

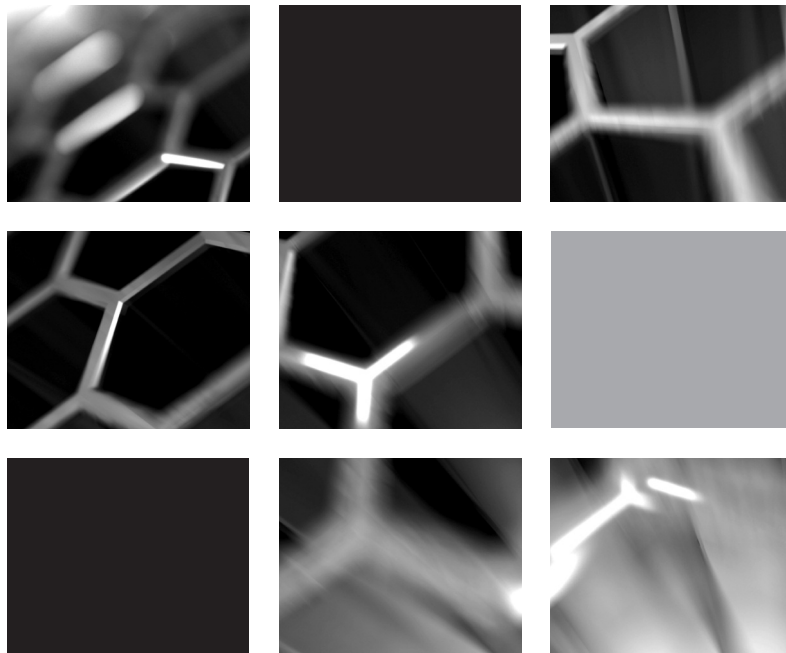


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The use of cognitive behavioural strategies in the management of anger in a child with an autistic spectrum disorder: an evaluation

Ena Fitzpatrick, Republic of Ireland, GAP Journal, May 2004

Editorial comment

Ena Fitzpatrick is a teacher in a class for children with ASDs within a mainstream school, with two support assistants. This paper describes how cognitive behavioural strategies were used to help an eleven year old boy with an ASD and moderate learning difficulties to understand and manage his anger.

Note: Appendices 3 and 4 have not been included in this version due to restrictions on space, but they are given in the GAP Journal.

Acknowledgements

I wish to thank my tutor, Gillian Boyd, for her support, guidance and encouragement as I embarked on this project. I would also like to thank my colleagues, without whose practical support this work would have been impossible to carry out. Finally, but most importantly, I must thank 'Christopher' for his willing participation in the programme of activities outlined in this project. We have learnt and continue to learn from each other.

Introduction

The difficulties associated with anger management have been a source of concern since the time of Aristotle, who advised mankind to:

'not forget that it is human to be painfully affected by anger and to find revenge sweet ... Anyone can become angry – that is easy. But to be angry with the right person, to the right degree, at the right time, for the right purpose, and in the right way – that is not easy.' (385 –322 BC Nicomachean Ethics, cited Gribble in Visser, 1999)

It would appear that emotional awareness, cognitive ability (or the ability to rationalize) and the ability to communicate one's feelings in an appropriate manner are central to the appropriate expression of negative emotions such as anger. Anger is seen as a 'social emotion' and social interaction is often the provocation. Since impairments in social relations, language and communication, and flexibility of thought are all associated with ASD it is hardly surprising then that some people with ASD display inappropriate emotional

outbursts or challenging behaviours. In addition, the presence of a learning disability is also a contributory factor for many people with ASD, since it is widely accepted that a significant proportion of people with learning disabilities have difficulty differentiating between emotions, and regulating and expressing emotions, particularly strong negative emotions such as anger (McAlpine, Kendall and Singh, 1991; Bates, 1992 cited Black et al., 1997).

That is not to say, however, that people with a learning disability, and/or ASD, can not be enabled to develop the skills necessary to control their emotional outbursts or behaviour. Dobson and Block (1988) cited in Radnitz, 2000), maintain that thoughts and beliefs affect behaviour, and that altering those thoughts and beliefs can result in beneficial change in behaviour. This theory is at the heart of cognitive behaviour therapy (CBT). Allen (1999) describes it as *'helping people to develop different thinking habits.'* Evidence from the literature to support the use of cognitive behavioural approaches with people with learning disabilities is somewhat limited and similar research for people with ASDs is even more

limited. There is an article on this though by Dougal Hare in this issue of the Journal which gives references to others work with CBT and this population. This small-scale action research study documents the introduction and implementation of cognitive behavioural strategies during the last month of the school term with a child with an ASD who has a long-standing difficulty with anger and a growing tendency towards aggressive behaviour.

Aims of the work with the child

It was anticipated that engaging in this work would:

- lead to greater insight into the child's cognitive processes
- provide opportunities to challenge any cognitive distortions
- give rise to the development of greater emotional awareness
- bring about changes in the child's thoughts and beliefs, and
- result in the development of increased self-control.

However, given the short time span of the study, and the nature of the child's difficulties, it was unrealistic to expect findings of great significance to emerge. Furthermore, during the four-week period of its implementation, Christopher suffered from very severe hay fever, causing him not only to miss school for a number of days but also to be very lethargic and sleepy due to medication on his return. What was achieved during that time constitutes the optimum that it was possible to achieve given the busy timetable being pursued in the class. Findings are qualitative in nature and relate specifically to this child under this specific set of circumstances.

Literature review

Traditional intervention strategies for behaviour problems such as aggression have, in the past, focused on the presentation of consequences to suppress these responses (Durand & Carr 1989, cited Radnitz (2000)) and on reinforcement schedules (Howells et al., 2000). Cognitive behavioural strategies, on the other hand, focus on the development of skills that will allow the individual to become more independent and responsible for his/her own actions. Central to cognitive behavioural psychology is the idea that a person's thoughts, beliefs and attributions concerning experiences, which are

themselves borne out of past experiences, impact upon his/her emotional state and behaviour. These past experiences may in turn have resulted in the development of dysfunctional/distorted ideas. However, focusing on a person's thoughts, beliefs and attributes in a systematic, structured way can be effective in changing beliefs and emotions and impact positively on behaviour. This approach is very similar to Rational-Emotive Therapy (RET) which developed from the work of Albert Ellis (1962) and seeks to challenge a person's irrational beliefs, in order to bring about change and substitute more realistic thoughts. In effect, cognitive behavioural therapy aims at correcting faulty logic and helping the individual to develop the skills that will enable him/her to regulate and control his/her own behaviour.

Strategies used in cognitive behavioural approaches

The strategies often used with cognitive behavioural approaches include:

- Self-instruction: a strategy where key words/phrases are repeated,
- Self-management: the individual is taught to monitor and regulate his/her own behaviour
 - 'obtaining the skills involved to change one's own behaviour and providing intervention for oneself,'* (Smith, 1990 p.103 cited Stenfert et al., 1997)
- Problem-solving: problems are defined, possible solutions are developed and decisions are made on which solution is best
- Social skills training: the person is helped to develop self-awareness in a social problem situation, and s/he engages in the selection of appropriate choices.

One of the main benefits of CBT is the growth in independence that is inherently part of the process. The ability to manage potentially difficult situations and regulate one's own behaviour can lead to independence of treatment providers and ultimately increased social interaction.

This ability to self regulate has in the past been regarded as beyond the scope of some people with learning disabilities (Stenfert Kroese, 1997) and research into the effectiveness of such interventions for people with learning disabilities is limited. Evidence from this

research would suggest, however, that people with learning disabilities do in fact benefit from cognitive behavioural interventions. Paquin (1978 cited Radnitz, 2000) found that a 9 year old girl with a learning disability who exhibited disruptive behaviour, showed improved academic performance and less disruptive behaviour as a result of being taught to self-graph. Benson, Rice and Miranti (1986, cited Black & Novaco, 1993) in their comparative group analysis, evaluated relaxation training, self-instruction, problem-solving and a combined treatment approach with 'mentally retarded' adults. Significant reductions on anger and aggression measures were reported across groups, although there were no significant differences between treatment groups. Koegal and Koegal (1990) in their study of whether four students with an ASD (aged 9 to 14 years) could learn to use a self-management treatment package to reduce their stereotyped behaviour, found that the students were able accurately to record instances when they were not engaged in stereotyped behaviour. Their recordings of presence of stereotypy, however, proved to be inaccurate. Notwithstanding this inconsistency, all four students showed decreases in the target behaviours. Furthermore, a follow-up study involving two of these students in a community setting, found that self-management procedures were learnt quickly in their new settings and that reductions in stereotyped behaviour occurred for extended periods of time in the new settings without the presence of treatment providers (Jones et al., 1997).

Black and Novaco (1993) extended the work of Benson et al., (1986), in their treatment of anger with a man with learning disabilities by including a combination of cognitive behavioural techniques (ie self-monitoring, cognitive restructuring, the development of behavioural coping skills and training in interpersonal problem-solving skills). Results demonstrated a strong decrease in irritability, improvements in pro-social behaviour and an overall increase in self-control of anger and aggressive behaviour. The dual function of the self-monitoring process (ie treatment and assessment, is viewed as integral to cognitive behavioural treatment (Black & Novaco, 1993). Occasions of anger and frustration are therefore perceived as further opportunities for addressing problems rather than setbacks or evidence of failure.

Howells, Rogers and Wilcock (2000) raise questions as to the validity of the earlier results relating to intervention

programs for people with learning disabilities. They suggest that the reported reduction in the frequency of incidents of anger in earlier studies may have resulted not from teaching self-management techniques, but from improved incident management skills on the part of carers who have been directly involved in anger management programs. This is a very valid point and one that would seem to question the validity of 'frequency' alone, as the determining factor in the assessment of incident management programs. They also question the efficacy of intervention programs that accept only people who have the ability to talk about their feelings and emotions, thereby excluding people who have difficulties recognizing and naming feelings and emotions. People with ASD, for example, experience such difficulties (Attwood, 1998) and would naturally have been excluded from such programmes.

In Howell et al.'s (2000) evaluation of a cognitive behavioural approach to teaching anger management skills to a group of adults with learning disabilities, participants were taught how to recognize and understand the cognitive processes involved in anger arousal (ie the way we think about the anger-provoking stimulus and how we interpret what others are thinking and doing). They were also taught to use anger calming thoughts and role-play was a key feature in their programme. Difficulties experienced in the collection of data precluded the authors from generating any significant quantitative, clinical data in relation to the use of cognitive behavioural approaches with people with disabilities; rather their results were qualitative in nature. They found that all five participants were able to discriminate between 'red' (anger-provoking) and 'green' (anger-calming) thoughts and, in addition, participants reported during interviews that they felt more in control of their own anger.

A large component of CBT requires the individual to imagine different personal motivations for the behaviour of others (Jones et al., 1997). This form of therapy would naturally place serious demands on the individual with ASD since interpreting the mental states of others, empathizing with their feelings and adopting their differing social perspectives, are areas of difficulty traditionally associated with ASD (Frith, 1991). Interestingly, Jordan (2000) warns against trying to undermine what for people with ASDs are their legitimate emotions and suggests, as a prerequisite to teaching tolerance, that the teacher recognizes and understands

the child's difficulties. In effect then, the teacher/researcher is also required to imagine and understand the personal motivations for the behaviour of the child in order to engage in this intervention. As a consequence it would be impossible to predict the pace at which this form of intervention can be progressed. What is anticipated, therefore, is that the cognitive behavioural techniques and strategies described in this small scale study will, of necessity, form part of the child's long-term programme and that, over time, he will be enabled to develop coping strategies for dealing with what for him are distressing and stressful situations.

Study Design and Methods

Description of the child: Christopher

Christopher (fictitious name) is an eleven-year-old boy with a mild learning disability and a diagnosis of mild to moderate autism. He has difficulty processing and applying complex chains of information, in organizing his thoughts to speak or write and in expressing language. He also has difficulty with problem-solving, with memory, motivation, perspective-taking and social interaction. Christopher lacks interpersonal skills, is easily frustrated and has a low anger threshold. While he has an extensive vocabulary, and can speak at length about his preferred topics (videos and video games), he has difficulty expressing his emotions. His difficulties are reflected in his scores on the Socialization and Maladaptive Behaviour Scales of the Vineland Adaptive Behaviour Scales (Sparrow et al., 1985) that fall into the moderate and significant range of delay respectively.

Christopher is very reluctant to stay in a room in the presence of babies, toddlers or young children. He becomes very agitated and does his utmost to escape; if this is not possible he gets very angry, shouting (eg 'Get that stupid baby out of here.'). He also has difficulty tolerating the presence of the children from the adjoining class who frequently enter our room during break times or who join us for selected activities (eg for cooking, PE, musical chairs, video). Previous strategies have included recognizing the tell-tale signs and identifying the triggers that set him off, removing the signs and practising relaxation techniques (eg deep breathing, counting to 10/20). In recent times, however, his expressions of frustration and anger have become more aggressive both verbally and physically. He has a tendency lately to talk to himself, ruminating about an event, prolonging the arousal until his anger builds up and ends in violent outbursts, where he thumps the table, kicks furniture,

turns over chairs, sweeps books off the table, and scribbles on books or on the table. He may show physical aggression towards other children in his immediate environment, lashing out with his fists, and pushing and shoving them.

A systematic and structured intervention programme that would enable Christopher to control his anger and aggressive outbursts was needed. The decision to try a cognitive behavioural approach was borne out of the perception that Christopher's aggressive behaviours were the result of distorted or dysfunctional thoughts and beliefs, and that if he could be enabled, as Allen (1999) suggests, to reconstruct his ideas and develop coping strategies for potentially difficult situations, his behaviour might improve. The complexity of this task was acknowledged, but given that a programme of self-monitoring and evaluation had already been successfully implemented with one of the other children who exhibited disruptive behaviour, there was a perception that Christopher would benefit from this form of intervention.

Methods

Implicit in the ability to self-monitor levels of anger is the ability in the first instance to distinguish between emotions. It was necessary therefore, to assess Christopher's level of emotional awareness. This assessment took the form of (a) labelling photographs of people as happy, sad, angry, and (b) sorting scenarios relating to Christopher's personal experiences into happy, sad, frightened, angry, not sure (see *Appendix 1* for examples of experiences where Christopher says he feels these emotions).

In addition, there was a perception among staff that Christopher had a difficulty with 'theory of mind', that is, he lacked the ability to understand things from another's perspective, and that this contributed significantly to his behaviour problems. In the light of the importance attributed in the literature to 'theory of mind', it was necessary to establish if this perception was indeed valid. A modified version of the 'Sally/Anne' test (Baron-Cohen et al., 1985) was devised and administered. This test was also administered to the remaining four children in the class who have a diagnosis of ASD and varying degrees of learning disability, as a means of comparing Christopher's level of understanding in this area with that of his peers with an ASD. The children's performance on this test would provide valuable insight into their level of development and, in Christopher's case, give an

indication what it might be realistic to expect from our intervention program.

Components of the programme

The cognitive behavioural strategies that formed the basis of the intervention programme included:

- Self-monitoring using daily logs completed by Christopher to report on a half-hourly basis whether he felt angry or not and to what extent, (eg a 'Wee bit', 'Big bit' or 'Lots'). These provided information about Christopher's own assessment of his mood.
- Debriefing sessions subsequent to aggressive outbursts, or when Christopher recorded on his Daily log that he felt angry during a particular period of time. Christopher was encouraged to talk about his feelings and his behaviour, giving an insight into his thought processes and providing opportunities to challenge his ideas and beliefs and suggest alternative choice (see *Appendix 2* for examples of the conversations we had during the debriefing sessions). Debriefing sessions were used in conjunction with observation sheets that provided information about the perceived triggers associated with Christopher's aggressive outbursts and his actual behaviour during incidents. This information provided a background against which 'informed' discussion could take place.
- Social Problem Solving, a cognitive-affective-behavioural process whereby Christopher was given the opportunity to attempt to identify, discover or invent ways of dealing with everyday problems (after D'Zurilla & Goldfried (1971) cited Loumidis & Hill, 1997). Social skills worksheets were used (from Super Duper 2002) that pose social problems in various settings (eg a child being chased who does not want to be chased).

Results

This small-scale study set out to evaluate the effectiveness of using cognitive behavioural techniques in helping a child with ASD and learning difficulties to deal appropriately with his anger. Having due regard to the child's difficulties and the short-term nature of the intervention it was not expected that there would be any major change in either the child's thoughts and beliefs or his aggressive behaviour. Furthermore his performance on the 'false belief' test, where he attributed his own perspective to the assistant (by predicting that she

would look for the scissors where he knew they were, and not where she had put it), would indicate that he has a significant difficulty with 'theory of mind.' Since results show that generally speaking, three year olds fail on this test but that 4 year olds are more successful, (Warden & Christie, 1997), Christopher's lack of development in this area would appear to be quite significant. This finding has implications for the amount of time that would be needed to effect any real change in Christopher's thinking. By comparison the other children with an ASD in his class displayed no such difficulty on this test.

There is evidence in this study, however, that goals relating to gaining greater insight into his cognitive processes, having opportunities to challenge any cognitive distortions and the development of greater emotional awareness were achieved. Self-monitoring and self-reporting, for example, proved effective as a means of focusing Christopher's attention on his emotions and how they affect his behaviour. Over a three-week period, Christopher accurately recorded the times when he was/was not angry, in contrast to the inaccurate recordings of presence of stereotypy by participants in the Koegal and Koegal study (1990). Far from avoiding drawing attention to times when he felt angry, Christopher was quite anxious to talk about it. The daily records afforded him the opportunity to discuss what it was that made him angry and to recreate the situation verbally. Williams and Jones (1997) stress the importance of verbal interaction in the process of self-regulation/monitoring, stating that,

'the ability of an individual to use language to describe and control his or her own behaviour represents one of the most important of all skills.'
(Williams & Jones, 1997, p.72)

This process also provided the researcher with insight into Christopher's thought processes, to view circumstances from Christopher's perspective, and at the same time take advantage of the chance to challenge Christopher's ideas and help him to arrive at socially appropriate solutions that were acceptable to him. It was noted that his tendency to ruminate on incidents diminished in the short time that he was self-monitoring and reporting.

While it would be naive to suggest that any significant changes in his beliefs have come about, there was

noteworthy progress made with regard to Christopher's compliance with the instruction to finish on the computer. Pre-intervention, Christopher's behaviour was very aggressive when he was called on to finish and return to the classroom for lunch. Within one week of self-monitoring and self-reporting, his behaviour improved dramatically; there was no aggressive outburst and only a minor protest. The social problem-solving story 'Time to go' (see Appendix 4) provided an opportunity to examine Christopher's thinking surrounding this topic as it applied to him, and to reinforce his more socially appropriate behaviour. Subsequent visits to the computer room, which were prefaced by reminders of his previous appropriate behaviour, were incident-free.

Assessment of Christopher's emotional awareness showed that he could correctly label photographs according to the emotions portrayed in them (eg happy, angry, and sad). Further opportunities for assessment arose during debriefing sessions. His choice of the word 'frown' was very appropriate in the 'Time to go' social problem-solving story, (Appendix 4) and he demonstrated his ability to identify the emotions of others (eg 'John was shaking his head with sadness because he was upset,'. In sharp contrast, he showed some confusion labelling his own feelings (eg 'lonely,' to describe how he felt when he was asked to shut down the computer and 'sad' as a response to Nigel's laughing).

A number of inconsistencies also emerged which demonstrate Christopher's difficulty with perspective-taking and would indicate that Christopher experiences difficulty interpreting the feelings and motivations of others (eg Christopher feels angry when Trevor, who appears happy, enters our room, and is frightened because his friend Bill won't play with him. It was expected that this would make him sad. Inconsistencies relating to going into the adjoining classroom for selected activities were also noted and will be discussed later. Scenarios categorized as 'sad' were appropriate, and would seem to indicate that Christopher is empathetic towards people who are upset or hurt. There was no confusion with regard to 'happy' scenarios and not surprisingly, the scenarios in the 'angry' column related to:

- Christopher's feelings towards the children in the adjoining class,

- having to share a favourite activity, even with a friend,
- other children occupying Christopher's work space, and
- being asked to come away from the computer.

Christopher's anxiety surrounding the presence of babies was also confirmed.

The difficulties highlighted by this activity informed the choice of social problem-solving worksheets to be completed as part of this programme of intervention. Due to the constraints of time, however, only two social problems were addressed. The two topics were chosen because they related specifically to areas of difficulty for Christopher:

- 1 what to do when a friend is chasing you and you don't want to be chased, and
- 2 what to do when it is time to stop engaging in an enjoyable activity and you want to continue

The use of worksheets, with pictorial representations of the problems, provided opportunities to discuss options for the characters concerned without any personal threat to Christopher. It was also possible to relate the problems to those actually experienced by Christopher and to engage in some disputing and testing of a belief, a process Beck et al. (1979) call collaborative empiricism, (cited Dagnan & Chadwick, 1997).

Discussion

For people with ASD, most interpersonal interaction is painfully difficult since it deprives them of a sense of control (Boucher, 1996). Participating in this program of intervention required Christopher to engage regularly and intensively in interaction with the teacher/researcher. This did not seem to pose a problem for him, perhaps because he was given the teacher/researcher's undivided attention.

The factors that triggered Christopher's angry responses included the presence of his peers from the neighbouring class and the presence of young children, in particular, babies and toddlers. Christopher's response to the presence of babies/toddlers has a long history and his mother reports that she may have contributed to its development. Apparently Christopher became upset whenever his baby brother cried and it

was customary for her to remove the crying child from Christopher's space to another room. She further reports that Christopher still exhibits difficulty tolerating his brother's presence, insisting that he leave the room. If this does not happen Christopher leaves the room himself or 'escapes.' This information shed some light on Christopher's habit of insisting that children he doesn't like from the neighbouring class leave the room.

He is also a reluctant participant in any activity that takes place in another classroom. As a way of dealing with this difficulty, a programme of joint activities that lend themselves to working in parallel or co-operatively was initiated. Cookery sessions, for example, take place in alternate rooms on alternate weeks and both classes also come together for PE activities, video, shopping and social trips. During cooking sessions in the other classroom, a timer is used to reassure Christopher that there is a limit to the time to be spent there. The benefits of using this strategy are threefold:

- it provides Christopher with a focus and distracts him from his tendency to want to leave,
- it provides staff with a reference point for discussing with Christopher improvements in his behaviour, and
- it provides staff with a model to refer to for the future.

It is hoped that by engaging in this procedure, Christopher's discomfort in the presence of his peers in the other class might dissipate and lead to more prosocial behaviour towards them in the future.

One would assume from the 'Scenario Sort' that Christopher preferred cooking to watching a video. The opposite is in fact the case. Why then did Christopher report feeling frightened at the prospect of going to the other classroom to watch a video? The answer may lie in the fact that there is a routine established for going this room to cook, whereas there is none for video. It is also possible that the use of the timer provided Christopher with a measure of reassurance in this situation. This hypothesis needs to be tested in the coming school term.

One might also assume from the scenarios classified as 'sad' that Christopher has developed a level of empathy towards others who are upset or hurt. Being empathetic, however, involves emotional mind reading and having,

'an affective response more appropriate to someone else's situation than to one's own.'
(Hoffman, 1987 cited Warden & Christie, 1997)

It would be impossible to attribute this characteristic to Christopher given his proven difficulty with perspective-taking. It is more likely that Christopher's form of empathy is the immature 'ego-centric empathy' displayed by two-year-olds (ie showing distress at another child's distress but unable to understand what has caused the other's emotion or what might alleviate it. In fact, it is probable that difficulties associated with the interpretation of other's emotional states cause Christopher to exhibit conflicting emotions (eg being angry when Michael is laughing). It is hoped that over the coming months, debrief sessions will throw some light on his thoughts and beliefs surrounding the emotions and behaviours of his peers from the neighbouring class. There is a perception, on the other hand, that by completing the Daily Log and engaging in self-reporting Christopher is becoming more aware of his own feelings. A further positive outcome of engaging in this activity is that completed logs highlight that he has many happy periods during the course of each day. This evidence promotes a more positive self-image and enhances his self-esteem.

It was noted that his tendency to ruminate on incidents diminished somewhat in the short time that he was self-monitoring and reporting. Previous interventions tended to be reactionary in nature and focus on diverting Christopher's attention, using counting as a means of calming him, responding to situations as they occurred. It is possible that his tendency to ruminate developed in the absence of any real effort on the part of staff to resolve the conflict constructively. In sharp contrast, methods employed in this intervention went right to the heart of his difficulties. He was encouraged to gain an understanding of his moods and time was given to listen to him as he explained his feelings. This procedure helped to bring closure to what were for him distressful situations.

Concluding comments

Involvement in this study has confirmed the view that there is much to be gained through the use of cognitive behavioural strategies and techniques in the management of anger in a child with ASD. Self-monitoring and reporting has opened up a more focused channel of communication between child and teacher,

through which two-way understanding and learning can take place. The complexity of the difficulties experienced by a child with ASD and learning difficulties and the need to provide him with ongoing systematic and structured intervention has been highlighted. Use of social problem-solving activities (albeit limited) has provided opportunities to address Christopher's difficulties in a non-threatening and positive way. It is anticipated that further work in this area will in time lead to the development of coping skills necessary to control his emotions and his behaviour. It is further anticipated that these approaches will be utilized with another child in the class whose difficulties in dealing with anxiety seriously affect his concentration and ultimately his opportunities for learning. Admittedly using such strategies is time-consuming but if in the process our children develop self-management and better coping strategies then the time spent will have been well invested.

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The use of cognitive behavioural strategies in the management of anger in a child with an autistic spectrum disorder

Appendix 1: Examples of scenarios which Christopher says make him happy, frightened, angry or sad (people's names have been changed)

Happy	Frightened	Angry	Sad
No homework today			Having lots of homework
Going to the other classroom to cook	Going to the other classroom to watch a video	Michael is in our room and he is laughing	M crying
Video today		Trevor is in our room and he is very happy	Nigel laughing
Going to the café with my family		Teacher asks me to come away from the computer	
Playing on the computer on my own.	Yvonne brings in her baby to see us	Playing on the computer with my brother	Bill going to France on holidays
My friend Bill asks me to come to his house	Bill won't play with me	Playing on the computer with Bill	Bill going to France on holidays and I wont see him for a long time
Richard and Bill are playing and having great fun	Bill splashes me in the swimming pool	I'm copying Bill	Bill is upset
My birthday		Bill is copying me	Richard falling and crying
Cooking in our own room		Jim sitting in my chair	Angela (assistant) has a sore hand
A sunny day		George making robots at my table	Having a bad nosebleed
Going to the activity room	John is in our room	Playing on the computer with John	John falling and cutting his leg
Doing drama			Mary's boys coming into our room to do drama
Doing art			
Going to the zoo with my friends from school			
Going to P.E. with 3 rd class			
No school on Saturday or Sunday			

Appendix 2: Sample observation sheets and debriefing sessions

19/6/03	12.45	Incident in the Yard at Lunchtime	
18/6/03	2.00pm	Shouting Incident after PE	
Trigger	Behaviour	Duration	Debrief
John shaking his head repeatedly on the way back from the gym after PE (He didn't want to go back to class and had been crying)	Christopher clenches his fists and shouts repeatedly at John to stop shaking his head. Comes into class in a very agitated state.	2-3 minutes	<p>Why are you angry? Because John was shaking his head with sadness because he was upset.</p> <p>What did you do? I shouted at him. Did that make John feel better? No.</p> <p>How did it make him feel? Sad. <i>OK. How could you make him happy?</i> Not shout at him. <i>That's right. Not shout at him.</i></p>
On his return from the yard Christopher recorded ' Lots ' of anger for the period when he was in the yard.			<p><i>Why were you angry?</i> I was fighting with Bill and Nigel. <i>Was that play fighting or really fighting?</i> Why ... Because Nigel grabbed my arm and ran with me. <i>What did you do?</i> I tried to let go but he kept on and on. <i>What did you say to him?</i> I said let go of me. <i>Did you shout at him?</i> Yes. <i>I think Nigel was just playing with you.</i> Yes he was, until he grabbed. <i>Did you like Nigel playing with you?</i> No, 'cos he was very bold and annoying. <i>What was he doing that was bold?</i> He was going to grab me and bring me back. <i>What did he do that was annoying?</i> I fell on the grass with Bill and Nigel and Nigel got up and grabbed me. Bill hurt Nigel on the arm. <i>Was Nigel trying to help you to get up?</i> I think so. <i>Do you think he was trying to hurt you?</i> No. He was just playing with me. <i>Are you still angry with him?</i> No Will you be angry the next time he tries to help you up? No.</p>

The use of cognitive behavioural strategies in the management of anger in a child with an autistic spectrum disorder

23/6/03			
Trigger	Behaviour	Duration	Debrief
11.30–12.00 Toddlers making noise, some crying.	Christopher thumps chairs; moves chairs, pulls his own hair, stands up and sits down again a number of times. Puffs and sighs (sign that he is calming down)	1 minute (Wee bit)	5 minutes later Christopher says: I was brave when I heard those sweet sounds of the toddlers. <i>You didn't get too angry.</i> No I just got a little bit angry
12.05 John enters the room and plays with a robot	Christopher growls at him and tries to hit him as he passes by.	20 secs. (Wee bit)	<i>Why did you get upset with John?</i> He just stole a robot from the shelf. It's OK, I'll get it back when he's gone.
12.15 Jim enters the room and repeatedly calls Christopher's teacher by her name (he has just recently learnt how to say her name correctly)	Christopher shouts aggressively ' <i>Stop saying that.</i> '	20 secs. (Wee bit)	Christopher reports a 'Wee bit' angry for this incident, stating 'He shouldn't be here.' <i>Why do you think he kept saying my name?</i> I don't know. <i>Jim is just practising saying my name. Last week he wasn't able to say it properly and now just wants to show everybody that he can say it. Is that OK?</i> Yes but he shouldn't come in here.
12.20 John screams in adjacent room	Christopher shouts, ' <i>What's that yell? It's like an explosion!</i> '	Seconds (Wee bit)	I'm sorry that John got upset.

24/6/03			
Trigger	Behaviour	Duration	Debrief
12.05 Jim enters the room shouting	Christopher yells, ' <i>You stop that shouting.</i> '	5 secs. (Wee bit)	<i>Christopher how did you feel when Jim was shouting?</i> I was a bit angry. <i>And what did you do?</i> I shouted at him. <i>That's right. How many people were shouting then?</i> Me and Jim. <i>That's right. Is it a good idea to shout?</i> No but he makes me mad. <i>And what do you think happens when you shout at Jim?</i> He leaves the room.

The use of cognitive behavioural strategies in the management of anger in a child with an autistic spectrum disorder

Trigger	Behaviour	Duration	Debrief
<p>1.00 Christopher sees a bouncing castle in the grounds of the neighbouring school.</p>	<p>Christopher runs off instead of coming back to classroom after lunch and has to be called on a number of times before he returns. He wants to go to the bouncing castle and gets very annoyed when he is told that it belongs to the other school and that we cannot use it. He storms into the classroom, shouting.</p>	<p>(Lots)</p>	<p>See next page for 'Debrief'</p>
<p>Note: <i>Italics</i> denotes the teacher's responses</p>			