Abstract

Traditional therapy with children who stutter has focused on providing a tool box of strategies that the child may use to manage his fluency, which may be combined with identification and desensitization of the thoughts and emotions associated with stuttering. Therapy targeted at supporting children to identify their thoughts and feelings, and aiding their understanding of the relationship between cognitions and emotions, can have an important impact on children’s speech, even at a young age.

This paper will present how Cognitive Behaviour Therapy (CBT) has been used with children who stutter at the Michael Palin Centre in its integrated therapy approach for children aged 5 to 14 years and their parents. Particular challenges will be discussed regarding how to adapt language and material to support the younger child who stutters, with a specific focus on using language which will help a younger child to access their thoughts; enabling a child to talk about feelings; supporting a child to identify and challenge their thinking by considering alternative perspectives; and developing coping strategies to manage more challenging situations.

There is growing evidence for the use of CBT with children as the recommended intervention for a range of mental health disorders. The evidence base for the use of CBT with children who stutter needs to be further developed, in order that those children for whom the emotional impact of stammering is significant, receive the targeted and integrated support they need.

Keywords: Cognitive Behaviour Therapy; stutter; children
1. **Introduction to Cognitive Behaviour Therapy**

Epictetus, a first century philosopher, observed that “People are disturbed not so much by events themselves, as what they make of them” – it is not the actual events that cause a negative reaction, but the way that they are interpreted. In the 1960’s Aaron Beck proposed that human beings are constantly engaged in a process of filtering and interpreting information, in order to make sense of the world and of experiences, but some people develop systematic, unhelpful biases in the way they interpret information. Beck (1976) also proposed that cognitions, emotions, physiological and behavioural responses are linked in a cycle (See Figure 1).

![Figure 1 Beck’s Cognitive Model](image)

In children who stutter (CWS), this cycle may present as feelings of nervousness or embarrassment about speaking, which may be linked to negative thoughts or predictions about their speech. This may trigger physiological changes, which may lead to behavioural responses such as increased effort in speaking and more stuttering, or deciding not to speak in order to keep themselves safe.

Cognitive Behaviour Therapy (CBT) is a form of psychotherapy which helps people explore the impact of their thoughts, feelings and physiological responses on their behaviour and supports them in experimenting with challenging their thoughts and predictions in order to develop more helpful responses.

2. **Evidence for Cognitive Behaviour Therapy**

CBT has been widely used with children and adolescents with mental health difficulties and there is a growing evidence base for its effectiveness with this population. Systematic reviews found that CBT was an effective treatment for children and adolescents with anxiety disorders (James et al., 2013; Cartwright-Hatton et al., 2004). There have been other studies looking at the effectiveness of CBT with other psychological disorders in children such as depression (Compton et al., 2004; Klein et al., 2007); social phobia (Spence et al., 2000); obsessive compulsive disorder (Bolton et al, 2011); and traumatic stress (Gillies at al., 2013). There is also evidence from a developmental perspective that children are able to engage in CBT (Grave & Blisset, 2004; Friedburg & McClure, 2002).

CBT may be a useful tool with CWS as there is evidence that they can experience social exclusion and negative peer reactions (Langevin et al., 2009). In addition studies have shown that CWS can develop negative reactions towards their own speech from an early age (Vanryckekeghem et al., 2001 & 2005) and social anxiety develops among some adolescents and adults who stutter (Iverach & Rapee, 2014; Craig & Tran, 2006). CBT is used in therapy with adolescents and adults who stutter (Fry et al., 2014; Menzies et al., 2008; Millard, 2011), but there are no studies demonstrating its use with young CWS.

3. **CBT at the Michael Palin Centre**

The Michael Palin Centre uses an integrated approach to the management of stuttering (Cook & Botterill, 2005), incorporating speech management techniques, social communication skills training and cognitive techniques, all
within the context of the child’s environment (see Figure 2). With younger children therapy typically starts with an indirect component (Kelman & Nicholas, 2008), helping the family to provide the foundations which will support the child’s fluency. In cases where the child presents with clinically significant anxiety or depression, a referral would be made to the relevant psychological support services.

Figure 2 The Therapy Triangle

4. Using a cognitive model with children

4.1 Identifying emotions and cognitions

The therapist may introduce the cognitive model by first focusing on children’s emotions. This will enable children to recognise their feelings, to normalise their experiences and to start to challenge typical negative cycles of thinking that may have developed. Children typically notice their emotions and changes in mood, more easily than they are able to identify specific cognitions. Emotional recognition can be introduced using activities such as: emotions face charts/flashcards (depicting a range of positive and negative emotions), emotions pairs games, identifying feelings of characters in stories and films and differentiation activities e.g. identifying thoughts versus feelings. Story stems (Fuggle et al., 2013) can be used to support children to identify the thoughts and feelings of a fictional character, by completing a story which replicates a scenario that is being experienced by the child. For example, the child may complete a story about another child who stutters who is asked to take part in a school play. This externalises the problem from themselves, thereby enabling children to more easily access their own thoughts and feelings about the situation.

Children can be supported to rate the intensity of their emotions by using questioning e.g. ‘when that feeling was at its worst how strong was it?’, ‘how nervous / embarrassed did you feel at the time?’ In order to support younger children to quantify their emotions, visual supports can be used e.g. an anxiety dial, filling cups with water, feelings thermometer (Stallard, 2002), feelings traffic lights or blowing up balloons. These activities translate an abstract concept into a more visual and concrete notion, which can be more accessible and motivating. This can also act as a baseline measure of change. Children are also introduced to the concept of emotions falling along a continuum, to help to shift thinking from being polarised (e.g. angry or calm) and introducing changes in intensity of emotion. By supporting children to become more adept at expressing their feelings and by becoming more desensitised to emotions, they may begin to have less of a detrimental impact. Subsequently, if children are less easily emotionally aroused, their fluency may be less likely to be destabilised as a result (Karrass et al, 2006). This
direct input with children should be built on previous work with parents, to build their skills in supporting children’s emotional reactions in their daily lives. For example, supporting parents to be open about emotions, and label and acknowledge their child’s emotions, in order to indirectly support them to manage their emotions more easily (Kelman & Nicholas, 2008).

Visual methods can also be used to support children to access cognitions, initially in others e.g. completing ‘thought bubbles’ for characters in stories, or cartoons (Stallard, 2002) and moving towards self-identification of thoughts by completing their own thought bubbles, for example, from where the somatic change occurs (e.g. “what’s my racing heart saying?”). Belief ratings can be attributed to the thoughts identified (e.g. “people will laugh at me” - belief=30%), again considering the belief of thoughts along a continuum, rather than as absolutes. Friedberg & McClure (2002) describe a child-friendly means of exploring a simple cognitive cycle, using a ‘thought flower garden’ in which the child is invited to draw a picture of the situation that triggers the negative emotion (the ground), depicting the thoughts (the stem) and feelings (the petals) growing out of the soil.

Therapists can use a range of helpful questions to support children to access their thoughts more easily e.g. ‘what went through your mind?’, ‘when you were feeling worried what were you thinking?’, ‘what was your heart saying to you?’, ‘what did you imagine might happen?’, ‘what was the worst thing that could happen?’, ‘did you have a picture in your mind?’ and ‘supposing that did happen, what would be the worst thing about that for you?’.

Children and young people are then encouraged to categorise thoughts that are unhelpful (‘junk’ thoughts) and more helpful (i.e. ‘cool’ thoughts) (McNeil et al., 2003), and to begin to identify typical negative thinking patterns (Verduyn et al., 2009; Stallard, 2002 & 2005).

4.2. Links between emotions, cognitions and behaviours

Children require the causal reasoning capacity to make connections between thoughts, feelings and resulting behaviours (Grave & Bliss, 2004). Simple cognitive cycles can be explored with CWS, to identify how their thoughts and emotions impact on what they do. Safety behaviours (such as giving up talking, avoiding words or situations, avoiding eye contact) can be identified, labelled and normalised as an understandable coping response to fear or anxiety. Alternatively, physiological changes such as increased bodily tension, or increased speech rate, triggered by unhelpful thinking patterns (e.g. “I’ll stutter...people will laugh” or “they will think I’m an idiot”) can often result in increased stuttering. These links can be made explicit to children and young people through psycho-education, in order to develop awareness and to enable children and young people to begin to challenge these thoughts and to develop more adaptive coping responses.

5. Using creativity in therapy

Therapy needs to be individualised to match the child’s interests, experiences and developmental level in order to ensure that concepts are comprehensible and accessible and that activities are engaging and motivating. It is therefore important that the therapist demonstrates flexibility and creativity in their approach (Stallard 2014).

5.1. Stories and analogies

Stories that focus on topics such as anger, anxiety and negative thinking (Lamb-Shapiro, 2000a; 2000b; Sobel, 2000) can be used in therapy, as a means of describing familiar difficulties experienced by fictional characters, thus externalising the problem and indirectly challenging cognitions in a non-critical way. Puppets and play figures can be used in a similarly engaging way, to model behaviours in others, to allow children to consider an outsider perspective e.g. to give advice to the character about what they could do to help themselves, or suggest a more helpful thought.

Analogies such as the anger volcano (Stallard, 2002), or the ‘letter box’ analogy (Friedberg & Wilt, 2010) to introduce the concept of mental filtering, can support children to access more complex concepts using familiar and developmentally appropriate ideas.

5.2. Children’s drawings

Drawing can be a valuable method to support children to express themselves without relying heavily on using language or on adult-led interactions. They can be used as a focused activity to engage the child’s interest, to put at
Ease and to provide opportunities for questions and observation (Thomas & Jolley, 1998). A clinical application of the use of drawings is outlined below, in which an 8 year old CWS described a recent school trip, during which he was required to speak in front of a group of people. When asked questions by the therapist about this challenging scenario, he had experienced significant difficulty tuning into his thoughts, feelings and actions at that time. However, by depicting the situation using drawing, he was able to use a medium with which to accurately express his experience and spontaneously provided a commentary (see Figure 3).

![Figure 3 Children’s drawing and transcription](image)

6. **Cognitive reframing**

   When children and young people are able to notice and identify their cognitions, unhelpful thoughts can be challenged and ‘reframed’ by: checking the evidence that supports the thought being 100% true; considering alternative explanations for events; exploring how likely it is that the feared event will happen and reconsidering the possible cost were the worst to happen. Behavioural experiments are a further powerful tool to test out thoughts and predictions, in order to gather empirical evidence, in the context of child’s real world.

   Younger children can be supported to identify more helpful messages or ‘self-talk’ and to problem-solve difficulties using mentalisation (Fuggle et al, 2013) by considering others’ perspectives e.g. asking “what would your best friend say?”, or using the analogy of a football coach (e.g. “who would your coach be?”; “what advice would they give?”; “what would your team mates say?”).

7. **Developing coping strategies**

   Coping strategies are identified and practised within and beyond clinic, as part of the therapy process. Supporting children and young people to identify what they already do that works, can reinforce that they already have the skills and resources to cope and highlights helpful strategies to build upon. Problem-solving a particular challenge together with a child and their family, and encouraging the child to identify and try out their preferred solution, encourages flexible thinking and increases the child’s internal locus of control (i.e. feeling empowered to be able to solve a problem themselves).

   Younger children may use a ‘helping hands’ activity in which they draw around both hands, writing all of the people within their immediate support network on one hand and their coping strategies on the other. Examples of coping responses may include talking to a friend or parent, or writing down worries or thoughts.

   Children and young people can start to practise skills learnt in therapy, in a range of real-life situations. These
may be identified using hierarchies (e.g. a ladder) outlining speaking situations that are least-to-most challenging. They may then identify situations in which they are willing to stretch their existing ‘comfort zones’ and practice tolerating the exposure to feelings of anxiety. Children can be encouraged to tune into their level of anxiety before, during and after a challenging task and notice and reflect on the feeling gradually reducing. Children may also reflect on their confidence level (and what helped them to build this) and on their coping skills and resilience. These experiences can help children to build authentic evidence (e.g. ‘I spoke in front of the class’) to support more adaptive thoughts (e.g. ‘I can do it’) about themselves and their performance e.g. using a ‘belief box’.

In order to develop generalisation of skills beyond clinic, between-session tasks are agreed in conjunction with children and their families from the start of therapy. Examples of tasks may include: noticing tasks; thought records; daily diaries; behavioural experiments; positive data logs / good news diaries; stretching comfort zones (e.g. answering a question in class); and reading / bibliotherapy (e.g. handouts about ‘thinking traps’). Tasks should be child-led and should be clear, specific and relate to the child’s goals. By supporting children to consider the rationale of homework tasks, this will be more relevant and meaningful and may lead to improved generalisation of skills.

8. Action planning

CBT is a collaborative approach involving the child and the therapist working together, so that the child feels ownership of the process throughout. The child and therapist set the agenda together for each session, plan homework tasks and problem-solve together. The child then reviews and reflects on the therapy and decides the future plan. By normalising future setbacks, the child can prepare for them and not be overwhelmed by encountering obstacles. They can be supported to identify their skills and abilities to cope with challenges and to develop an action plan following therapy, in order to continue to build and maintain gains in confidence, independent coping, problem-solving and resilience.

A helpful analogy for children, to demonstrate the natural fluctuations of progress, is a roller coaster ride, or a game of ‘snakes and ladders’, to identify setbacks that are likely to be encountered (the snakes) and to help them to identify specific coping strategies to employ when things are more challenging (the ladders).

Helpful questions to support children to devise a personal action plan may include: what has been the most helpful or important thing that I have worked on?; what am I pleased with?; what have I done to make this happen?; what will I do to keep things going?; what will I do or say to myself when things are not going so well or when I lose confidence?; what new skills have I got to tackle challenges? and how can build on what I have learnt?.

9. Involving the child’s context

Parents may play an important role in influencing or maintaining a child’s cognitive cycle. Neimeyer (1993) described a ‘systemic bow tie’, demonstrating how others’ responses influence a person’s cognitive cycle. For example, a child who is about to order his food in a restaurant may feel anxious and make predictions about what will happen, resulting in increased tension (see Figure 4). As his mother observes this, her own apprehension may build as she too predicts a negative outcome. As a result the child may struggle more to speak and his mother may intervene to ‘rescue’ him, resulting in their negative thinking being reinforced. The mother’s intentions are to support her child, but she may be inadvertently helping him to perpetuate an unhelpful pattern of thinking.
Therapeutic intervention may involve helping the child and their parent to devise their cycles and examine the interaction, in order for both of them to consider changes that they might make to adopt a more helpful cycle which results in the desired behavioural change. Biggart et al (2007) described in more detail how CBT may be used with families of CWS.

10. Measuring outcomes

A range of measures can be used to gather outcomes and monitor progress. Measuring children’s goals using 0-10 rating scales, acts as a direct measure of change, in relation to the child’s desired outcome.

Outcome measures should explore the area of need that has been targeted in therapy (e.g. anxiety, low mood, self-esteem and communication attitude) e.g. using Beck Youth Inventories (Beck et al., 2005); SDQ: Strengths and Difficulties Questionnaire (Goodman, 1997); Resiliency Scales (Prince-Embury, 2007); Overall Assessment of the Speaker’s Experience of Stuttering (OASES, Yaruss & Quesal, 2006); Communication Attitude Test (CAT, Brutten & Vanryckeghem, 2006); KiddyCAT (Vanryckeghem & Brutten, 2007); Draw your stutter (Millard & Rustin, 2003). Figure 5 demonstrates the latter measure, alongside the young person’s reflection of his two pictures, pre and post therapy.
“The first one is where the stutter is big and strong, now it is weak. The first one has big eyes, I was anxious. It has fangs, I was frustrated. Now it’s really small, it’s smiley because it’s calmer and has no fangs. It’s relaxed and calm and not anxious anymore” (RW, 13 years old).

11. Conclusion

Clinical practice at the Michael Palin Centre indicates that CBT is a useful tool for children who stutter, but it is important to build empirical evidence to demonstrate this. The identification or development of appropriate outcome measures will be an important step with this client group, in order to capture the changes which result from this approach.

Creativity is a critical component of using CBT with younger children, firstly in order to help them access abstract concepts such as thoughts and feelings, and secondly to support them in exploring and making changes which will result in more helpful responses. There is a growing resource base available to therapists using this child-led approach, and the greatest asset will always be the clinician’s own skills which include flexibility, humour and imagination.

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References


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