. It is possible, therefore, that the use of an outside professional in Fredrickson *et al.*'s (2005) study could explain the ongoing positive changes in the focus child's acceptance and rejection ratings which they report during the course of the weekly CoF meetings. If the use of an outside professional is the key to positive changes during the course of weekly CoF meetings, however, it is interesting to note that positive changes during the course of weekly CoF meetings were not observed in the other CoFs set up by Fredrickson *et al.* (2005) for their non-autistic participants.

Factors associated with the focus children and teacher involved in the CoFs were considered as further potential sources of difference between Fredrickson *et al.*'s (2005) study and this one. In correspondence, Laura Warren suggested that the positive impact observed for the focus child with autism in their study could be related to the particularly sociable nature of the focus child, the way in which the focus child responded well to the support offered by the CoF and the enthusiasm of the teacher. No formal measures of the focus children's sociability, the focus children's level of engagement with the intervention and teacher's enthusiasm were recorded in this study. This makes it difficult to consider the influence of these variables on outcomes in this study.

After reviewing the similarities and differences between the intervention and intervention implementation in this study and Fredrickson *et al.*'s (2005), no definite cause of the difference in outcomes is clear. Ideas for future research which explores how the initial changes observed in this study could be maintained, in the way they are in Fredrickson's *et al.*'s (2005) study, are discussed where areas for future research are outlined.

5.4.4 The CoF and the focus child's happiness at school

No previous research has considered the impact of the CoF on measures gained directly from the focus child. Whitaker *et al.*'s (1998) study involved discussion with the focus children, though their views are not described in any detail.

The lack of research which has included the views of the focus children involved in CoFs interventions seems surprising within the current context of educational practice which includes a heavy emphasis on the views of young people (The United Nations Convention on the Rights of the Child, 1989; Every Child Matters, DfES, 2003; The Code of Practice, DfEs, 2001; SEN Toolkit, DfES, 2001).

Cook-Sather (2006) suggests that increasing emphasis on pupil voice is based on the following convictions: that young people have unique perspectives on learning, teaching and schooling; that their insights warrant not only the attention but also the responses of adults; and that they should be afforded opportunities to actively shape their education (p.359). Messiou (2002) asserts the right of children to be listened to as a key element in the progress and process of inclusion in particular. She suggests that in order to understand inclusive education we need to explore the views of those who are marginalised.

With this in mind, gaining the views of pupils with autism is essential to research which aims to support their successful inclusion. The researcher aimed to keep the views of pupils with autism central to this project by including personal accounts of inclusion from those with autism in the Literature Review and including the view of the focus pupils in the evaluation of the CoF intervention.

Writing about the methodology involved in gaining pupil views, Gray (2004) and Cook-Sather (2006) suggest that while the importance of pupil voice is well accepted, the practicalities and issues involved in ensuring children's voices are properly heard are less well understood. It may be that the complexities involved in accurately gaining and reporting pupil views could explain the lack of pupil voice in existing research which has sought to evaluate the use of the CoF intervention with pupils with autism. Discussion relating to gaining the views of the focus child in future research is provided later where areas for future research are outlined.

5.4.5 The CoF and the focus child's behaviour

Four previous studies have considered the impact of the CoF intervention on the focus children's behaviour. Kalyva and Avramidis (2005) and Haring and Breen (1992) report quantified changes in the focus children's behaviour (the number of interactions with peers) following the CoF intervention.

Fredrickson *et al.* (2005) report a positive change in peer perceptions of the focus children's behaviour, rather than the behaviour itself. Although they suggest that the CoF works by changing peers' perceptions and peers' behaviour rather than by directly changing the focus child's behaviour, as James and Leyden (2010) note, as peers' perceptions and peers' behaviour change, new relationships are forged and new behaviour may emerge. This could explain the changes in observable behaviour reported by Kalya and Avramidis (2005) and Haring and Breen (1992).

Whitaker *et al.* (1998) also consider perceptions, rather than observations, of the focus child's behaviour. Like this study, they consider adults', rather than peers' perceptions of the focus child's behaviour. Whitaker *et al.*'s (1998) findings are consistent with the majority of outcomes reported in this study - that adults perceived some positive changes in the focus children's behaviour following the CoF intervention. Whether the changes reported by adults in this study and Whitaker *et al.*'s (1998) study reflect a change in the focus children's behaviour or a change in adults' perceptions of behaviour is not clear.

The positive changes in the focus children's behaviour reported by the majority of adults in this study and in previous research must be considered within the context of research which has sought to gain teachers' views on inclusion. Avramidis *et al.* (2000), Scruggs and Mastropieri (1996), Dockrell and Lindsay (2001) and responses to the Audit Commission's consultation (Peacey, Dockrell and Peart, 2002) suggest that teachers recognise their lack of knowledge and skill in the area of inclusive practice and lack the support they feel they need. Taking this into account, the changes adults report in the focus children could be interpreted as a reflection of changes in adults' feeling about the situation which could be caused by the support offered from an outside professional that the CoF intervention provides. In this study, for example, for each case, the researcher spent a considerable time with each adult talking about the focus

child and the focus child's needs. The opportunity for further discussion was also provided.

Miller (2003) writes about involvement of an EP providing a 'temporary and overlapping system' which enables teachers to step outside the values and norms of the behaviour imposed through the membership of the school system and consider the situation from a new perspective. From Miller's (2003) point of view, it could be that the involvement of an trainee EP, rather than the CoF itself, allowed adults to consider the situation from a new perspective – a perspective in which the focus child was viewed more positively.

5.4.6 The CoF and changes in attributions

This study's exploration of the attributions made by peers about the focus child's behaviour was based on the hypothesis proposed by Fredrickson *et al.* (2005) that the whole class CoF meeting works at reattributing negative behaviour displayed by the focus child to the external and stable cause - autism. This hypothesis is consistent with attribution theory and with previous work which reports positive outcomes associated with providing peers with descriptive and explanatory information about a classmate with additional needs (Campbell *et al.* 2004; Frederickson *et al.* 2007; Ochs *et al.* 2001). No previous research has sought to explore this hypothesis and provide evidence to support a better understanding of the processes involved in the CoF intervention.

This study's investigation into peers' attributions about the focus child's behaviour did not provide evidence of the change in thinking described by Fredrickson *et al.* (2005). The number of external attributions made about the focus child's negative behaviour was not seen to increase following the CoF intervention. The limitations of the methodology used to explore peers' attributions, however, as discussed further below, could explain these findings. Suggestions for methodology which could be used in future research into peer attributions are provided later where areas for future research are outlined.

5.5 Limitations of this research

The results reported must be considered within the context of the limitations of the research. Before implications for future research can be considered, it is important to describe the limitations of the research.

5.5.1 The use of a single case experimental design

The study's AB single case experimental design involved limited opportunity, during a relatively short baseline phase, to observe natural trends in SIS outcomes before the start of the CoF intervention. Variation in ratings of acceptance and rejection during this short baseline phase occurred in all cases. This was particularly problematic for one case (case C) where large variation in the baseline phase meant a picture of the focus child C's level of acceptance and rejection was not clear.

Evaluation of baseline trend is fundamental to the principles upon which single case experimental designs operate (Barlow *et al.*, 2009; Barlow and Herson, 1973, Robson, 2002). As baseline data allows the researcher to gather information about the natural behaviour under study (Barlow *et al.*, 2009) and serves to predict how the behaviour would continue without the intervention (Rizvi and Nock, 2008), the absence of a clear baseline makes the task of drawing conclusions about the impact of the intervention difficult.

Extended baseline periods, particularly in case C, would have allowed a better understanding of the focus children's baseline levels of acceptance and rejection before the introduction of the CoF intervention. During the baseline phase, it would have been beneficial to calculate each focus child's level of acceptance and rejection, and ensure a stable baseline had been established, before introducing the intervention.

The researcher's ability to draw conclusions about the impact of the CoF intervention was further reduced by the adoption of an AB design, rather than

the planned multiple baseline design. The varied length of the baseline phase characteristic of a multiple baseline design would have provided the researcher with a stronger case for arguing a causal relationship between the intervention and the changes observed (Robson, 2002).

5.5.2 The use of visual analysis

Although visual analysis was chosen as the most appropriate method for considering the data gathered from SISs completed by peers, criticisms of visual analysis, must be considered (De Prospero and Cohen, 1979, Owen-DeSchryver's, 1997, Harbst, Ottenbacher and Harris, 1991). As outlined in Chapter 3, while there are conflicting findings about the extent to which autocorrelation occurs in behavioural data (Houle, 2009), the possibility that patterns observed in the data are linked to a natural trend, rather than the impact of the intervention, cannot be ruled out. Although analysis of the mean, trend, level and variability in each phase was considered before conclusions about the impact of the intervention were made, the short baseline period may not have fully illustrated any autocorrelation present in the data during the baseline phase.

5.5.3 The collection of data at two points in time

The collection of data at only two points in time (for the SCHI, SDQ and CSPC) meant that no opportunity to observe natural trends over time was provided for these variables. The potential impact of other factors, not related to the CoF, which may have caused changes in SCHI, SDQ and CSPC ratings, means that no causal link between changes observed in these measures and the CoF intervention can be made. Changes observed could be related to the variables described by Cohen *et al.* (2009) in Chapter 3 – for example, history, maturation and testing. Changes observed could also be related to factors related to the classroom and school environment. In case D, for example, school staff noted that the CoF intervention was implemented during the run up to child D's

transition to high school. Staff explained that as the transition approached, child D appeared increasing anxious about this change. This approaching change in child D's life is an example of a factor, not related to the CoF intervention, which may have impacted on child D's rating of happiness over time.

5.5.4 Missing Data

For four weeks in case B and four weeks in case D, no data relating to the focus child's level of social inclusion was gathered. On these occasions, teachers reported they had been unable or forgotten to complete the SIS with their class. Missing data points impacted significantly on the researcher's capacity to draw conclusions about the longer term impact of the CoF and the impact of the weekly CoF meetings.

In reporting cases B and D, the researcher acknowledges that the missing data is not consistent with descriptions of the characteristics of single-case experimental design – for example, Cohen, Manion and Morrison's (2008) suggestion that the design involves continuous assessment of some aspect of human behaviour over a period of time and McCormick's (1995) description that the repeated measurement throughout an intervention is a key feature of single case experimental designs.

The decision to include available data was made on the grounds that the data collected provides some insight into the impact of the CoF, particularly the whole class CoF meeting, and that previous research has involved collecting data over time but not continuously (though authors of these studies do not describe them as single case experimental designs) - for example, Fredrickson, Warren and Turner (2005) who used the SIS at four points in time and Eckert, Ardoin, Daisey, and Scarola, (2000) who report data collected at three points in time.

5.5.5 Treatment Integrity

Although the researcher's observations of a weekly CoF meeting and review of treatment integrity checklists completed by the circle facilitators led the researcher to conclude that, according to these criteria, the integrity of the CoF intervention had been maintained, some deviations from the guidance provided were noted.

In cases B, C and E, the warm up activities described by the researcher were not implemented. The researcher acknowledges that if differences in the way in which the CoF intervention impacted across the five individual cases were observed, these could be linked to differences in the warm up activities completed. No clear differences in the way the CoF intervention impacted across the five cases were consistent with the differences in warm up activities used.

The researcher's observations and the circle facilitator's completion of the treatment integrity checklist revealed that in case B, the circle facilitator experienced difficulties in refraining from directing pupils. Although following further discussion and a second observation, a positive change in the circle facilitator's approach was noted, the circle facilitator's difficulties illustrate the challenge that implementing the CoF's focus on peers' ideas can pose.

5.5.6 Self-reported data

All measures used involved self-reported data – i.e. peers reporting their thoughts/feelings about the focus pupils, focus pupils rating their level of happiness at school, adults rating the focus children's behaviour and peers reporting attributions about a focus pupil's behaviour. The benefits and biases associated with self-reported data must be acknowledged.

The decision to use peer responses to measure the focus children's level of social inclusion was made on the basis of previous research which used similar

approaches, including the research completed by Fredrickson *et al.* (2005) upon which this study was based. As Fredrickson and Cline (2009) point out, information from peers is particularly valuable because peers have access to the low frequency, but psychologically meaningful, events which lead to the establishment of social reputations. In considering ratings made by peers, Fredrickson and Cline (2009) note, however, that ratings may be affected by personal factors such as the child's physical attractiveness, intelligence and academic success and by interactive factors such as similarities between the rater's and child's gender and race. In relation to this study, this suggests that ratings of the focus children are likely to be related not only to factors related to the children's additional needs, but to personal and interactive factors. Although ratings provided by peers for each focus child are compared only with ratings provided by the same peers (i.e. the personal and interactive factors would have remained the same), when considering ratings provided by peers across the five cases, the potential influence of personal and interactive factors must be considered.

The decision to gather data from the focus children was made on the grounds, as described earlier, that because the intervention is designed to support these pupils, their voice is important. Wriglesworth, Humphrey, Kalambouka and Lendrum (2010) describe the complexities involved in using measures with younger pupils whose self awareness and self concept may not be fully developed and whose answers may be biased towards 'the here and now' rather than summative judgments covering a period of time. Given the age and needs of the focus pupils in this study, the possibility that the pupils experienced difficulties with self awareness and the possibility that focus children's responses to the SCHI reflected 'the here and now', rather than an overall view of the past week, must be acknowledged.

In considering the use of self-reported data gathered from adults about a child, Wriglesworth *et al.* (2010) note that adults provide a means for describing a

child in relation to his/her same age peers. They explain that teachers are able to use their experience with other children as a frame of references in completing measures. They warn, however, that a teacher's education and experiences can influence their ratings and that more experienced teachers are generally found to provide higher ratings (Denham, 2005).

In this study, no information about teachers' and circle facilitators' education and experience was gathered. Although ratings provided by adults before the CoF intervention are compared only with ratings provided by the same adults after the CoF intervention (i.e. their level of education and experience would not have changed significantly over the eight week period), when considering ratings provided by adults across the five cases, the potential influence of differences in education and experience must be acknowledged.

In addition to outlining potential sources of bias specifically associated with data from peers, focus pupils and adults, potential sources of bias relevant to all self-reported data must also be acknowledged. As described in Chapter 2, variability in factors related to the participants (for example, their mood during the completion of the questionnaires) may have impacted on the outcomes obtained. Participants' potential awareness of the researcher's hopes may have also resulted in some bias (either deliberate or unconscious) in the ratings they provided.

Given the number of potential sources of bias associated with self-reported data described, it seems unsurprising that Wriglesworth *et al.* (2010) suggest that no single respondent can provide flawless information. As well as accepting the limitations associated with each source, as Wrigelsworth *et al.* (2010) recommend, this study involved gaining information about the focus child from several sources.

5.5.7 The CSPC

Unlike the other measures used in this study, the CSPC is not a standardised measure. This means the format of the interviews conducted and the coding procedure used to interpret interview responses were open to bias associated with the researcher.

The first source of bias relates to the researcher's use of interview questions. An adapted version of the alternative interview procedure described by Elig and Frieze (1979) was used. This involved asking child E's peers to recall and reflect on a recent unsuccessful situation involving child E. When pupils were interviewed for a second time after the CoF intervention, pupils were asked again to recall a recent unsuccessful situation involving child E. As the attributions peers made at the two points in time related to two different events, caution must be applied when comparing attributions. Although any differences in the nature of the attributions made after the CoF intervention could be related to changes in the child's thinking about the focus child, it is also possible that differences observed were related to factors associated with the different situations the child chose to describe.

A second source of potential bias relates to the interpretation and coding of attributions expressed by peers. Although inter-rater reliability suggested a 'fair' correlation between the researcher's coding of peer responses and a second rater's coding of peer responses, disagreement between the two raters' coding was observed. Sources of bias associated with the researcher's coding must, therefore, also be acknowledged.

A further source of potential bias relates to the small sample of pupils with whom interviews were conducted. As an investigation into the attributions made by peers formed only a small part of the project, interviews were conducted in relation to one focus child (child E) and only with circle members. Outcomes from the SIS associated with case E suggest that focus child E's level of

acceptance was high, and his level of rejection low, at the start of the study. Individual analysis of ratings provided by the six circle members interviewed suggested that before the CoF intervention five of the six CoF members rated the focus child positively. This suggests that findings reported could be related to factors associated with peers' level of understanding and acceptance of the focus child before the CoF intervention.

As noted earlier, the significant bias associated with the methodology used to explore peer attributions in this study makes it difficult to determine whether the lack of changes observed following the CoF intervention reflects an actual lack of change or methodology which fails to capture it.

5.6 Implications of the findings

5.6.1 Work with children and young people

Suggestions about how the CoF would impact on other pupils with autism are not possible to make given that this study evaluated the impact of the CoF on five pupils only from a varied population. As acknowledged in Chapter 2, the researcher's intention for this study was to provide an in-depth look at the impact of the intervention for five pupils, add to the existing evidence base and inspire future research rather than to provide generalisable findings.

With this in mind, it is important to note that for the five pupils involved in this study, outcomes from the single case experimental design suggest no clear long term positive impact of the CoF on the focus children's level of social inclusion. These findings could be interpreted to question the CoF's potential for more than a short term impact. Considered with the researcher's review of existing research which evaluates the CoF intervention for pupils with autism, the findings highlight the limited evidence base to support the use of the CoF intervention with pupils with autism. This should impact on how EPs present the CoF to school staff, parents and pupils interested in being involved in setting up

a CoF for a pupil with autism. Providing an honest summary of existing research which acknowledges that there is some suggestion of positive short term outcomes, but no clear evidence to suggest longer term outcomes, would enable staff, parents and pupils to make an informed decision about whether or not they would like to be involved in a CoF.

Where EPs and school staff make an informed decision to set up a CoF for a pupil with autism, this study's findings should prompt EPs to consider ways in which any changes which may occur following the whole class meeting can be prolonged. This could include careful consideration of the following factors:

- what information is shared about autism in the whole class meeting (and whether this is revisited with peers)
- who delivers the whole class meeting and weekly circle meeting
- the skill level of the circle facilitator.

5.6.2 Further research

The systematic literature review presented in Chapter 2 describes the limits of the existing empirical evidence which has sought to evaluate the CoF intervention used to support pupils with autism. While this study adds to this limited evidence, the body of research continues to be fairly small and a number of unanswered questions remain.

The impact of the CoF and the focus child's level of social inclusion

The difference between this study's findings and previous research which has looked at the impact of the CoF intervention on pupils with autism suggests that further research is needed to gain a better understanding how to achieve the longer term impact of the CoF reported by Fredrickson *et al.* (2005) and to a lesser degree by Boznic *et al.* (2002). Further consideration, with a larger

sample, of the factors which may impact on the success of a CoF is needed. Factors associated with the following variables could be explored:

- The focus child (for example, personal characteristics including level of sociability)

- The focus child's classmates (for example, their existing level of understanding of the focus child's needs)

- The adults involved in the study (for example, levels of knowledge and experience)

- The format of the whole class and weekly CoF meeting (for example, what description and information is provided about autism)

In light of previous research which reports positive outcomes associated with the sharing of information about a child's autism with peers (Frederickson *et al.* 2007; Fredrickson, 2010; Ochs *et al.* 2001), further investigation which explores the impact of the kind of information about autism which is shared with peers during the whole class meeting appears particularly appropriate. Given that this study reports an initial positive impact of information about the focus child being shared, consideration about whether further exploration of this information, for example regular reminders to peers, also appears important.

The impact of the CoF on other variables

As acknowledged in the description of this study's limitations, measures of the focus children's happiness and adults' perceptions of the focus children's behaviour taken at only two points in time make conclusions about the impact of the CoF on these variables difficult to draw. Further research that employs methodology which would allow the researcher to draw a causal relationship

between any changes in these variables and the CoF intervention would provide a clearer picture of the CoF's impact. Single case experimental design methodology, for example, could be used.

In addition to a more robust investigation of the impact of the CoF on the focus children's happiness at school and adults' perceptions of the focus children's behaviour, further research could focus on other variables which may be affected by the CoF intervention. With the emphasis on pupil voice described earlier, consideration of the focus children's experiences of school, particularly their feelings about the nature of their interactions with peers, could provide richer, more personal information about the impact of the CoF for the focus child. The adoption of a different epistemological standpoint and the careful consideration of how best to capture, and measure, the focus child's feelings in a way which is meaningful remains the challenge associated with such further research.

The impact of the CoF on peer attributions about the focus child's behaviour

As acknowledged in the study's limitations, methodological weaknesses associated with peer interviews means that further consideration of the best way to investigate peer attributions about a particular child's behaviour at two points in time would be beneficial. Future research could consider, for example, using the CSPC format employed in this study but describing the event recalled by a child in the first interview during the second interview and asking the child to talk about the event again. Although this format would mean the peer may not recall the incident as clearly, or in the same way, this may provide an opportunity to re-explore the peers' attributions about a single incident.

The limited sample used in study's peer interviews suggests that further investigation into the attributions made by a larger, broader sample of peers would be beneficial. Exploration of the attributions made by non-circle member

classmates, including classmates who may not have rated the focus child so favourably prior to the CoF intervention, would provide a greater insight into the nature of attributions made by peers about the behaviour of a focus child with autism.

The use of single case experimental designs

In addition to prompting further research into the impact of the CoF intervention for pupils with autism, the researcher hopes that this project inspires future use of single case experimental designs. This study clearly demonstrates the value of single case experimental designs – particularly in research undertaken with a specific, and subsequently small, target population.

As is increasingly recognised by researchers (Horner et al, 2005, and Lundervold and Belwood, 2000, for example), single case experimental designs can be used to illustrate a link between an intervention and observed outcomes. Although not successfully used in this study, the multiple baseline design planned demonstrates how the design could be used as a particularly powerful means of demonstrating causality between an intervention and a pattern of change.

5.7 The researcher's reflections

5.7.1 Research with pupils with autism

The researcher chose to undertake research which focused on evaluating an intervention with pupils with autism. This decision was made partly because of the researcher's own experiences working with pupils with autism and partly because of the limited evaluation of the CoF with this specific population.

The experience of completing research which focuses on pupils with autism has highlighted the complexities involved in conducting research with this population. The non-homogenous nature of the population meant that extra careful consideration of the study's design and data analysis was needed in

order to acknowledge the dangers associated with grouping data from different participants. Careful consideration of appropriate measures was also needed in order to ensure that measures used were relevant and applicable to the population. Despite these complexities, the researcher is proud to have faced these challenges and attempted research in an area which may not appeal to other researchers for these very reasons.

5.7.2 Implementing the CoF intervention

The researcher's involvement in setting up and monitoring the CoFs in this study provided insight into the personal experiences of the adults and pupils involved in the interventions. Although gathering personal accounts was not the focus of the research, informal feedback suggested that those involved in the CoFs enjoyed the experience. Adults and classmates were, for example, always keen to share enthusiastic thoughts about the intervention with the researcher. The researcher's own experience of implementing the intervention was positive too. From this point of view, the CoFs felt successful. The researcher was keen to remember, however, that adults' feeling that the intervention was enjoyable does not provide evidence of positive outcomes for the focus children. The fixed design and the post-positivist approach allowed the researcher to remain focused on considering the impact of the CoF on variables directly related to the focus children.

5.7.3 The practicalities of research

The project provided the researcher with experience in real world research - research in which the degree of control used in a laboratory setting is not possible. This included facing challenges in gaining participants, gaining consent within the timescales planned and collecting data at regular intervals throughout the project. The uncompleted multiple baseline design and the missing data highlighted the researcher's need to support, remind and

encourage those involved in the study not only with the implementation of the intervention but also with factors crucial to the research – the gaining of consent and the collection of data.

5.8 Conclusions

5.8.1 Main findings

This study evaluated the CoF intervention used to support five pupils with autism in their mainstream classrooms. Outcomes from a single case experimental design showed that for all focus pupils, levels of peer acceptance increased and levels of peer rejection decreased following the whole class CoF meeting. For all cases, these positive changes were not maintained during the course of the weekly CoF meetings and levels of rejection and acceptance generally returned to levels comparable to those observed before the CoF intervention. As the same pattern of change was observed in all five cases, the researcher concluded that the CoF had a short term, but no longer term, impact on the focus pupils' levels of social inclusion in this study.

The study also involved comparing data collected at two points in time (before and after the CoF intervention). In four out of the five cases, positive changes in the focus children's ratings of happiness at school were reported following the CoF intervention. In four out of the five cases, adults' ratings of the focus children's behaviour were reported following the CoF intervention. No change in the attributions made by peers about the focus child's behaviour was observed following the CoF intervention.

When considering outcomes, several key limitations to the study's design and implementation must be kept in mind - in particular: missing data from the single case experimental design analysis in two of the five cases; the use of comparisons between pre and post measures of the focus children's happiness and adults' perceptions of the focus children's behaviour and; biases linked to the interviews conducted.

Despite its limitations, this study clearly illustrates the need for further research which evaluates approaches, and seeks to understand approaches, which aim to support the social inclusion of pupils with autism in their mainstream classrooms. While this study provides no evidence that the CoF worked successfully to produce long term changes for the pupils in this project, it highlights factors which may influence the success of peer interventions and which are worthy of future research.

5.8.2 The unique contribution of the research

This study describes an evaluation of the CoF undertaken with two purposes. It aimed to contribute to a better understanding of both the outcomes and the processes associated with the CoF intervention used to support pupils with autism.

The researcher's use of a single case experimental design to consider the impact of the CoF intervention on the focus children's level of social inclusion has added an arguable rigorous evaluation to the limited body of research in this area. Unlike previous studies, this study presents data related to five individual cases which enabled the researcher to draw conclusions about common patterns of change.

This research also built on Fredrickson *et al.*'s (2005) key study and their previously untested hypothesis that the CoF works by changing the way peers attribute the focus child's behaviour. Although changes in attributions were not observed in this research, the study documents an attempt to explore this hypothesis and offers reflections on the complex methodological task of measuring attributions.

As well as offering unique contributions to the existing body of research relating to CoFs, this study demonstrates the practical value that single case

experimental designs offer research practitioners. As Ferron, Bell, Hess, Rendina-Gobioff and Hibbard (2009) note, because the design of single case experimental designs is so closely aligned with practice, single case experimental designs provide practitioners with the opportunity to engage in research alongside their daily practice. From the researcher's personal point of view, enthusiasm for single case experimental designs and the research skills developed through the experience of completing this project will have a lasting influence on her future practice.

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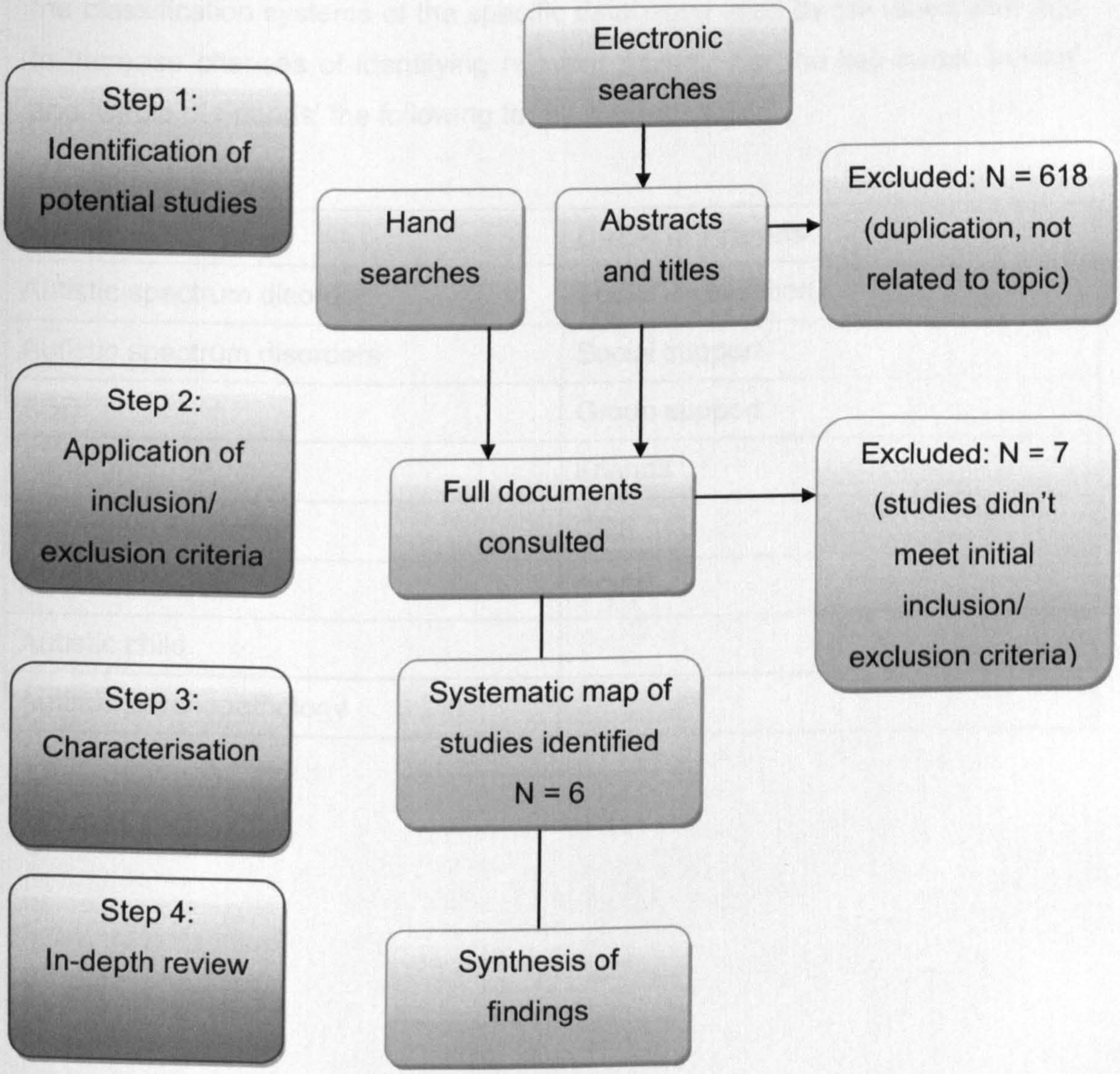
7 Appendices

7.1 Appendix I: Flowchart of the screening and searching process used for the systematic literature review



7.2 Appendix II: List of search terms used for the systematic literature review

To identify search terms for the systematic literature review, the thesauruses included in each of the databases were used. This aimed to take advantage of the classification systems of the specific databases used by the researcher and to increase chances of identifying relevant papers. For the key terms 'autism' and 'Circle of Friends' the following terms were identified:

Autism	**Circle of Friends**
Autistic spectrum disorder	Social intervention
Autistic spectrum disorders	Social support
ASD	Group support
Aspergers	Friends
Aspergers syndrome	COF
Autistic children	COFP
Autistic child	
Autistic psychopathology	

7.3 Appendix III: Record of search strategy used for the systematic literature review

Electronic searches

Search strategy	Search terms used
PsychINFO (searched in July 2009) Key word searches (in reference, titles and abstract)	ASD and circle of friends Autism and circle of friends Autistic spectrum disorder and circle of friends Autistic spectrum disorders and circle of friends Autistic children and circle of friends Autistic child and circle of friends Autistic psychopathology and circle of friends Aspergers and circle of friends Aspergers syndrome and circle of friends ASD and social intervention Autism and social intervention Autistic spectrum disorder and social intervention Autistic spectrum disorders and social intervention Autistic children and social intervention Autistic child and social intervention Autistic psychopathology and social intervention Aspergers and social intervention Aspergers syndrome and social intervention ASD and social support Autism and social support Autistic spectrum disorder and social support Autistic spectrum disorders and social support Autistic children and social support Autistic child and social support Autistic psychopathology and social support Aspergers and social support Aspergers syndrome and social support and group support Autism and group support Autistic spectrum disorder and group support Autistic spectrum disorders and group support Autistic children and group support Autistic child and group support Autistic psychopathology and group support Aspergers and group support Aspergers syndrome and group support

	ASD and friends Autism and friends Autistic spectrum disorder and friends Autistic spectrum disorders and friends Autistic children and friends Autistic child and friends Autistic psychopathology and friends Aspergers and friends Aspergers syndrome and friends Circle of friends COF COFP
ASSIA (searched in July 2009) Key word searches (in reference, titles and abstract)	ASD and circle of friends Autism and circle of friends Autistic spectrum disorder and circle of friends Autistic spectrum disorders and circle of friends Autistic children and circle of friends Autistic child and circle of friends Autistic psychopathology and circle of friends Aspergers and circle of friends Aspergers syndrome and circle of friends ASD and social intervention Autism and social intervention Autistic spectrum disorder and social intervention Autistic spectrum disorders and social intervention Autistic children and social intervention Autistic child and social intervention Autistic psychopathology and social intervention Aspergers and social intervention Aspergers syndrome and social intervention ASD and social support Autism and social support Autistic spectrum disorder and social support Autistic spectrum disorders and social support Autistic children and social support Autistic child and social support Autistic psychopathology and social support Aspergers and social support Aspergers syndrome and social support ASD and group support Autism and group support Autistic spectrum disorder and group support Autistic spectrum disorders and group support

	Autistic children and group support Autistic child and group support Autistic psychopathology and group support Aspergers and group support Aspergers syndrome and group support ASD and friends Autism and friends Autistic spectrum disorder and friends Autistic spectrum disorders and friends Autistic children and friends Autistic child and friends Autistic psychopathology and friends Aspergers and friends Aspergers syndrome and friends Circle of friends COF COFP
Google (Searched in July 2009)	ASD and circle of friends Autism and circle of friends Autistic spectrum disorder and circle of friends Autistic spectrum disorders and circle of friends Autistic children and circle of friends Autistic child and circle of friends Autistic psychopathology and circle of friends Aspergers and circle of friends Aspergers syndrome and circle of friends Circle of friends COF COFP
Google Scholar (Searched in July 2009)	ASD and circle of friends Autism and circle of friends Autistic spectrum disorder and circle of friends Autistic spectrum disorders and circle of friends Autistic children and circle of friends Autistic child and circle of friends Autistic psychopathology and circle of friends Aspergers and circle of friends Aspergers syndrome and circle of friends Circle of friends COF COFP

Hand searches

Journals hand searched (1985-2009)	Educational Psychology in Practice Educational and Child Psychology

7.4 Appendix IV: Systematic map of studies used for the in-depth review of the systematic literature review

Study	Setting	Participant characteristics	Implantation of the intervention	Study design and measures used	Outcomes reported
Whitaker, Barratt, Joy, Potter and Thomas (1998)	5 children in mainstream schools + 1 child in school for pupils with MLD UK	6 participants Pupils years 3-10 All participants have a diagnosis of ASD (ranging of subtle manifestation of asperger's to high functioning autism)	Taylor's (1997) process of 'circle of friends' used Weekly meetings led by a member of Autism Outreach/school staff 6-8 volunteers per group Between 3-17 sessions	Design: Post only, single group design Measures: Qualitative approaches - interviews, questionnaires, discussion with focus children, circle leaders, circle members and parents	Positive qualitative reports from circle leaders, circle members and parents (including perceived improved social integration and higher levels of peer contact).

Study	Setting	Participant characteristics	Implantation of the intervention	Study design and measures used	Outcomes reported
Haring and Breen (1992)	Public junior high school USA	2 participants, 1 with a diagnosis of ASD Participant with ASD aged 13	'behaviour social support network strategy' used- this involved 'circle of friends' framework + training sessions Weekly adult facilitated meetings 4 volunteers for the group Observation over 2 months	<u>Design</u>: Multiple baseline design (comparing ASD pupil with a pupil with learning difficulties) <u>Measures:</u> Quantitative measures - frequency and appropriateness of social interactions which occurred during 5 minute transition period between lessons. Qualitative measures – pupils daily rating of the quality of their interactions involving the focus child, anecdotal evidence of satisfaction with the program and attitude towards interacting with the focus child.	Quantitative data - a greater number of interactions, and interactions with appropriate social responding, between focus child and peer network post group support. Qualitative data – reports of increased satisfaction from group members with the intervention and improved ratings of interactions involving the focus child.

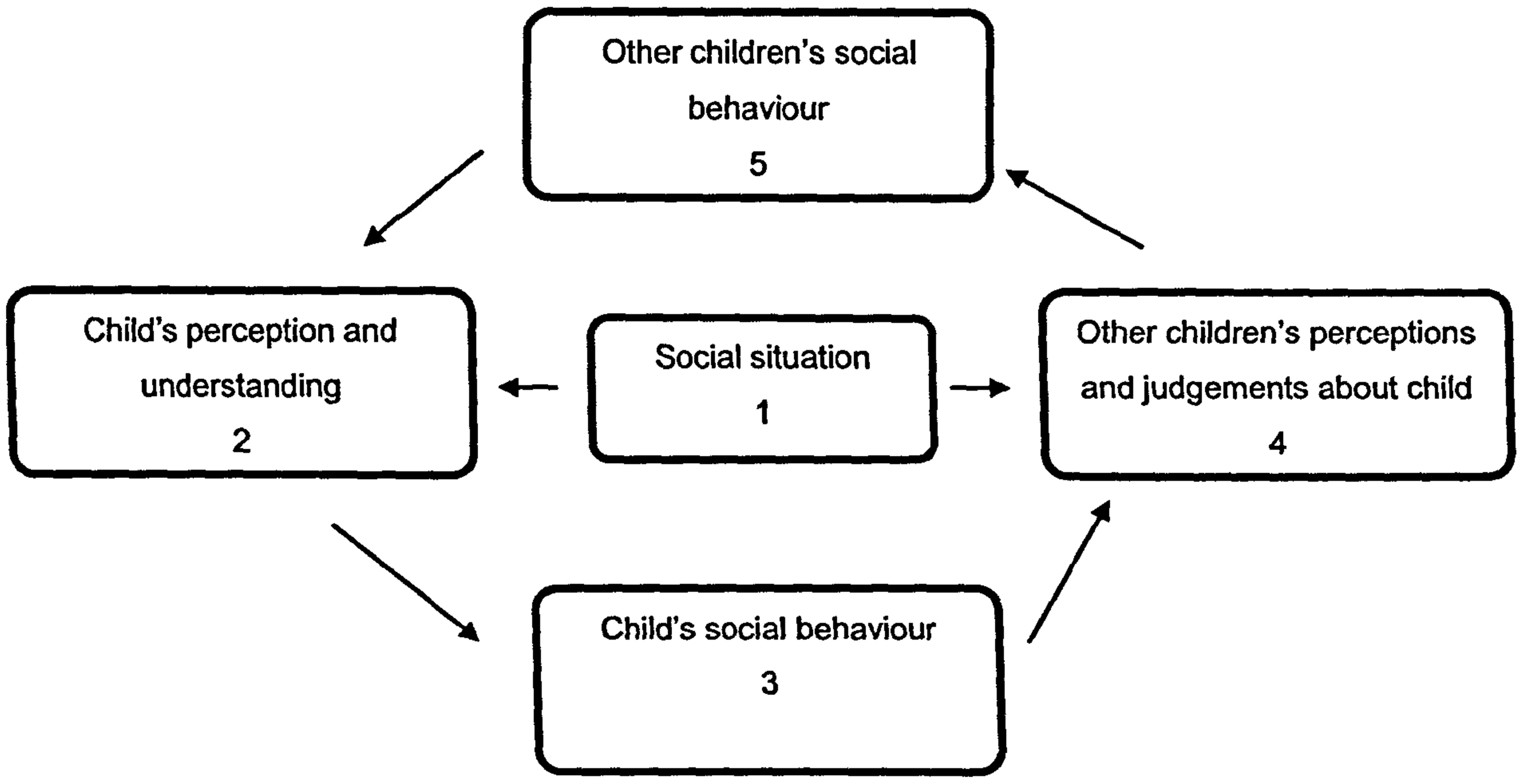
Study	Setting	Participant characteristics	Implantation of the intervention	Study design and measures used	Outcomes reported
Fredrickson, Warren and Turner (2005)	Mainstream school UK	14 primary aged pupils, one with ASD	Taylor's (1999) guidance on 'circle of friends' used Assistant EPs delivered weekly meetings Pupils given age-appropriate information about ASD 6 weeks of sessions	<u>Design:</u> Pre - post (and follow-up) single group design. Data collected at 4 points in time. <u>Measures</u>: Sociometric rating scale (LITOP questionnaire from Social Inclusion survey SIS) used to calculate 'acceptance' and 'rejection' indexes Perceptions of the focus child's (Guess Who questionnaire).	Acceptance and rejection scores for focus child appeared to improve post intervention. Perceptions by peers of a positive change in focus child's behaviour. Proportion of children who rated the focus child as disruptive reduced post intervention. At follow-up the proportion of classmates who rated the focus child's behaviour as disruptive had risen only slightly as had his rejection scores.

Study	Setting	Participant characteristics	Implantation of the intervention	Study design and measures used	Outcomes reported
Kalyva and Avramidis (2005)	Nursery setting UK	5 children Aged between 3.10 and 4.7 All have a diagnosis of ASD All boys	'circle of friends' intervention delivered Weekly sessions delivered by class teachers 5 volunteers for each group Sessions completed over months	<u>Design</u>: Pre-post RCT (2 pupils in intervention group and 3 in control) + follow-up <u>Measures:</u> Observation schedule which recorded the number of responses and initiation attempts (successful and unsuccessful) for each child.	Intervention group had significantly lower number of unsuccessful responses and initiations post intervention and at follow-up than the control group.
Gus (2000)	Mainstrea m school UK	1 pupil Year 10 Diagnosis of ASD	Circle of friends 'adapted to meet needs' I session only Focus of discussion about ASD rather than friends	<u>Design:</u> Case study? <u>Measures:</u> Post intervention questionnaire completed by peers. Teacher follow-up questionnaire.	Pupils reports of increased understanding, behaviour and attitude towards focus pupil. Teacher reported that the focus child appeared happier.

Study	Setting	Participant characteristics	Implantation of the intervention	Study design and measures used	Outcomes reported
Bozic, Croft and Mason-Williams (2002)	Mainstream school (focus pupil in an autism specific base) UK	1 pupil Aged 8 Diagnosis of autism.	Circle of friends adapted (additional practical sessions) 6 weeks of sessions 6 circle volunteers Initial session run by an EP, circle sessions run by teacher	<u>Design:</u> action research <u>Measures:</u> Some interactions videotaped. Lunchtime sampling observation to monitor playtime interactions. Feedback forms. Pre and post 'popularity score' - Sociometric questionnaire (related to preferences about playtime)	Positive qualitative feedback from pupils. Reports of focus child's improved play skills and ability to maintain joint attention. Improved 'popularity score' compared to matched peer with autism.

7.5 Appendix V: Model of social competence

A model of social competence in children (Fredrickson and Turner, 2003, adapted from Dodge et al., 1986)



7.6 Appendix VI: Questionnaire completed by EPs

As my thesis is looking at using the 'Circle of Friends' intervention, I would really like to find out a bit more about how much the intervention is used in XX. I would be most grateful if you could answer the questions below.

Please answer these questions in relation the your last **three years** of practice.

	Please circle	
1. Have you facilitated setting up a 'Circle of Friends'? (if no, please skip to question 6)	yes	no
2. Approximately how many 'Circle of Friends' have you facilitated setting up?		
3. Have any of the pupils you have set up a circle for had a diagnosis of ASD?	yes	no
4. Other than ASD, what have been the needs of the pupil(s) you set up the circle(s) for?		
5. Do you feel the circle(s) you set up had a positive impact on the child the circle was for?	yes	no
6. Do you feel the 'Circle of Friends' intervention is a valuable tool for EPs?	yes	no
7. Would you consider using the 'Circle of Friends' intervention in the future?	yes	no
8. Would you consider setting up a 'Circle of Friends' for a pupil with ASD in the future?	yes	no
9. If the answer to either question 7 or 8 is no, please describe your reasons.		

Any other comments?

Thank you for taking the time to complete this questionnaire.

7.7 Appendix VII: Timeline for a multiple-baseline design

Week	Child A	Child B	Child C	Child D	Child E
February 1st – 5th	Gain consent from schools, parents, pupils, parents of volunteers				
February 8th – 12th					
February 15th -19th	Half term				
February 22nd – 26th	Deliver measures				
March 1at – 5th	Gain consent				
March 8th – 12th	Intro/arrange/ Baseline	Intro/ arrange/Baseline	Intro/arrange/Baseline	Into/arrange/ Baseline	Intro/arrange/Baseline
March 15th – 19th	Baseline	Baseline	Baseline	Baseline	Baseline
March 22-26th	Baseline/ Pre measures/ training	Baseline	Baseline	Baseline	Baseline
March 29th – April 2nd	Easter Holiday				
April 5th – 9th					
April 12th – 16th	Whole class + CoF	Baseline/Pre measures/training	Baseline	Baseline	Baseline
April 19th – 23rd	CoF	Whole class + CoF	Baseline/ Pre measures/training	Baseline	Baseline
April 26th – 30th	CoF (monitor)	CoF	Whole class + CoF	Baseline/Pre measures/training	Baseline
May 3rd – 7th	CoF	CoF (monitor)	CoF	Whole class + CoF	Baseline/Pre measures/training
May 10th – 14th	CoF	CoF	CoF (monitor)	CoF	Whole class + CoF
May 17th – 21st	CoF	CoF	CoF	CoF (monitor)	CoF
May 24th – 28th	CoF	CoF	CoF	CoF	CoF (monitor)
May 31st – June 4th	Half term				
June 7th – 11th	CoF	CoF	CoF	CoF	CoF
June 14th – 18th	post measures	CoF	CoF	CoF	CoF
June 21st- 25th		post measures	CoF	CoF	CoF
June 28th – July 2nd			post measures	CoF	CoF
July 5th – 9th				post measures	CoF
July 12th – 16th					post measures

7.8 Appendix VIII: Information booklet for teachers

Setting up a Circle of Friends

Information from Newton, C. and Wilson, D. (2003) Creating Circles of Friends – A peer support inclusion workbook

Please feel free to contact Rebecca James

XXXXX (Psychology Service)

XXXXX (Work mobile)

Rebecca.James@XXXXX

Introduction to Circles of Friends

These brief notes will give you some background information and an idea of what will be involved in setting up and running a Circle of Friends in your school.

1. Circles of Friends originated in North America and Canada as one of a range of strategies to encourage the inclusion of children with disabilities into mainstream settings. Circles have been used to support children with a wide range of disabilities and have also been used in the community. The approach has been developed in Nottingham, Bristol and elsewhere in the UK and has been shown to be very effective.

2. A circle usually consists of 6-8 volunteers (most often from the same class or tutor group) who meet regularly (usually weekly) with the 'focus child' and an adult. The circle has three main tasks: to offer encouragement and recognition for successes and progress; to identify difficulties, set targets and devise strategies for achieving targets; and to help to put these ideas into practice.

3. Setting up a circle includes the following steps:

   - Gaining the support and agreement of the focus child and his or her parents.

   - A meeting with the whole class (which the focus child does not attend) aimed at identifying those willing to be supporters. This will be run by Rebecca.

   - Informing the parents of those chosen to be circle members and gaining their agreement to their children's participation.

   - Weekly meetings of the circle, the focus child, and an adult facilitator (taking 20-30 minutes). The adult facilitator will need to be a member of school staff.

The whole class meeting

This session will be delivered by Rebecca. The class teacher and member of staff who will be running the Circle of Friends meetings need to be present. The focus child is not part of this session.

1. Introduction
    a) Explain your involvement with *focus child*.
    b) Explain your interest in how children get on with and can help each other.

2. Ground rules
    a) Treat each other with respect.
    b) Listen ... one person speaking at a time.
    c) Confidentiality.

3. Need to talk about focus pupil
    a) Emphasise this is unusual (to talk behind someone's back).
    b) Focus pupil knows this is happening.
    c) Reason is that you need their help to think about ways in which focus pupil can be helped (stress need for/ value of their insights).

4. Need for confidentiality (explain)
    a) No reference to who said what about whom - the details stay in this class.
    b) Emphasise that this confidentiality also binds adults.

5. Listing positives
    a) Focus on positives first - good at ..., nice things about..., what the focus child does well.
    b) List all contributions on a flip chart.

6. Where things do not go so well/ difficult times for focus child
    a) Explain that you've heard about some difficulties, but probably not all.
    b) Ask for descriptions of behaviour - list.
    c) Describe sort of person the focus child is - list.

7. Discussion of friendships
    a) Display circle diagram and introduce the circles:
        i) People you love and who love you

ii) Allies/best friends
iii) Friends/acquaintances
iv) People paid to be in your life.

b) Fill in a volunteer's circles on the flip chart with help from class.
c) All fill in own circle diagram privately.

8. Discussion about focus child's difficulties
   a) Explain that there are some ways in which the focus child's thinks differently.
   b) Explain that this means that the focus child finds some things harder than other children – particularly making and keeping friends, understanding how other people think and feel, understanding what people say and how they say it (tone of voice and facial expression) and adapting when things change.
   c) Explain that as a result the child could find keeping people in Circles 2 and 3 difficult.

9. What would it be like if ...?
   a) What would it be like if circles 2 and 3 had no people in them?
   b) How would it feel? - make a list.
   c) How would they behave? - make a list. Compare to flip chart from 6.

10. List ideas to support focus child: enlist empathy, support and commitment.

11. What's involved?
   a) Explain about the idea of Circles of Friends and that you want to set up a group which will help with the focus child's difficulties.
   b) Explain what would be required, e.g. meeting at lunchtime once a week.
   c) Explain that only six to eight will be involved.
   d) Pass out small pieces of paper. Ask pupils to think about whether they would like to volunteer, then to write their name on the paper with *either* a yes or a no. Stress confidentiality and 'no pressure'.
   e) Explain that not everyone will be able to do it *but*
      i) the teacher may need new people in group at later date
      ii) everyone can take responsibility for helping.

The first meeting of the circle

This will be delivered by Rebecca. The member of staff who will be running the Circle of Friends meetings needs to be present.

1. Introductions.

2. Restate ground rules.
   a) Listen to each other.
   b) Treat each other as we would like to be treated.

3. Reminder of the aims.
   a) To work with the focus child to help him/her.
   b) To help him/her identify and sort out difficulties.
   c) To support each other in helping the focus child.

4. Ask each to state reason for wanting to be in group.

5. Ask the group to list positives (point out that the focus child didn't hear what was said at first session). Ask the focus child to add any to list.

6. Ask the group to list situations where things do not go so well and what the focus child needs to work on.
   a) Ask for descriptions of behaviours.
   b) Turn each problem behaviour into a positive target (describing what the focus child should be doing rather than not doing).
   c) Ask the focus child to add to any of lists a) or b).
   d) Talk about what would be different if the focus child achieved these targets - for him or her and for others.

7. Introduce problem-solving.
   a) Explain need to work on one or two targets at a time.
   b) Ask group to decide which target(s) (including the focus child in discussion). Suggest that it may be best to start with something quickly achievable.
   c) Brainstorm possible ways to get to the target.
   d) Select strategies jointly and help group spell out steps.
   e) Agree responsibilities and boundaries.
   f) Emphasise realism about speed of change, setbacks, etc.

8. Agree name for group.

9. Arrange next meeting.

The subsequent meetings of the circle: The role of the circle facilitator

Running the circle meetings

A range of approaches can be used in running the weekly circle meetings. Problem solving approaches work well and are usually relatively safe and easy to learn for all involved and allow space to explore issues, celebrate positives and examine negatives. The main purpose of the meeting is to generate supportive ideas and practical tactics.

First meetings of a circle of friends can be chaotic and difficult for the adult to manage constructively. Angry feelings towards the focus child are sometimes expressed or discussions are begun that have no obvious relevance to helping the child. The adult needs to remind the group of the ground rules, the reason why they are meeting and of the need to listen to each person's contribution.

For younger children it can be helpful to structure the group meeting in ways that make the listening and turn taking roles clearer. For example by allowing group members to talk only when in possession of a special object. Objects may include a talking stick, a listening stone, a pretend, or real microphone and so forth.

We encourage people running circles to follow their instincts drawing on their own gifts, strengths and experiences of talking with and working with children. There is nothing magical or mystical going on here we simply ask that adults have a genuine commitment and concern for the focus pupil and are able to listen carefully to and follow the lead of children. The focus pupil should be very carefully listened to and as far as possible increasingly allowed to guide proceedings to ensure that their needs and issues are addressed. Weekly sessions can range from straightforward to the deeply therapeutic.

Whatever experiences are drawn upon it is clear that circles quickly become a learning experience for all the children in the group as they talk about feelings, problem solve, listen, empathise, challenge, and work out new ways forward.

We have found that there is a need for clear boundaries throughout and clarity regarding how group members should deal with disclosures from the child they are

supporting. Giving clear permission for circle members to pass on any information disclosed to them to the involved teacher is important. Permission and guidance is helpful with regard to what the circle members should put up with from the focus pupil. It is important to stress that they continue to have personal rights, which should not be violated. It is not acceptable for circle members to be abused physically or verbally just because they are trying to support and they need to hear this early on.

Group processes and content can vary enormously and are largely influenced by the style and strengths of the facilitator and what they feel able to handle or pursue. These can range from deeply emotive material to 'straight forward' behavioural strategies. There is an important need for maintenance, support and follow-up sessions and for any involved outside facilitator to keep in touch, especially with a newly formed circle.

The circle facilitator

The circle leader or facilitator should contain, hold boundaries and ensure safe space for the exploration of feelings and ideas. The role is also to provide rich positives and praise and build the esteem of the individual and the circle. The facilitator should attempt to encourage mutual support, trust, honesty and openness among the group members. We have learned that this role is crucial to the success of circles of friends.

The commitment, skills, personal qualities and model provided by this adult deeply influence the progress of the circle in its acceptance and support of a vulnerable focus pupil. Ideally this individual needs support and supervision in their work with the group from someone with appropriate psychological skills and strengths. In the busy real world the ideal level of this may not be possible, but identifying a trusted colleague to confide in and be supported by plus close contact with the whole group leader if a visitor or another member of staff is essential. We all need people for support in much the same way as the focus pupil. Rebecca is available for support on 0116 2845100.

Working together, circle members are also more likely to be more effective with the focus pupil. Pairs are much less vulnerable to intimidation, bullying or aggression from highly challenging focus pupil who is being supported.

Pupil interventions

We have been greatly impressed by the richness of the discussion and the way the group has functioned in such circles, often surpassing adult problem solving and mutual support giving. We are also struck by the power of very simple interventions from other children. For instance:

I just say forget it ... and he does

We are just there for him, to listen...

We just follow him out of the room and quietly ask him to come back...

I went round to his house and asked if I could play...

Other interventions range from the rich and varied to the mundane and adult oriented. We are fascinated by interventions occurring outside the classroom:

We saw him getting angry with the dinner lady...we went and started talking to him ....told him it was not worth it....he walked away.

I told him to go back in and apologise to the teacher.....

I told him to stop it when I saw what he was doing on the field..

and even outside the school:

I leant out of the window and shouted ' do you want to come swimming Shane? 'He said he couldn't, but now he comes every week with us.

Preventative strategies in the classroom are interesting:

We've invented a ' three tap code '...if he starts talking on the carpet one of us taps the floor near him... then he shuts up.

We are going to design a chart and write how well she has done during each lesson

Wayne is going to sit on one side of him and I'm going to sit on the other....

I shouted back at them to stop calling Paul...

We are going to speak to Samantha because she is making her life really bad...

Active interventions with the adult world reveal new insights into pupil perspectives on supply teachers, class teachers and midday supervisors, but are also excellent ways of calming difficult situations:

We need to invite Mr. Rogers (head of year) to our next meeting to talk to him about how he is treating John...

To an annoyed teacher, as John comes dancing and singing loudly into the room... 'He s just feeling a bit excited at the moment, Mr. Newton just praised him up'...

We are going to write a letter to her mum....

We both went and spoke to the dinner lady, she didn't understand about...

Whilst these are not therapeutic groups, some of the circles seem to offer individual children opportunities to share their deepest secrets, sufferings or vulnerabilities in a healing way.

Developing circle meetings and advanced processes and connections

For those wishing to expand their repertoire of processes beyond what they can instinctively carry out or plan, ideas to get the best out of small groups can be drawn from a range of sources. Ultimately circles of friends are unlike any other group that has been set up before so whilst ideas can be drawn from what follows a willingness to explore and be creative, whilst respecting the pupils involved, will continue to be the most essential. One approach which lends itself well to this work is the:

Problem Solving Approach

- Review Positives and negatives
- Agree problem area to work on
- Select and specify target
- Brainstorm strategies that will help the achievement of this target
- Select useful and workable strategies
- Agree who will do what and when
- Ensure focus pupil comfortable, involved and accepting of agreed strategies

Subsequent meetings of the circle: Summary

These meetings will be run by a member of school staff. Please complete the one minute checklist at the end of each session. Rebecca will observe one session and complete the same checklist.

1. Ask the pupils to sit in a circle.

2. Warm-up/settling-in exercise

3. Things that have gone well
   a) Ask for any situation involving the focus child which went well (involving or witnessed by the members)
   b) Get detail as to what the focus child said or did.
   c) Explore how participants felt.

4. Ask for any success in working towards targets.

5. Things that could have gone better

6. Discuss any blockages in steps towards target.

7. Brainstorm solutions.

8. Any other problems.

9. Target setting
   a) Maybe more of same, different means to the same end, or a new target.
   b) Brainstorm solutions (if not already done in 3b).
   c) Plan detail and agree responsibility and action.

The subsequent meetings of the circle: Warm up activities

Session 1 (run by Rebecca) – no warm up activity

Session 2 – Rhythm Master

Everyone sits in a circle. Choose someone to be the detective. Ask the detective to close their eyes while the rhythm master is chosen. The rhythm master then starts doing actions which everyone follows, for example clapping their hands or clicking their fingers. When everyone is doing the actions, ask the detective to open their eyes and try to guess who the rhythm master is. If they guess correctly the rhythm master then becomes the detective and a new rhythm master is chosen. If the detective guesses incorrectly the rhythm master can then choose a new detective and a new rhythm master.

Session 3 – Pass the smile

Everyone sits in a circle. The first person turns to the person on their right and smiles, that person turns to the next and passes the smile around the circle. This activity could be repeated with different facial expressions.

Session 4 – Bunnies

Ask the children to sit in a circle. Demonstrate putting both hands up to your head like ears, to demonstrate that you are the 'bunny'. The child to your right raises their left hand to their head to make one ear and the child to their left raises their right hand to make the other. The bunny can pass the bunny role to another person in the circle by looking them in the eye and then taking their hands from their head and pointing towards the new bunny. Those to the left and right of the original bunny must drop their hands and those to the left and right of the new bunny must put their hands up to their heads as in the first example. The aim is not to make any mistakes.

Session 5 – Tomato Ketchup

Choose one person to be the detective. Ask the detective to close their eyes while you point to a member of the group. This person has to say 'tomato ketchup' in a silly or disguised voice. Ask the detective to open their eyes and guess who spoke. If the caller does not guess correctly, the person who said 'tomato ketchup' becomes the caller.

Session 6 – Creeping round the circle

Ask the children to sit in a circle with one chair in the middle. Choose a detective to sit on the chair in the middle with a set of keys placed under the chair. Ask the detective to close their eyes. Choose a person to try and creep round the circle and pick up the keys without making a noise. The detective can catch the person creeping round the circle by pointing in their direction. If the person creeps round the circle and picks up the keys without being detected they win or become the detective (if time).

Session 7 – Ring on a String

Thread a ring onto a long piece of string and tie the ends together to make a circle. Everyone stands in a circle holding a section of the string with both hands. Choose someone to stand in the middle of the circle and be the detective. Ask the detective to close their eyes while the children start passing the ring around the circle. Ask the detective to open their eyes and watch as the children in the circle try to move the ring around the circle without the detective in the middle spotting it. Children can 'fake' pass the ring to each other! Ask the detective to guess where the ring is. Each detective has two guesses, before another detective is chosen.

Session 8 - Wink Freeze

Choose one person to be the detective. Ask the detective to close their eyes while a winker is chosen. They will signal to other children to freeze by winking. Ask the children to walk around the room and the winker to wink at the other children as subtly as they can. The detective has to guess who the 'winker' is. If the detective does not guess correctly, the winker becomes the detective.

7.9 Appendix IX: Treatment integrity checklist

A one minute checklist for Circle Facilitators

At the end of each circle meeting please complete the following checklist by ticking the appropriate features. Thank you.

Features		Tick if applicable	Any other comments
The focus pupil was present			
Circle volunteers were present (please note if/ how many were absent)			
The agreed circle facilitator was present			
No other pupils or staff members were present			
The session started with the warm up or 'settling in' exercise from the guidelines			
Strengths	'What went well' was shared		
	Details of 'What went well' were shared (what the child said or did, when and where it happened and possible reasons)		
	Participants' feelings about 'What went well' were discussed		
	The facilitator asked 'What went well' in relation towards the focus pupils' target(s)		
Difficulties	Details of 'difficulties' within the week were shared (the focus was placed upon what the circle can do about it rather than on assigning blame)		
	Any blockages in steps towards the target(s) were discussed by the circle		
	Solutions were brainstormed by the circle (although no pressure was put on the circle to find immediate answers)		
Targets setting	Targets were set (maybe more of the same, different means to the same end or a new target)		
	Solutions were brainstormed by the circle (if not already covered previously)		
	Details of agreed actions and responsibilities were discussed		
The facilitator encouraged all circle members to contribute			
The facilitator guided the children in generating their own ideas and did not add their own			

7.10 Appendix X: Social Inclusion Survey

Social Inclusion Survey Instructions

Please ask your class to complete this questionnaire once a week. Please assign a set time to complete the questionnaire – for example every Wednesday after lunch. It is really important that the questionnaire is completed each week so if you are unable to ask your class to complete it at the set time, please ensure that it is completed at another time.

Please read the following instructions each time you ask the class to complete the questionnaire.

We are going to complete a questionnaire about how pupils of your age get along with each other at school. There are no right or wrong answer, you just have to put what you think. The questionnaire asks about how you get along with other people at school and I know that this is quite a private thing so I will be careful to keep your questionnaires private. It is very important that you keep them private as well. That means not looking at your neighbour's questionnaire to see what they are putting and not talking about what you have put, now or afterwards. Does everyone understand that?

Look down the side of your questionnaire and you will see that it has got the names of everyone in this class in the order they come in the register. Now, if you look across the top it says 'How much do you like to play with each person at school?' Opposite each person's name there are four little circles. The second circle has got a smiling face and you are going to tick that circle if it is the name of somebody who you like to play with at school. The third circle has got a straight mouthed faced and you are going to tick that circle against the names of people you don't mind whether you play with them or not. The last circle has got a sad face and you are going to tick that circle if it is the name of someone who you prefer not to play with at school. We all have different people that we like to play with at school, that we don't mind whether we play with them or not and that we prefer not to play with. The first circle has got a question mark in it and you are going to tick that circle if it's the name of someone who you don't know well enough to decide how much you to like to play with them at school.

Before we start I would like everyone to find their own name on the questionnaire and cross it out. (This allows pupils completing the questionnaire to be identified without having to write their name on it. Check this has been done as you collect them in).

In a minute, I will ask you to start and I want you to go carefully down the list showing how much you like to play with each person at school. Tick the question mark if it is someone that you don't know well enough to decide how much you like to play with them, tick the smiling face if it's the name of someone you like to play with, tick the sad face it it's the name of someone you prefer not to play with and tick the straight-mouthed face if it's someone you don't mind whether you play with them or not. Make sure you haven't missed anybody out.

If you can't make out any of the names, just put up your hand and I will tell you who it is. Also remember to keep your questionnaires private.

Many, many thanks for your help! I really appreciate it!

SOCIAL INCLUSION SURVEY (SIS)

How much do you like to play with each person at school?

	?	☺	😐	☹
	?	☺	😐	☹
	?	☺	😐	☹
	?	☺	😐	☹
	?	☺	😐	☹
	?	☺	😐	☹
	?	☺	😐	☹
	?	☺	😐	☹
	?	☺	😐	☹
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	?	☺	😐	☹
	?	☺	😐	☹
	?	☺	😐	☹
	?	☺	😐	☹

7.11 Appendix XI: SchoolChildren's Happiness Index

The SchoolChildren's Happiness Inventory Instructions

Please ask the pupil the Circle of Friends is for to complete this questionnaire with the support of a member of staff who knows him well/he know well.

The questionnaire should be completed the week before the Circle of Friends is set up and after the last Circle of Friends session.

Please follow the procedure outlined below.

Before completing the questionnaire, in discussion with the child, choose something that they like and another thing that clearly dislike about school. Then using the materials provided fill in these two things discussed on the sample cards (S1 and S2).

Place the response options on the desk, in front of the child. Ask the child:

If one of these cards said (S1) 'During the last week in school, I liked (child-chosen preference), **where would you place it; would you place it under 'I agree' or 'I disagree'** (indicate).

Allow the child time to respond.

Then ask:

Would you place it under I agree 'A little' or I agree 'A lot' (indicate)**?**

The child may choose either of the second-level response option, but they should place the card in line with their previously expressed option.

Repeat with the child's non-preferred choice (S2). Once the child has shown they understand the task, proceed with the other items. Explain by saying:

Here are some things you might have thought or felt during the last week in school. Look at number one (point). 'During the last week in school, I had lots of energy'. You might think 'I Agree' if it's right about you (point out on the response options form) or 'I Disagree' (point) if it's not. Then chose if you 'Agree a Lot' (point) or 'Agree, a Little' (point). Or you might 'Disagree a Little' (point) or 'Disagree a Lot' (point). After I read each one aloud, put the piece of paper where it fits you best.

Read the statements in order starting with number 1. Record the child's response on the form provided. Please ensure that all items are answered. If clarification is sought, please note which the items and the explanation used.

The SchoolChildren's Happiness Inventory

		I agree		I disagree	
1	During the last week in school:	A lot	A little	A little	A lot
1	I had lots of energy				
2	I was nervous				
3	I wanted to come to school				
4	I was cross				
5	I was sad				
6	I felt relaxed				
7	I felt ill				
8	I felt that school was a safe place				
9	I concentrated				
10	I felt sick				
11	I felt positive				
12	I felt angry				
13	I wanted to cry				
14	I got on well with everyone				
15	I was in a bad mood				
16	I enjoyed myself				
17	I was tired				
18	I felt calm				
19	I was interested in working				
20	I felt sorry for myself				
21	I felt good				
22	I was confused				
23	I was confident				
24	I felt upset				
25	I wanted to give up				
26	I felt wide awake				
27	I had headaches				
28	I worked well				
29	I was frightened				
30	I liked being with other people				

The SchoolChildren's Happiness Inventory Response Grid

I agree ✓		I disagree ×	
A lot ✓✓✓✓	A little ✓	A lot ××××	A little ×

7.12 Appendix XII: Strengths and Difficulties Questionnaire

Strengths and Difficulties Questionnaire

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain or the item seems daft! Please give your answers on the basis of the child's behaviour over the last six months or this school year.

Child's Name ..... Male/Female

Date of Birth.....

	Not True	Somewhat True	Certainly True
Considerate of other people's feelings	☐	☐	☐
Restless, overactive, cannot stay still for long	☐	☐	☐
Often complains of headaches, stomach-aches or sickness	☐	☐	☐
Shares readily with other children (treats, toys, pencils etc.)	☐	☐	☐
Often has temper tantrums or hot tempers	☐	☐	☐
Rather solitary, tends to play alone	☐	☐	☐
Generally obedient, usually does what adults request	☐	☐	☐
Many worries, often seems worried	☐	☐	☐
Helpful if someone is hurt, upset or feeling ill	☐	☐	☐
Constantly fidgeting or squirming	☐	☐	☐
Has at least one good friend	☐	☐	☐
Often fights with other children or bullies them	☐	☐	☐
Often unhappy, down-hearted or tearful	☐	☐	☐
Generally liked by other children	☐	☐	☐
Easily distracted, concentration wanders	☐	☐	☐
Nervous or clingy in new situations, easily loses confidence	☐	☐	☐
Kind to younger children	☐	☐	☐
Often lies or cheats	☐	☐	☐
Picked on or bullied by other children	☐	☐	☐
Often volunteers to help others (parents, teachers, other children)	☐	☐	☐
Thinks things out before acting	☐	☐	☐
Steals from home, school or elsewhere	☐	☐	☐
Gets on better with adults than with other children	☐	☐	☐
Many fears, easily scared	☐	☐	☐
Sees tasks through to the end, good attention span	☐	☐	☐

Signature ..... Date .....

Parent/Teacher/Other (please specify:)

Thank you very much for your help

7.13 Appendix XIII: Format used for interviews with classmates (adapted version of the Coding Scheme of Perceived Causality)

I'm going to ask you to think about some of the things that happen in your classroom.

1. Can you tell me about something that has happened in the classroom that you like/ you enjoy? (discuss)

2. What about something that has happened in the classroom that you don't like/you don't like so much? (discuss)

I want you to think about (focus child) now because we're going to do some work thinking about how to help (focus child) in a few weeks. I'm not going to tell (focus child) about what you talk about today. What we talk about will be confidential. Do you know what that means? I just want to get a picture of how things are in your class at the moment.

3. Can you tell me about a time involving (focus child) which has gone well recently?

   (prompt – something that (focus child) has done well at)

   (repeat until a social situation mentioned)

   (prompt – what about something that's not to do with work. Something to do with other people)

   Why do you think they did that? Why do you think that happened? Why do you think that went well?

4. Can you tell me about a time involving (focus child) that didn't go so well?

   (prompt – a situation that (focus child didn't do so well in)

   (repeat until a social situation mentioned)

   (prompt – what about something that's not to do with work. Something to do with other people)

Thank you for your help.

7.14 Appendix XIV: Project information flyer

Circle of Friends Project

What is a Circle of Friends?

A Circle of Friends is a small group of children who have agreed to think about ways to help one of their classmates. A Circle of Friends group meets weekly to work on coming up with solutions and ideas for sorting out difficulties. The group includes an adult and the child the group aims to support. The meetings last about 20-30 minutes. Children are asked to volunteer to be part of the group during a class session which involves talking about friendships and about the Circle of Friends group.

What are the benefits of Circles of Friends?

Circles of Friends are used widely in Canada and America and increasingly in this country. Circles of Friends were mentioned in the DfEE Circular 10/99 *Social Inclusion: Pupil Support* and more recently recommended by the DfES as a tool which can be used to support pupils who are being bullied (DfES, 2002). Research on Circles of Friends has been very positive and found that volunteers are very good at coming up with ideas to support the child. Research has also shown that staff and pupils involved in Circles of Friends have felt the circles to be worthwhile both for the child and for the volunteers. This project aims to explore the benefits of Circles of Friends when used to support a pupil with an Autistic Spectrum Disorder.

What would being part of the project involve?

Participating in the project would involve trainee educational psychologist Rebecca James working with school staff to set up a Circle of Friends for the child the Autism Outreach teacher has identified. This will include Rebecca delivering the class session and working with staff to make arrangements for the 8 weekly Circle of Friends meetings. These meetings will need to be run by a member of school staff. The teacher and child the group is for will be asked to complete a short questionnaire at the start and end of the project. The child's classmates will be asked to complete a short questionnaire weekly.

I hope you feel able to support the project. If you would like to find out more, and are thinking about joining the project, please let your link psychologist know or contact Rebecca James directly at Rebecca.James@XXXXX or on XXXXX.

7.15 Appendix XV: Consent letter to parents of focus pupils

Dear X,

I'm writing to tell you about a project X Primary School is involved in. We are looking at setting up 'Circles of Friends' and would like to invite X to be part of this project.

Circles of Friends are groups made up of 6-8 children who have agreed to think about ways to help one of their classmates. Following discussion with staff at X Primary School and the school's link psychologist, X has been identified as someone who would benefit from a Circle of Friends. If you agree, the project will be explained to X and she/he will be able to decide whether or not they would like a group to be set up for them.

The Circles of Friends group would meet weekly with a member of staff and X to work on coming up with solutions and ideas for sorting out difficulties. The meetings would last about 20-30 minutes each. X's classmates would be asked if they would like to volunteer to join the group after a whole class session focusing on friendships, the Circle of Friends group, things that are going well for X and those things that could go even better. This initial whole class session is usually best undertaken without the presence of the child the circle aims to support. I've enclosed some additional information if you'd like to find out more about Circles of Friends. Further information is also available from http://www.inclusive-solutions.com/circlesoffriends.asp.

Circles of Friends are used widely in Canada and America and increasingly in this country. Research on Circles of Friends has been very positive and found that volunteers are very good at coming up with ideas to support the child the group is for. Research has also shown that staff and pupils involved in Circles of Friends have felt the circles to be worthwhile. This project aims to explore these benefits further. If X chooses to join the project, she/he would be asked to complete a questionnaire before the Circle of Friends is set up and again after eight weeks of Circle of Friends meetings. She/he would as be asked to completed a difference questionnaire on a weekly basis. X's teacher would be asked to fill in questionnaires at the start and at the end of the project, and X's classmates would be asked to fill in a questionnaire on a weekly basis.

Research into Circle of Friends is supported by the University of Nottingham and X Psychology Service. All information gathered as part of the project will remain confidential. Any information shared in reports on the project will be made anonymous so that X and X Primary School cannot be identified. If you change your mind after you sign the agreement to take part, you and X will be free to withdraw from the project at any time.

I hope you feel able to support the staff and pupils of X Primary School by allowing X to join in with this project. To make sure that X gets the opportunity to take part, please complete the consent form below and return it to the school office as soon as possible. If you have any questions please feel free to ask X at X Primary School, or contact Rebecca James, who will be setting up the Circles of Friends, at Rebecca.James@XXXX or on XXXX

Yours sincerely,

CIRCLE OF FRIENDS PROJECT- PARENT CONSENT FORM

CHILD'S NAME: _____ YEAR: _____

I have read the information in the attached letter and agree to my child taking part in the Circle of Friends project. I understand that I am free to withdraw my child from the project at any time should I change my mind. I understand that any information reported about the project will be confidential and anonymous.

PARENT/ CARER SIGNATURE: _____ DATE: _____

PARENT/CARER NAME (please print): _____

Please return this form to the school office as soon as possible, and no later than XXXX 2010. Thank you.

An Introduction to Circles of Friends
A parents' guide

1. What is a Circle of Friends?

A Circle of Friends is a group of 6-8 children who have volunteered to meet regularly with your child and a member of school staff (usually for 20-30 minutes per week).

2. What is a Circle of Friends for and what happens?

The circle has four main aims:

- To create a support network of other pupils for your child.
- To help your child cope more easily in school and give him or her more choices.
- To provide your child with encouragement and recognition for any achievements and progress.
- To work with your child in identifying difficulties and coming up with practical ideas to help to sort these out.

The adult is there to help the circle, but the children do the work with your child – coming up with ideas, trying things out, reporting back.

The circle can't provide instant friendship – but we hope that it will help your child to build closer and better connections and relationships with other children.

3. How will it be set up?

The members of your child's class will be asked if they are interested in being part of the circle. Your child's teacher will explain to them what this involves – usually this is best done when your child is not actually in the room.

We almost always end up with more pupils who are willing to help than we need. Your child's class teacher and your child will be involved in the selection of group members. The group then meets regularly with an adult.

4. Will it help?

Obviously we can't guarantee this. However, Circles of Friends has been used quite widely in Canada, America and increasingly in this country.

Evaluations in this country have so far been very positive and have helped children who have had complex difficulties and disabilities:

- Children at the centre of the circles have often shown improved behaviour and less worry about mixing with their classmates.
- The volunteers have been very good at coming up with creative and practical ideas.
- Most volunteers have been keen to continue their involvement.
- School staff have found the circles to be very worthwhile.

Information from: Newton, C. and Wilson, D. (2003) Creating Circles of Friends – A peer support inclusion workbook. Inclusive Solutions UK Limited.

7.16 Appendix XVI: Consent from focus pupils

(without pictures)

Participating in the Circle of Friends project

Your school is joining in a project looking at Circles of Friends. We've been thinking about how things are going for you at school and think it would be good for you to have something called a 'Circle of Friends'. I want to tell you what a Circle of Friends is, and about the project, and then you can decide if you would like to have a Circle of Friends and be part of the project.

The idea of a Circle of Friends is that you would have a group of children whose special job it is to help think about how to make things go well for you at school. It would mean you meeting with 6 children every week for 8 weeks to think about how your week has been and what they can do to help things go even better.

It would also mean someone called Rebecca coming in to do some work with your class. Rebecca would talk to the class while you're not there about how things are going for you at school. She would ask the class about things that you do that they like and also things that you do that they don't like. Rebecca would also talk to the class about things that you find hard and about how important friends are. She would then ask your classmates who would like to part of your special Circle of Friends group. When Rebecca has done this with other children, lots of classmates have wanted to be in the special group. Of the people who say yes, you can choose 2 to be part of the group and your teacher will choose 4.

How does this sound?
Do you have any questions about what a Circle of Friends is?

Part of Rebecca's work is that she wants to see how the Circle of Friends group goes. This means she will ask your teacher, your classmates and you to fill in some questionnaires. There will be one questionnaire for you to fill in before the Circle of Friends is set up and after 8 weeks and another questionnaire for you to fill in each week.

If you decide you want to be part of the project you can change your mind and say you don't want to join in anymore at anytime. You just need to tell an adult.

When Rebecca writes about the project she won't use anyone's names or the school name so no one reading the project will know who you are.

How does this sound?
Have you got any questions about the project?

Please answer the following questions:

Do you understand what a Circle of Friends is?	yes	no
Do you understand that Rebecca will come and work with your class?	yes	no
Do you agree to attend 8 weekly meetings?	yes	no
Do you understand that you will be asked to fill in some questionnaires?	yes	no
Would you like to be part of the project?	yes	no

Do you have any questions?

Please sign below to show that would like to be part of the project.

Child's name:

Child's signature:

Date:

Consent for focus pupils (with pictures)

Participating in the Circle of Friends project

Your school is joining in a project looking at Circles of Friends. We've been thinking about how things are going for you at school and think it would be good for you to have something called a 'Circle of Friends'. I want to tell you what a Circle of Friends is and about the project and then you can decide if you would like to have a Circle of Friends and be part of the project.

The idea of a Circle of Friends is that you would have a group of children whose special job it is to help think about how to make things go well for you at school. It would mean you meeting with 6 children every week for 8 weeks to think about how your week has been and what they can do to help things go even better.

8 meetings

It would also mean someone called Rebecca coming in to do some work with your class. Rebecca would talk to the class while you're not there about how things are going for you at school. She would ask the class about things that you do that they like and also things that you do that they don't like. Rebecca would also talk to the class about things that you find hard and about how important friends are. She would then ask your classmates who would like to part of your special Circle of Friends group. When Rebecca has done this with other children, lots of classmates have wanted to be in the special group. Of the people who say yes, you can choose 2 to be part of the group and your teacher will choose 4.

Rebecca meeting with your class

You doing something else

How does this sound?
Do you have any questions about what a Circle of Friends is?

Part of Rebecca's work is that she wants to see how the Circle of Friends group goes. This means she will ask your teacher, your classmates and you to fill in some questionnaires. There will be one questionnaire for you to fill in before the Circle of Friends is set up and after 8 weeks and another questionnaire for you to fill in each week.

Filling in some questionnaires. This will mean answering some questions about classmates and school.

If you decide you want to be part of the project you can change your mind and say you don't want to join in anymore at anytime. You just need to tell an adult.

When Rebecca writes about the project she won't use anyone's names or the school name so no one reading the project will know who you are.

How does this sound?
Have you got any questions about the project?

Please answer the following questions:

Do you understand what a Circle of Friends is?	yes	no
Do you understand that Rebecca will come and work with your class?	yes	no
Do you agree to attend 8 weekly meetings?	yes	no
Do you understand that you will be asked to fill in some questionnaires?	yes	no
Would you like to be part of the project?	yes	no

Do you have any questions?

Please sign below to show that would like to be part of the project.

Child's name:

Child's signature:

Date:

7.17 Appendix XVII: Consent letter to parents of classmates

Dear parent/carer,

I'm writing to tell you about a project X Primary School is involved in. We are looking at setting up 'Circles of Friends' and would like to invite your child, along with all your child's classmates, to be part of this project. If you agree, the project will be explained to your child and he/she will be able to decide whether or he/she would like to be involved.

What is a Circle of Friends?

A Circle of Friends is a group made up of 6-8 children who have agreed to think about ways to help one of their classmates. A Circle of Friends group meets weekly to work on coming up with solutions and ideas for sorting out difficulties. The group includes an adult and the child the group aims to support. The meetings last about 20-30 minutes. Children are asked to volunteer to be part of the group during a class session which involves talking about friendships and about the Circle of Friends group.

What would being part of the project involve?

If you agree for your child to be involved in the project, he/she will be part a class session about friendships and Circles of Friends which will be delivered by trainee educational psychologist Rebecca James. During this session your child will be invited to be part of the Circle of Friends group and may, or may not, be chosen to attend weekly Circle of Friends meetings if they do volunteer. These meetings will take place for eight weeks. Your child will also be asked to complete a short questionnaire, which looks at peer relations, on a weekly basis.

What are the benefits of being part of the project?

Circles of Friends are being used in other parts of the country and are used on widely in Canada and America. As well as helping the child the Circle of Friends is for, they have been found to have benefits for all the children involved. In particular, Circles of Friends seem to help children to develop their ability to think through problems and helps with their understating of themselves and others.

Research into Circle of Friends is supported by the University of Nottingham and X Educational Psychology Service. All information gathered as part of the project will remain confidential. Any information shared in reports on the project will be made anonymous so that your child and X Primary School cannot be identified. If you change your mind after you sign the agreement to take part, you and your child will be free to withdraw from the project at any time.

I hope you feel able to support the staff and pupils of X Primary School by allowing your child to join in with this project. If you have any questions

please feel free to ask X at X Primary School, or contact Rebecca James, who will be setting up the Circles of Friends, at Rebecca.James@XXXXX or on XXXXX. If you agree to for your child to be part of the project, please complete the consent form below and return it to the school office as soon as possible.

Yours sincerely,

CIRCLE OF FRIENDS PROJECT- PARENT CONSENT FORM

CHILD'S NAME: _____ YEAR: _____

I have read the information in the attached letter and agree to my child taking part in the Circle of Friends project. I understand that I am free to withdraw my child from the project at any time should I change my mind. I understand that any information reported about the project will be confidential and anonymous.

PARENT/ CARER SIGNATURE: _____ DATE: _____

PARENT/CARER NAME (please print): _____

Please return this form to the school office as soon as possible, and no later than XXXX 2010. Thank you.

7.18 Appendix XVIII: Consent from classmates

Participating in the Circle of Friends project

Your school is joining in a project looking at something called 'Circles of Friends'. I want to tell you about the project and then you can decide if you would like to involved.

I've planned with your teacher that I am going to come and do some work with your class in a few weeks. What this will mean is that I will come in and spend a morning or an afternoon with you talking about friendships and how things are going in your class. I will also ask you if you would like to be part of the small of group I'm going to set up called a 'Circle of Friends'. I'll explain more about this when I come in again.

I am doing a project looking at the work I'm planning to do with you all so would really like to see how well it works in this school. If you decide you want to take part in the project, I will ask you for your help with a few things. As well as me coming in to work with your class, I also want to ask you to fill in a questionnaire once a week until the end of term. The questionnaire shouldn't take that long and we will have a look at it together in a minute.

I would like you to think now about whether you would like to be part of the project. If you decide you want to be part of the project you can change your mind and say you don't want to join in anymore at anytime. You just need to tell an adult.
When I write about the project I won't use anyone's names or the school name so no one reading the project will know who you are.
Do you have any questions?

Please answer the following questions:

Do you understand that you will be involved in a session looking at friendships and how things are going in your class?	yes	No
Do you understand that you will be asked to fill in a questionnaire every week?	yes	no
Would you like to be part of the project?	yes	no

Do you have any questions?
Please sign below to show that would like to be part of the project.

Name: Signature:

Date:

7.19 Appendix XIX: Interview consent from parents of the focus child

Dear X,

Thank you for agreeing for your child to be involved in the Circle of Friends project. I am writing to ask for your further support with the project.

The Circle of Friends being set up for your child has been chosen at random to be involved in an additional part of the project. This would mean asking a small number of X's classmates (approximately 6) to participate in short one-to-one tape-recorded discussions with me (trainee educational psychologist Rebecca James) at the start and end of the Circle of Friends project. These discussions would involve questions relating to things that happen in the class and include specific questions designed to explore classmates' thoughts and about X's behaviour.

The purpose of the planned discussions is to gain an understanding of classmates' perceptions and understanding of X's behaviour before and after the Circle of Friends. Research suggests that these perceptions may change during the course of the Circle of Friends project. I am keen to explore this further to gain a better understanding of how and why the Circle of Friends has been used with such success in the past. I am happy to discuss the findings of the study, specifically the Circle of Friends set up for X, with you in person once the study is complete. I understand the sensitive nature of this topic and would like you to consider if you are happy for this to happen. Please feel free to contact me if you would like to discuss this in person or if you have any concerns.

As mentioned in my earlier letter, all information gathered in the study will remain confidential. Any information shared in reports on the project will be made anonymous so that your child and X School cannot be identified.

I hope you feel able to support the Circle of Friends project further by agreeing for this additional part of the project to go ahead. If you have any questions please feel free contact me Rebecca.James@XXXXX or on XXXXX. If you are not happy for this part of the project to go ahead, the Circle of Friends will be set up as previously agreed. Please complete the form below and return to X School as soon as possible.

Yours sincerely,

Rebecca James

Trainee educational psychologist

CIRCLE OF FRIENDS PROJECT- PARENT CONSENT FORM

I have read the attached letter and I agree/ do not agree for Rebecca James to complete discussion with X's classmates which will include questions about X's behaviour (please delete as appropriate).

I understand that I am free to withdraw my child from the project at any time should I change my mind. I understand that any information reported about the project will be confidential and anonymous.

CHILD'S NAME: _____ YEAR: _____

PARENT/CARER NAME (please print): _____

PARENT/ CARER SIGNATURE: _____ DATE: _____

7.20 Appendix XX: Interview consent from the parents of classmates

Dear parent/carer,

Thank you for agreeing for your child to be involved in the Circle of Friends project. I am writing to ask for your further support with the project.

Your child has been chosen at random to be asked to participate in an additional part of the project which involves a one-to-one discussion with myself (trainee educational psychologist Rebecca James). This would mean your child spending approximately 20 minutes with me prior to the Circle of Friends being set up and at the end of the Circle of Friends project. During this time, your child will be asked to answer questions about their thoughts and feelings on the behaviour of other children in their class. The discussion will be recorded.

All information gathered as part of the project will remain confidential. Any information shared in reports on the project will be made anonymous so that your child and X School cannot be identified. If you change your mind after you sign the agreement to take part, your child will be free to withdraw from the project at any time.

If you agree for your child to participate in this additional part of the project, your child will be asked if they are happy to do so. The discussion will be explained and your child will be reminded that they are able to stop participating at any time.

I hope you feel able to support the Circle of Friends project further by allowing your child to join in with this project. If you have any questions please feel free contact me Rebecca.James@XXXX or on XXXXX. If you agree for your child to be part of the project, please complete the consent form below and return it to the school office as soon as possible.

Yours sincerely,

Rebecca James

Trainee educational psychologist

CIRCLE OF FRIENDS PROJECT- PARENT CONSENT FORM

I have read the attached letter and I agree/ do not agree for Rebecca James to complete discussion with XXXX's classmates which will include questions about XXXX's behaviour (please delete as appropriate).

I understand that I am free to withdraw my child from the project at any time should I change my mind. I understand that any information reported about the project will be confidential and anonymous.

CHILD'S NAME: _____ YEAR: _____

PARENT/CARER NAME (please print): _____

PARENT/ CARER SIGNATURE: _____ DATE: _____

7.21 Appendix XXI: Interview consent from classmates

Interviews with classmates

I'm interested in understanding how children get along with each other and what they think about each other's behaviour. I would love to hear your thoughts and feelings about this. I'd like to ask you some questions today and again in a number of weeks. There are no right or wrong answers to the questions. I am just interested in what you think.

From what we talk about today and the other work I'm doing with your class, I am planning to write a report. I would like to tape record the conversation we have so that I can listen to it again and use some of what we talk about in my report. I won't ever use your name or your school name in my report so no one reading it will ever know who you are.

If you don't want to answer any questions or carry on talking you can ask to go back to the classroom at any time.

Do you have any questions?

Please answer the following questions:

Are you happy to answer some questions?	Yes	no
Do you understand that you can ask to go back to the classroom at any point?	Yes	no
Are you happy for me to record the conversation?	Yes	no

Do you have any questions?

Please sign below to show you are happy to participate in this part of the study.

Child's name:

Child's signature:

Date:

7.22 Appendix XXII: Example summary of expectations for schools

Circle of Friends Project – Timetable

X Primary School

8th – 12th March	• Rebecca meets classmates and gains their consent • Rebecca asks classmates to complete the class questionnaire (Social Inclusion Survey) for the first time
15th – 19th March	• Class complete the Social Inclusion Survey
22nd – 26th March	• Class complete the Social Inclusion Survey • Rebecca visits to discuss Circle of Friends set up and weekly meetings with the circle facilitator • Teacher completes Strengths and Difficulties Questionnaire • Circle facilitator completes Strengths and Difficulties Questionnaire • Child the Circle of Friends is for completes Happiness questionnaire (with a member of staff)
Easter Holiday	
12th – 16th April	• Rebecca visits to set up Circle of Friends (whole class session + circle meeting number 1) • Rebecca asks the class to complete the Social Inclusion Survey during her session
19th – 23rd April	• Class complete the Social Inclusion Survey • Circle meeting number 2
26th – 30th April	• Class complete the Social Inclusion Survey • Circle meeting number 3 (Rebecca to visit for this session)
3rd – 7th May	• Class complete the Social Inclusion Survey • Circle meeting number 4
10th – 14th May	• Class complete the Social Inclusion Survey • Circle meeting number 5
17th – 21st May	• Class complete the Social Inclusion Survey • Circle meeting number 6

24th – 28th May	• Class complete the Social Inclusion Survey • Circle meeting number 7
Half term	
7th – 11th June	• Class complete the Social Inclusion Survey • Circle meeting number 8
14th – 18th June	• Teacher completes Strengths and Difficulties Questionnaire • Circle facilitator completes Strengths and Difficulties Questionnaire • Child the Circle of Friends is for completes Happiness questionnaire (with a member of staff)

Please contact me if you have any questions or are unable to complete the activities described above.

Many, many thanks!

Rebecca

XXXXX (Psychology Service)
XXXXX (Work mobile)
Rebecca.James@XXXXX

7.23 Appendix XXIII: Raw data collected from SIS ratings

Focus child A

Phase	Week	Number happy	Number neutral	Number sad	Number unsure	Total responses	Index of acceptance	Index of rejection
A	1	6	6	6	5	23	0.3	0.3
	2	3	7	8	3	21	0.2	0.4
	3	4	6	8	3	21	0.2	0.4
	4	8	7	1	1	17	0.5	0.1
B	5	10	6	4	0	20	0.5	0.2
	6	9	10	0	0	19	0.5	0
	7	7	10	3	0	20	0.4	0.2
	8	11	8	4	0	23	0.5	0.2
	9	11	6	4	1	22	0.5	0.2
	10	10	6	3	0	19	0.5	0.2
	11	9	8	4	1	22	0.4	0.2

Focus child B

Phase	Week	Number happy	Number neutral	Number sad	Number unsure	Total responses	Index of acceptance	Index of rejection
A	1	5	7	9	3	24	0.2	0.4
	2	7	6	8	3	24	0.3	0.4
	3	8	4	9	3	24	0.4	0.4
	4	7	5	9	1	22	0.3	0.4
B	5	13	5	4	1	23	0.6	0.2
	6	11	5	5	0	21	0.5	0.2
	7	7	4	7	0	18	0.4	0.4
	8	No data						
	9	7	4	8	0	19	0.4	0.4
	10	No data						
	11	No data						

Focus child C

Phase	Week	Number happy	Number neutral	Number sad	Number unsure	Total responses	Index of acceptance	Index of rejection
A	1	1	10	13	1	25	0	0.5
	2	11	1	11	0	23	0.5	0.5
	3	11	2	13	0	26	0.4	0.5
	4	5	4	14	1	24	0.2	0.6
B	5	12	5	9	0	26	0.5	0.3
	6	9	2	14	0	25	0.4	0.6
	7	6	6	7	0	19	0.3	0.3
	8	5	8	10	0	23	0.2	0.4
	9	8	6	9	0	23	0.4	0.4
	10	6	7	8	0	21	0.3	0.4
	11	4	4	12	0	20	0.2	0.6

Focus child D

Phase	Week	Number happy	Number neutral	Number sad	Number unsure	Total responses	Index of acceptance	Index of rejection
A	1	12	7	4	4	27	0.5	0.2
	2	13	9	4	0	26	0.5	0.2
	3	13	10	2	0	25	0.5	0.1
	4	18	6	2	0	26	0.7	0.1
B	5	21	6	1	2	30	0.8	0
	6	18	5	1	1	25	0.8	0
	7	16	8	2	0	26	0.6	0.1
	8	14	9	2	2	27	0.6	0.1
	9	17	6	2	4	29	0.7	0.1
	10	16	7	3	1	27	0.6	0.1
	11	16	8	2	1	27	0.6	0.1

Focus child E

Phase	Week	Number happy	Number neutral	Number sad	Number unsure	Total responses	Index of acceptance	Index of rejection
A	1	8	8	1	5	22	0.5	0.1
	2	6	12	1	2	21	0.3	0.1
	3	11	10	1	1	23	0.5	0
	4	10	7	2	1	20	0.5	0.1
B	5	16	7	0	0	23	0.7	0
	6	No data						
	7	11	8	2	0	21	0.5	0.1
	8	11	7	3	0	21	0.5	0.2
	9	No data						
	10	10	8	2	0	20	0.5	0.1
	11	No data						
	12	No data						

7.24 Appendix XXIV: Interview excerpts

Child 1

Time	Interview except	Location of the cause
Pre	**In year 4, some people came to school and kept on calling (focus child) names. That was last year, he has left now.** Ok. ….What did he (focus child) do? **He called names back.** Did he? Ok. Why do you think that happened? **I don't know.** Does he call names to other people? **Not normally.** And if he ever does, why do you think that is? **He gets annoyed.**	2
Post	**Well.. he's still banging on the table with his pencil. It puts people off….. you can break the lead in the pencil too.** Can you tell me why you think that happens? **Maybe he is finding the work hard.** **He works for a bit and then maybe he gets bored. Or he could be finding it difficult to concentrate.**	1

Child 2

Time	Interview except	Location of the cause
Pre	**Well, we have asked him to *do something* and um sometimes he has either not done it or well… yeah not done it.** Ok. Thanks for being so honest. Can you think about why he might not have done it or why that might have happened? **Um. I think that at that point he was probably thinking um um 'can't I do something um by telling myself to do something rather than by other people?'.** Oh ok, so he didn't want to be told? **Yes.**	2

Post	**Well he has kind of disobeyed (teacher) a few times. Like this afternoon when he kept on making noises and (teacher) turned around and he shouted.** Ok. And can you tell me why it is or what made that happen? **Sometimes he gets annoyed with people telling him what to do like um… um.. like an example.. in football some people tell him to just pass and sometimes he doesn't and he just um.. he keeps on running with the ball without passing.**	2

Child 3

Time	Interview except	Location of the cause
Pre	**Actually yeah…sometimes he embarrasses people like he hugs people.** Ok. **And sometimes he tries to do wrestling moves on you.** Ok. **Stuff like that.** Ok. Can you tell me why you think that happens? Why it is he tries for example to give you a hug and that makes you feel embarrassed? Why do you think that happens? **I think just because.. like.. to start with he didn't quite know how to .. kind of.. be with people. Now he's learning.** Ok. **And his friends have become quite close.**	1
Post	**Swearing. I think he just copies it. He hears it and then he has started to do it. I think that the others would disagree with me and stuff.** I was going to ask why you think it is that that happens… **Yeah, because he copies and thinks yeah I'll say that because it sounds cool.** Ok. You know how you were saying you think you're friends might disagree… **Yeah, last time they said that didn't happen in the meeting.** They think he doesn't swear? **They think he doesn't but they might have realised. It's their opinion.**	2

Child 4

Time	Interview except	Location of the cause
Pre	**Um.. sometimes people get a bit annoyed when.. when he makes noises when (teacher) is trying to explain stuff.** Ok. So he makes noises? **Yes. In the classroom.** Can you tell me why it is that happened? **Maybe he…it could be because like he is a bit like bored or doesn't really know what he's meant to be … (not clear) and stuff.** Doesn't know what he's meant to be….? **To be doing.**	1
Post	**Um well. I think because we've got the chairs and that I think it's still on the table sometimes because he sometimes plays drums on the table. Sometimes it's quite annoying on the table. And also touching people's hair. I think some people don't like it.** Ok. And can you tell me why it is you think those things happen? **It might be because he… he doesn't… he waits for (teacher) to help him as well so while he's waiting he's probably a bit bored so he gets carried away with things.** Ok. Thank you.	1

Child 5

Time	Interview except	Location of the cause
Pre	**Um… He doesn't like getting things wrong.** What happens then? **He gets quite upset about it.** Ok. What does he do that you can see happen? **Well he kind of sobs for a little and then he wants to do it straight away and then he wants to do it, do it, do it whilst the teacher is sitting next to him. The teacher says 'no you need to do this work' but then he just kind of wants to do it straight away.** Ok. **It's not very often. I have seen him do it a few times.** Can you tell me why you think that happens? **Hmm… I know the reason why in maths but I don't know the reason why in maths but I don't know the reason by in literacy and science.**	2

	Ok. Do you want to tell me why in maths first? **Because (teacher) gives out sweets in maths to people who gets full marks and he always really wants sweets all the time and he doesn't get it, he gets one wrong he gets really cross.** Ok. I know you said you don't know why it happens in science can we think about it. So he's in science and he gets one wrong and gets upset, why do you think it is that that happens? **Possibly because he really, really wants to get on with his work and wants to do it. He might also think that the other teachers give out sweets if you get them all right. He might think that.**	
Post	**Well, not really but sometimes he shouts quite loud and makes funny noises when everyone else is talking. Quite loud noises.** Ok. Any can you tell me why you think that that happens? **I think because everyone else is making a noise he doesn't want to be left out so he tries to make loud noises to join in.**	2

Child 6

Time	Interview except	Location of the cause
Pre	What about.. can you tell me about what happens if somebody disagrees with him? **Well he just persists with saying I'm right and you're wrong.** Ok. **And because (focus child) thinks he's always right even when he's wrong.** Ok. **But some people do that. Like me.** So if there is a situation and (focus child) is saying I'm right but someone else thinks he's wrong. Why do you think it is that he thinks he is right and carries on? **I don't know. There are people who like to think they are always right and I think he's one of them.** Ok. That was a careful answer. **Like me. I like to be right. If I'm wrong I think I accept it better than (focus child) though.**	1
Post	**Um… well he's still doing this drumming thing on the table. Although it's rhythmic it's annoying.** Ok. And can you think for my why you think that happens? **Um I don't know.... I think he likes doing it and he doesn't realise that some people don't like it.**	1