Cognitive behaviour therapy: theoretical origins, rationale, and techniques

Cognitive behavioural therapy (CBT) is a generic term to describe psychotherapeutic interventions based on cognitive, behavioural, and problem-solving approaches. The overall aim of CBT is to facilitate an awareness of the important role of cognitions on emotions and behaviours (Hofmann, Sawyer, and Fang 2010). CBT therefore embraces the core elements of both cognitive and behavioural theories and has been defined by Kendall and Hollon (1979) as seeking to

preserve the efficacy of behavioural techniques but within a less doctrinaire context that takes account of the child's cognitive interpretations and attributions about events.

CBT has established itself through numerous randomised controlled trials as an effective psychological treatment for children. It has proven to be effective in the treatment of anxiety (James et al. 2013; Reynolds et al. 2012; Fonagy et al. 2014), depression (Chorpita et al. 2011; Zhou et al. 2015; Thapar et al. 2012), post-traumatic stress disorder (Cary and McMillen, 2012; Gillies et al. 2013), chronic pain (Palermo et al. 2010; Fisher et al. 2014), and obsessive compulsive disorder (Franklin et al. 2015). In addition, CBT has informed many school-based prevention programmes and been found to be effective in reducing symptoms of depression (Hetrick et al. 2016; Calear and Christensen 2010), anxiety (Werner-Seidler et al. 2017; Stockings et al. 2016, Neil and Christensen 2009), and post-traumatic symptoms (Rolfsnes and Idsoe 2011).

The substantial body of knowledge demonstrating effectiveness has resulted in CBT being recommended by expert groups such as the UK National Institute for Health and Care Excellence (NICE) and the American Academy of Child and Adolescent Psychiatry for the treatment of young people with emotional disorders including depression, obsessive compulsive disorders, post-traumatic stress disorder, and anxiety. This growing evidence base has also prompted the development of a national training programme in the UK in CBT, Improving Access to Psychological Therapies (IAPT), which has now been extended to children and young people (Shafran et al. 2014).

CBT is an evidence-based intervention for the prevention and treatment of psychological problems.

The foundations of cognitive behaviour therapy

The theoretical basis for CBT has evolved over many years through the work of a number of significant influences. A review of this research is beyond the remit of this book, although it is

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important to note some of the key concepts and approaches that have underpinned and shaped CBT as we currently know it.

CBT is a generic term to describe therapeutic interventions based on behavioural, cognitive, and problem-solving approaches. It has evolved through three distinct phases or waves, each of which has significantly contributed to clinical practice.

First wave: behaviour therapy

The first phase was based on learning theory and was shaped by the pioneering work of Pavlov (1927), Wolpe (1958), and Skinner (1974) demonstrating classical and operant conditioning. This work established how emotional responses, such as anxiety, could become associated (conditioned) with specific events and situations, i.e. spiders or talking with people. Thus anxiety could be reduced by pairing events that trigger the anxiety (i.e. seeing a spider, approaching a group of people) with an antagonistic response (relaxation). This procedure (systematic desensitisation) continues to be widely used in clinical practice and involves graded exposure, both in vivo and in imagination, to a hierarchy of feared situations whilst remaining relaxed.

The second major influence of behaviour therapy highlighted the important role of environmental influences on behaviour. This work demonstrated that behaviour is triggered by environmental influences (antecedents) and that the consequences which follow will influence the likelihood of that behaviour occurring again. Behaviour will increase in occurrence if it is followed by positive consequences (positive reinforcement), or not followed by negative consequences (negative reinforcement). A detailed understanding of antecedents and the use of reinforcement to increase adaptive behaviours continue to be widely used techniques in CBT interventions.

Relaxation training, systematic desensitisation, exposure, and reinforcement are effective techniques.

Second wave: cognitive therapy

The second phase built on the efficacy of behavioural techniques by paying attention to the personal meanings and interpretations that individuals make about the events that occur. This was heavily influence by the work of Ellis (1962), Beck (1976), and Beck et al. (1979) who proposed that problems with emotions and behaviour arise from the way events are construed rather than by the event per se. As such, emotions and behaviours can be changed by challenging the meanings and ways in which events are processed. This led to the development of a comprehensive understanding of different types of cognitions (core beliefs, assumptions, and automatic thoughts); their focus (cognitive triad — about me, the future, the world); their content (personal threat, failure, responsibility, and blame); and the way in which information is processed (selective and biased). This is summarised in Figure 1.1.

In terms of cognitions, the strongest and deepest are core beliefs (or schemas) which are developed during childhood as a result of significant and/or repeated experiences. Overly critical and demanding parents may, for example, lead a child to develop a belief that they are a 'failure'. Core beliefs are very strong, global, rigid, fixed ways of thinking that are resistant to change. They underpin the meanings and interpretations that we make about ourselves, our world, and our future and lead us to make predictions about what will happen. The child with a belief that they are a 'failure' will therefore expect to fail in most situations.

These beliefs are activated by events similar to those that produced them (i.e. school tests). Once activated, attention, memory, and interpretation processing biases filter and select information that is

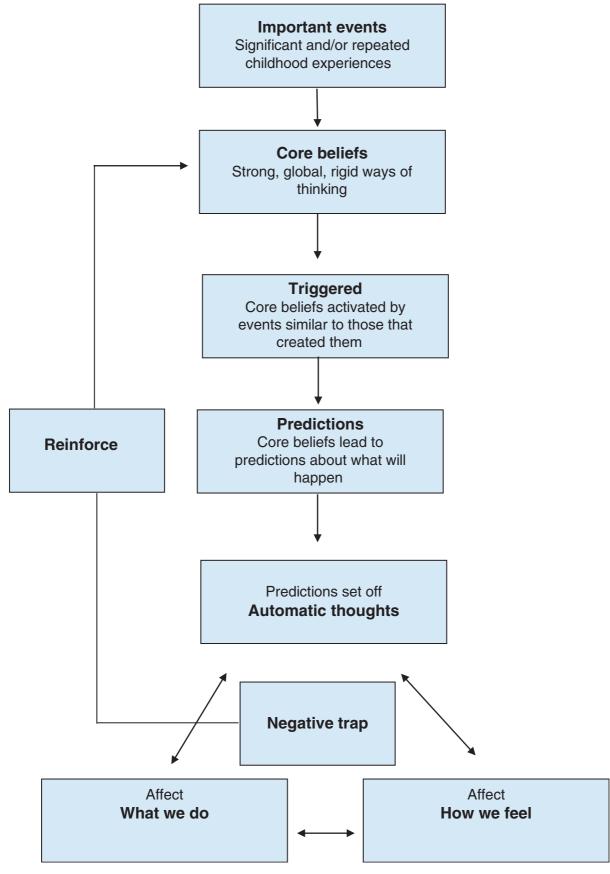


Figure 1.1 The cognitive model.

consistent with the belief. Attention biases result in attention being focused on information that confirms the belief (i.e. looking for evidence of failure), whilst neutral or contradictory information is overlooked. Memory biases result in the recall of information that is consistent with the belief (i.e. remembering past failures), whilst interpretation biases serve to minimise any inconsistent information (find a reason to negate any success).

Identifying and challenging attention, memory, and interpretation processing biases can improve psychological functioning

The most accessible level of cognitions are automatic thoughts or 'self-talk'. These are the constant stream of thoughts that race through our minds providing a running commentary about what we do. These are related to our core beliefs with dysfunctional and negative beliefs producing negative automatic thoughts. A child with a belief that they are a failure may experience a stream of negative automatic thoughts such as 'I will get this wrong', 'I can't do this', and 'what is the point of trying when I never do well' when preparing for a school test.

The focus of cognitive therapy is on the content and nature of the processing deficits and biases that are underpinning the child's problems. In general, young people who are anxious tend to have cognitions and biases towards the future and personal threat, danger, vulnerability, and inability to cope (Schniering and Rapee 2004; Muris and Field 2008). Depression tends to be related to cognitions concerning loss, deprivation, and personal failure with the process of rumination increasing feelings of hopelessness (Kendall, Stark, and Adam 1990; Leitenberg, Yost, and Carroll-Wilson 1986; Rehm and Carter 1990). Aggressive children tend to perceive more aggressive intent in ambiguous situations, selectively attend to fewer cues when making decisions about the intent of another person's behaviour, and generate fewer verbal solutions to problems (Dodge 1985; Lochman, White, and Wayland 1991; Perry, Perry, and Rasmussen 1986).

Interventions involve the identification of biased or selective cognitions and processing (negative thinking, thinking errors) which are then subject to objective testing (cognitive evaluation). Testing involves challenging selective attention biases by attending to overlooked information; challenging memory biases by recalling contradictory experiences, and challenging interpretation biases by exploring alternative explanations. This leads to the final stage (cognitive restructuring) where more functional and balanced thoughts, assumptions, and beliefs are developed.

Third wave: acceptance, compassion, and mindfulness

Cognitive therapies have proven to be very effective, although there remains a minority of people who do not respond to this form of psychotherapy. Some do not find the process of actively challenging and re-appraising specific cognitions easy or acceptable. Similarly, a number of studies have highlighted that changes in cognitions are not necessarily related to improved emotional well-being. Changes occur without directly and explicitly challenging the content of cognitions.

This has led to what has been called a third wave of cognitive behaviour therapies (Hofmann, Sawyer, and Fang 2010). These psychotherapies focus on changing the nature of the relationship between the individual and their own internal events rather than actively changing the content of their cognitions. This has been led to the development of Acceptance and Commitment Therapy (Hayes 2004; Hayes et al. 2006), Compassion-Focused Therapy (Gilbert 2009, 2014) and Mindfulness (Segal, Williams, and Teasdale 2012).

These interventions encourage the individual to live with, tolerate, and accept their experiences, cognitions, and emotions rather than attempting to change them. This requires the individual to connect with and experience the here and now with openness and curiosity. Mindfulness techniques are used to increase awareness as attention is focused on internal and external events as they occur.

Thoughts and emotions are accepted without judgement as ongoing internal mental events and physiological reactions that are separate from their personal core identity.

A second theme is that of acceptance where individuals learn to accept and value themselves for who they are rather than constantly criticising themselves for their imperfections or weaknesses. This value-based approach helps the individual to focus on those aspects of life which are personally important and motivates them to work towards their goals.

The third theme is that of compassion where self-criticism is replaced with self-kindness. Individuals are helped to focus on their strengths, positive skills, and acts of kindness. Compassionate reasoning helps to develop balanced, kinder, alternative thinking where self-criticism is replaced with self-compassion. Compassionate behaviour encourages the individual to behave in more helpful ways such as facing frightening events or displaying self-kindness. Compassionate imagery helps to create a positive self-image, whilst compassionate feeling helps to notice and experience acts of kindness from others.

Our relationship with our thoughts and feelings can be changed by mindfulness, acceptance, and self-compassion

Core characteristics of cognitive behaviour therapy

Although CBT is used to describe a range of different interventions, they often share a number of core features.

CBT is theoretically determined

CBT is based upon empirically testable models. Strong theoretical models provide the rationale for CBT, i.e. cognitions are associated with emotional problems and inform the content of the intervention, i.e. change the nature of the cognitions or our relationship with them. CBT therefore provides a cohesive and rational intervention and is not simply a collection of disparate techniques.

CBT is based on a collaborative model

A key feature of CBT is the collaborative process by which it occurs. The child has an active role in identifying their goals, setting targets, experimenting, practicing, and monitoring their performance. The approach is designed to facilitate greater and more effective self-control, with the therapist providing a supportive framework within which this can occur. The role of the therapist is to develop a partnership in which the child is empowered to develop a better understanding of their problems and to discover alternative ways of thinking and behaving.

CBT is time limited

It is often brief and usually time limited, consisting of no more than 16 sessions, and in many cases far fewer. The brief nature of the intervention promotes independence and encourages self-help. This model is readily applicable to work with children and adolescents, for whom the typical period of intervention is considerably shorter than that with adults.

CBT is objective and structured

It is a structured and objective approach that guides the young person through a process of assessment, problem formulation, intervention, monitoring, and evaluation. The goals and targets of

the intervention are explicitly defined and regularly reviewed. There is an emphasis on quantification and the use of ratings (e.g. the frequency of inappropriate behaviour, strength of belief in thoughts, degree of distress experienced, or progress towards achieving goals). Regular monitoring and review provides an objective way of assessing progress by comparing current performance against baseline assessments.

CBT has a here-and-now focus

CBT interventions focus upon the present, dealing with current problems and difficulties. They do not seek to 'uncover unconscious early trauma or biological, neurological, and genetic contributions to psychological dysfunction, but instead strives to build a new, more adaptive way to process the world' (Kendall and Panichelli-Mindel 1995). This approach has high face validity for children and young people, who may be more interested in and motivated to address real time, here-and-now issues, rather than understanding their origins.

CBT is based on a process of guided self-discovery and experimentation

It is an active process that encourages self-questioning and the development and practice of new skills. Children are not simply passive recipients of therapist advice or observations, but are encouraged to observe and learn through a process of experimentation. The link between thoughts and feelings is investigated and alternative ways of changing the content or nature of the relationship with his or her thoughts is explored.

CBT is a skills-based approach

CBT provides a practical, skills-based approach to learning alternative patterns of thinking and behaviour. Children are encouraged to practice skills and ideas that are discussed during therapy sessions in their everyday life, with home practice tasks being a core element of many programmes. These provide opportunities to identify what is helpful and how potential problems can be resolved.

CBT is theoretically determined.

It is based on a model of active collaboration.

It is brief and time limited.

It is objective and structured.

It focuses on current problems.

It encourages self-discovery and experimentation.

It advocates a skills-based learning approach

The goal of cognitive behaviour therapy

The overall aim of CBT is to improve current well-being and to enhance resilience and future coping. This is achieved through developing increased self-awareness, improved self-control, and enhancing personal efficacy through the promotion of helpful cognitive and behavioural skills. The process of CBT moves the young person from a dysfunctional to a more functional cycle as illustrated below.

Dysfunctional cycle Functional cycle Thoughts Thoughts More positive and balanced Overly negative Acknowledge success & strengths Self-critical and judgemental Accepting and non-judgemental Selective and biased **Feelings Behaviour Behaviour Feelings** Pleasant Avoid Unpleasant Confront Relaxed Give up Anxious Try Нарру Inappropriate Depressed Appropriate Calm Unhelpful Angry Helpful In control Out of control

CBT helps to reduce the negative effect of what people think (cognitions) on how they feel (emotions), and what they do (behaviour). This is achieved by either actively focusing on the content of the child's cognitions or by changing the nature of their relationship with them.

- If focusing on content, the child is encouraged to observe and identify common dysfunctional thoughts and beliefs that are predominantly negative, biased, and self-critical. Through a process of self-monitoring, education, and experimentation, these are tested and replaced by more balanced and functional cognitions that acknowledge strengths and success.
- If focusing on the relationship with cognitions, the child is encouraged to stand back from his or her thoughts and to observe them in a curious, non-judgemental way as passing cognitive activity. Mindfulness maintains attention on the here and now with the young person being encouraged to accept themselves and the events that occur.

The core components of cognitive behaviour therapy

CBT includes a range of techniques and strategies that can be used in different sequences and permutations. This flexibility allows interventions to be tailored towards particular problems and the individual needs of the child rather than being delivered in a standardised cookbook approach. Similarly, the wealth of techniques means that CBT can be used for prevention to enhance future coping and resilience as well as an intervention to reduce current psychological distress.

Although the primary focus of second wave (i.e. test and challenge the content of cognitions and processes) and third wave (i.e. change the nature of the relationship with our thoughts) CBT differ, embedded within these approaches are a number of different skills and techniques.

Psycho-education

A basic component of all cognitive behavioural programmes involves education about the link between thoughts, feelings, and behaviour. The process involves developing a clear and shared understanding of the relationship between how people think, how they feel, and what they do. In addition, the collaborative process of CBT and the active role of practice and experimentation are stressed.

Values, goals, and targets

CBT may involve identifying important personal values. These help to maintain focus on the future and act as a framework for motivating and guiding behaviour towards their achievement.

Goal setting is an inherent part of all cognitive behaviour programmes. The overall goals of therapy are mutually agreed and defined in ways that can be objectively assessed. The transfer of skills from therapy sessions to everyday life is encouraged by the systematic use of assignment tasks where new skills are practiced in real-life settings. Progress towards the achievement of specific targets is regularly reviewed and provides an objective way of assessing change.

Acceptance and acknowledgement of strengths

CBT helps the individual to recognise and acknowledge their strengths and achievements. Personal strengths can be empowering and can be used to cope with future challenges and problems. Acceptance is also emphasised so that rather than constantly trying to change things which are beyond his/her control events, emotions and thoughts are accepted for what they are.

Thought monitoring

The key task of developing a better understanding of common cognitions is achieved through observing and monitoring cognitions and patterns of thinking. Thought monitoring could focus on the specific content of core beliefs, negative automatic thoughts, or predictions to identify those that produce strong emotional reactions or are overly negative or self-critical. Alternatively, observation could be encouraged whereby the young person is helped to develop an awareness of the effect of their cognitions on their emotions.

Identification of cognitive distortions and deficits

The process of thought monitoring provides an opportunity to identify common negative or unhelpful cognitions, beliefs or predictions. In turn, this results in increased awareness of the nature and type of cognitive distortions (e.g. magnification, focusing on the negative), cognitive deficits (e.g. misinterpretation of others cues as negative, limited range of problem-solving skills), and the effect of these upon mood and behaviour.

Thought evaluation and developing alternative cognitive processes

The identification of dysfunctional cognitive processes leads to the systematic testing and evaluating of these predictions and beliefs and the learning of alternative cognitive skills. The development of a process of balanced thinking or cognitive restructuring is encouraged. This may involve a process of looking for new information, thinking from another person's perspective, or looking for contradictory evidence, which may result in dysfunctional cognitions being revised.

The evaluation provides an opportunity to develop alternative, more balanced, and functional cognitions, which recognise difficulties but acknowledge strengths and success.

Development of new cognitive skills

CBT involves the development of new cognitive skills such as distraction where attention is focused away from anxiety-increasing stimuli towards more neutral tasks. Cognitive coping can be enhanced through the use of positive self-talk with consequential thinking and problem-solving skills helping to develop alternative ways of thinking through challenges.

Mindfulness

CBT may develop new cognitive skills such as mindfulness where attention is focused non-judgementally on the present moment. Rather than reacting to, or attempting to change what we think or how we feel, mindfulness helps to develop curious observation and acceptance of our internal processes. This here-and-now focus reduces negative cognitive rehearsal of future events and rumination about past events.

Affective education

Many programmes involve emotional education designed to identify and distinguish core emotions such as anger, anxiety, or unhappiness. Programmes may focus upon the physiological changes associated with these emotions (e.g. dry mouth, sweaty hands, and increased heart rate) in order to facilitate a greater awareness of the child's unique expression of each core emotion.

Affective monitoring

The monitoring of strong or dominant emotions can help identify times, places, activities, or thoughts that are associated with both pleasant and unpleasant feelings. Scales are used to rate the intensity of emotion both during real-life situations and treatment sessions and provide an objective way of monitoring performance and assessing change.

Affective management

New emotional management skills are developed to help tolerate distress and/or manage emotions more effectively. This may involve techniques such as progressive muscle relaxation, controlled breathing, calming imagery, self-soothing, or distraction.

Greater awareness of the individual's unique emotional pattern can lead to the development of preventative strategies. An awareness of the anger build up may, for example, enable a child to stop his/her emotional progression at an earlier stage thereby preventing an aggressive outburst. Similarly the adoption of kindness and compassion throughout everyday life can help to develop a greater acceptance of what occurs and so prevent problems occurring.

Activity monitoring

This can be used to promote awareness of the link between what we do and how we feel and behave. This helps to develop a better understanding of how some activities or events are associated with different feelings and ways of thinking.

Behaviour activation

Activity monitoring can lead to behavioural activation whereby the individual is encouraged to become more active. This may involve increasing activities that create enjoyment, involve others, produce a sense of achievement, or encourage physical activity. Being active can have a positive effect upon mood.

Activity rescheduling

Engagement in activities that create more pleasant emotions can also be encouraged by activity rescheduling. This involves rescheduling positive mood-lifting activities to occur on those days or at those times that are currently associated with strong unpleasant emotions.

Skills development

A structured problem-solving process can provide a useful framework for confronting and dealing with challenges rather than putting decisions off or avoiding them. A number of CBT interventions also focus on the development of interpersonal effectiveness by enhancing skills such as conflict resolution, assertiveness, and developing and maintaining friendships.

Behavioural experiments

CBT is based upon a process of guided discovery during which predictions and thoughts are challenged and tested. A powerful way to undertake this is to objectively check things out by setting up behavioural experiments. These can help to test whether predictions and thoughts are always right, to discover alternative explanations for events or, what might happen if things were done differently.

Fear hierarchy and exposure

A core aim of CBT programmes is to encourage children to face and learn to cope with challenging situations or events. This can be achieved through a process of graduated exposure where problems are defined, the overall task broken into smaller steps and then each is ranked in a hierarchy of ascending difficulty. Starting with the least difficult, the child is exposed to each step of the hierarchy, either in vivo or imagination. Once successfully completed, they move to the next step, progressing through the hierarchy until the problem has been mastered.

Role play, modelling, exposure, and rehearsal

The learning of new skills and behaviours can be achieved in a variety of ways. Role play provides an opportunity to practice dealing with difficult or challenging situations such as coping with teasing. Role play enables positive skills to be identified and alternative solutions or new skills highlighted. A process of skills enhancement can facilitate the process of acquiring new skills and behaviours. Observing others model appropriate behaviour or skills can then result in new behaviour being rehearsed in imagination before being practiced in real life through exposure tasks.

Self-reinforcement and reward

A cornerstone of all CBT programmes is positive reinforcement and acknowledgement of effort. We need to care for ourselves and to value what we do. This could take the form of self-reinforcement, for example, cognitively (e.g. 'Well done, I coped well with that situation'), materially (e.g. downloading a special song), or by activities (e.g. special relaxing bath). Reinforcement should be based on effort and attempting to do things rather than upon the achievement of a successful outcome.

CBT provides the clinician with a rich toolbox of techniques that can be used flexibly to meet the needs and interests of the child. These are summarised in the Clinician's Toolbox (Figure 1.2).

CBT programmes includes a mix of the following:

Psycho-education

Identification of values, goals, and strengths.

Monitoring of thoughts, feelings, and/or behaviour.

Acceptance of what cannot be changed.

Identification, challenging, or observation of cognitions.

Developing new cognitive skills.

Learning alternative ways to manage unpleasant emotions. Learning new behaviours.

Target-setting and home-based practice.

Positive reinforcement.

Psycho-education

Understand the link between thoughts, feelings, and behaviour

Values, goals, and targets

Identify personal values, agree, goals and targets

Acceptance and acknowledgement of strengths

Recognise positives and strengths and accept who you are

Cognitions

Thought monitoring

Negative automatic thoughts Core beliefs/schema Dysfunctional assumptions

Identification of cognitive distortions and deficits

Common dysfunctional cognitions, assumptions, and beliefs
Patterns of cognitive distortions
Cognitive deficits

Thought evaluation

Testing and evaluating cognitions Cognitive restructuring Development of alternative, balanced thinking

Development of new cognitive skills

Distraction, positive and coping self-talk, self-instructional, consequential thinking

Mindfulness

Curious and non-judgemental observation

Behaviour

Activity monitoring

Link activity, thoughts and feelings

Behavioural activation

Increase mood lifting activity

Activity rescheduling

Timetable activities

Skills development

Problem-solving and interpersonal effectiveness

Behavioural experiments

Test predictions/assumptions Discover new meanings

Fear hierarchy and exposure

Face challenges in a graded way

Self-reinforcement

Take care of yourself and reward yourself

Figure 1.2 The clinicians toolbox.

Emotions

Affective education

Distinguish between core emotions Identify physiological bodily symptoms

Affective monitoring

Link feelings with thoughts and behaviour Scales to rate intensity

Affective management

Relaxation, self-soothing, mind games, imagery, controlled breathing