Cognitive behaviour therapy in medical practice

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SYNOPSIS

Cognitive behaviour therapy is a psychological treatment which is suitable for many patients with psychiatric problems or psychological reactions to physical illnesses. It can enhance the effects of drug treatment. The principles of the therapy are educating the patient, teaching basic relaxation and breathing control skills, and developing skills to identify, challenge and change maladaptive thoughts, feelings, perceptions and behaviour. It is a treatment readily used by medical practitioners.

Index words: anxiety, depression, hyperventilation.

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Introduction

Cognitive behaviour therapy (CBT) can be usefully and easily applied in any area of medical practice. There is evidence to show that CBT is better than placebo for insomnia, depression, panic disorder, agoraphobia, specific phobia, social anxiety disorder and pain. In some cases, it is better than drug therapy and may be less expensive. For other patients the combination of CBT with drug therapy may be effective.

Many doctors use elements of CBT even though they may not recognise that they are doing so. Understanding CBT is important, as it is possible to unwittingly reinforce negative or adverse responses. For example, encouraging avoidance of a feared situation to give temporary relief of anxiety may result in the patient having to repeatedly avoid that situation, thereby maintaining or exacerbating their problem.

Components of CBT

The basic processes of CBT are to:

- educate the patient
- teach basic skills for anxiety control with relaxation and breathing (hyperventilation) control
- identify, challenge and change maladaptive thoughts, feelings, perceptions and behaviour.

Treatment aims for decreased avoidance, more realistic thinking and more adaptive responses (emotional, physiological and behavioural).

Education

Doctors may incorrectly assume that patients know about their illnesses. Patients may have misconceptions about the diagnosis, the treatment and the prognosis. For example, patients with panic symptoms may believe they have a severe cardiac condition. This can increase anxiety and cause tachycardia, reinforcing fears of cardiac disease. Brief education about their illness will counter inaccurate appraisals of symptoms, minimise secondary anxiety and lead to more rational responses to symptoms.

The patient should be an active partner in their education and not simply a passive recipient of information.

Anxiety reduction techniques

Relaxation

Many people get tense with their illness, or in reaction to it. This tension may result in headache or muscle aches and pains, particularly in the neck, shoulder and lower back.

Stress-reduction books and tapes offer a range of relaxation techniques. They typically start with a person sitting quietly and then clenching their fists and then relaxing, extending their wrists and then relaxing, flexing the elbow and then relaxing, and so forth. While usually started in a quiet setting, once learnt the technique can be applied in a subtle and abbreviated fashion anywhere. This can prevent the development of excessive and uncontrollable tension. Relaxation techniques do not address the cognitive aspects of anxiety; a person can seem to be physically relaxed, while their worrying thoughts continue unabated.

Breathing control

Hyperventilation is a normal physiological response to a threat. Other symptoms of fear are typically a dry mouth, shortness of breath or feelings of suffocation, tachycardia, chest discomfort, pressure or tightness and dizziness. Symptoms due to the alkalosis caused by hyperventilation include light-headedness, numbness and tingling, and in more marked cases tetany with spasms, which usually start in the hands.

If their symptoms occur, patients should breathe slowly with deep even relaxed breaths in five-second cycles. They also need to recognise the fear and how their breathing responds to that fear.

Getting patients to hyperventilate in your office can often reproduce some of their symptoms. As this hyperventilation occurs in a 'safe' controlled setting and without the cues that trigger an attack, a panic/anxiety attack may not follow. That does not mean hyperventilation is not an influence in other

settings. By practising breathing control patients can learn that they can influence their symptoms.

This induction of symptoms in a controlled graded fashion followed by response prevention or response management is a classical intervention. To gain mastery, patients must be prepared to take modest risks.

There is no evidence that breathing in and out of a paper bag is efficacious, probably because it is mostly used long after the event which caused the hyperventilation. Asking patients to monitor and control their respiration is effective and not as socially embarrassing for them as breathing in and out of a paper bag in public.

Cognitive therapy

The patient can learn to identify, challenge, gradually modify, and change maladaptive, automatic thoughts, feelings, perceptions and behaviour. Five processes are described.

Collaborative empiricism

The doctor and patient jointly evolve an understanding of the problems and the goals of the treatment, providing feedback and demystifying therapy. For example the patient may regard symptoms, such as back pain, as out of their control, or that they must rest lest their back 'break'. The patient can be taught to take control of their pain through guided activity and the gradual experience of some relief.

Socratic dialogue

A progressive question and answer process assists in the identification of maladaptive thoughts and assumptions. The dialogue examines the meaning of events for the patient, assessing the consequences of maintaining maladaptive thoughts and behaviours, and developing more useful ways of dealing with the identified problems. A patient with a pathology result indicating neoplasia may believe they will rapidly die a horrible painful death. The reality may be quite the contrary. The doctor can relieve anxiety and avoid unnecessary consultations by a careful explanation of the illness, its treatment and the recovery process.

Guided discovery

The patient modifies their maladaptive beliefs and behaviours through a series of graded tasks developed with their doctor. These tasks are usually set weekly, for around 12 weeks. For example, the thought that life is hopeless (so why bother with anything) can be challenged and gradually changed to a more realistic and positive view, giving the patient a sense of purpose.

Identification of automatic (core) negative thoughts

CBT challenges the patient's automatic (core) negative thoughts and helps them to learn to challenge these thoughts themselves. These thoughts, feelings and perceptions may occur 'out of the blue', or for example, in response to a certain feared situation such as travelling on public transport or in a lift.

People may fear the same situation for different reasons. For example the experience of anxiety and the desire to leave a supermarket may have different causes. Those with social anxiety disorder may fear embarrassment or humiliation while exposed to the scrutiny of others. Those with panic disorder might fear the check-out queue because they feel unable to escape easily if they get a panic attack, and patients with depression may be irritable and feel that they cannot endure the wait in the queue. The same avoidance behaviour may therefore require different solutions for different diagnoses.

There can be characteristic distorted perceptions. A depressed patient may feel that others can see they are a bad person, even though others may have no such attitudes. Other depressed patients may not feel bad, but may expect they will fail in any activity they undertake. Patients with social anxiety disorder may place excessively high expectations on their social performance. They may feel that everyone's eyes are on them in a social situation, when the reality is that most people are unaware of their presence.

Automatic or 'core' thoughts and feelings often include false assumptions. For example the patient with social anxiety disorder might feel that they **will** embarrass or humiliate themselves. Their fear may be baseless, or based on some event in the past. This automatic thought might be better reconceptualised as a new circumstance in which they **may** embarrass or humiliate themselves, rather than they **will** do so. There is a possibility, but not an inevitability, of humiliation.

'R' strategy

The 'R' strategy is to relabel, re-attribute, refocus, record and revalue elements of the patient's problem.

To **relabel** an aspect of their obsessive-compulsive disorder (OCD) a person with obsessions about cleanliness should not say to themselves, 'I think my hands are dirty, or feel my hands are dirty,' but instead say 'I am having an obsession that my hands are dirty'.

A patient who feels that they must be a bad person, because they developed cancer, could **re-attribute** their symptoms by saying (then thinking and feeling), 'It is being ill with cancer that makes me feel bad'.

Refocus is a very important shift, which helps the patient train themselves to respond in new ways to their automatic thoughts, feelings, perceptions and behaviours. They can be taught to resist urges, to hold their anxiety, and habituate. Habituation is the reduction in the anxiety when the patient is placed in an anxiety-provoking situation and remains there. The fear or anxiety reaction diminishes during such exposure. If patients experience fear and want to avoid or leave an anxiety-provoking situation, they should hold off acting for fifteen minutes or so. They can then re-evaluate the situation, their thoughts, feelings and responses, and assess and **record** them. This helps mastering the task they felt previously unable to approach.

To **revalue** means to take on the role of an impartial spectator, a person we carry around inside us who is aware of all of our feeling states and circumstances. The patient, when wanting to do an anxiety-provoking task, can call up their own impartial spectator and watch themselves in action. This is to move from an internal personal battle to a more externalised conflict.

This is a shift from an internal 'me against myself' conflict to an external situation 'who is in charge here, me or my illness'.

Behaviour therapy

Establishing a problem list and hierarchy (see Box 1)

The patient needs to make a list of problems or situations they have avoided or might avoid. Each problem is then subdivided into a hierarchy ranging from tasks easily mastered to those achieved only with great difficulty. The patient and doctor can work through some of these situations. At first this can be done in the patient's imagination. They can think of a situation which causes minimal anxiety. They then think of a setting in which they face that situation and overcome it. This desensitisation in imagination is a precursor to getting into those situations and controlling them in practice. The person must have confidence in this process and be prepared to take risks. These are emotional 'risks' and should not expose the patient to danger. Gradual exposure leads to habituation. The fear diminishes, anxiety lessens and avoidant behaviour may be overcome.

The more the patient identifies, challenges and modifies their thoughts, feelings and behaviour, the easier mastery will become. What initially may seem a very challenging task will soon become routine as it is mastered and the patient moves on to more difficult tasks.

Problem chart Box 1

Different problems or issues may be listed and rated

Date	*Symptom or sign*	*Frequency*	*Severity **	*Disruption caused **
12/04/01	Panic	2/day	severe	very severe
16/04/01	Avoid shops	weekly	moderate	severe

* Rate: nil, minimal, mild, moderate, severe, very severe, extreme

Exposure and response prevention (see Box 2)

Exposure with response prevention leading to habituation and extinction of the anxiety and fear may be explained to the patient as 'getting used' to the feared situation or thought. This is part of common experience in learning new skills. For example, a child might feel that learning to ride a bicycle is impossible, but once they can ride, with much worry and anxiety, they have learnt a skill that remains for a lifetime.

Another, effective way to deal with anxieties is by flooding. This involves putting the person into the feared situation and have them remain there for however long it takes for their anxiety to subside. That can be emotionally distressing for a patient and is generally unnecessary, as a series of graded tasks agreed on by the patient and doctor, can achieve a satisfactory outcome with less distress.

Some feelings are reinforced by patient experiences. For example a typical journey in a lift is under a minute. If a sufferer gets into a lift they will leave the lift when their anxiety has built to a peak rather than when lessening. There is reinforcement that travel in lifts causes increasing anxiety up to a peak. If, however, they can be encouraged to stay longer in the lift (riding up and down), until their anxiety starts to settle, they begin to get a feeling of mastery over their problem. Progressively one can increase the period of time they spend in a lift. The important element is that the sufferer experiences their anxiety decreasing in the feared setting, rather than increasing.

Patient evaluation of thoughts and behaviour (see Box 3)

The patient can rate the severity of their thoughts, anxieties and behaviours, then re-rate them after challenge and reappraisal. Most patients can understand and apply a 0–10 scale for a particular symptom. Patients can rate their subjective anxiety and distress, the extent to which they hold beliefs and are coping, and the ease with which they can elicit a relaxation response.

Self-monitoring chart for exposure tasks Box 2

Exposure tasks can be listed and evaluated

Date	*Exposure task (Describe the task)*	*Prediction (Before exposure, what do you expect the outcome to be? Rate belief in your prediction 0–10)*	*Outcome (Describe outcome of the exposure task. What happened?)*	*Did prediction occur? (Yes/No)*	*Re-rate prediction (0–10)*
12/04/01	Go to lift	Feeling of overwhelming panic 10	Some anxiety but not out of control	No – not as bad as I had feared	6

Self-monitoring chart for thoughts and feelings Box 3

Situations and responses may be listed and assessed

Date	*Situation*	*Mood or feelings (Rate 0–10)*	*Core thoughts*	*'Evidence' for core thought*	*'Evidence' against core thought*	*Alternative thoughts*	*Re-rate mood or feelings (Rate 0–10)*
12/04/01	Going to supermarket	Fear of queue 8	Going to lose control. Certain to faint.	Felt out of control before. You cannot feel this bad without fainting.	Never actually lost control. Have felt this bad and worse and not fainted.	May have some control this time. I may sit down if I feel faint.	5

What if the patient gets stuck?

Occasionally a patient says everything is too difficult. The tendency is for both patient and practitioner to focus on the problem that is blocking progress. They should not dwell on this problem, but move to consider the next item in the hierarchy. Mastery of the next item may make the earlier problem irrelevant or eventually lead to it being overcome. If treatment reaches an impasse, it is worth considering additional help. Most psychiatrists and clinical psychologists are specifically trained in CBT and can provide further expert advice.

Patient motivation and self-efficacy

Motivation can be helped by a sense of self-efficacy, which challenges the irrational notion that problems can **never** be overcome. Work out alternatives with patients that elicit adaptive responses. For example, patients can learn to recognise and to control their anxiety with methods like relaxation, and hyperventilation control. This means that when they think about or test out some anxiety-provoking situation, they do not automatically have to panic, avoid the circumstance, or resort to medication. Patients should understand that transient increases in anxiety and distress are inevitable as they gain mastery over their difficulties.

Costs

CBT does not need multiple extended consultations. In medical practice CBT can be done sequentially over a number of relatively brief, for example ten minute, treatment sessions.

Medicines and CBT

Some people master their problems without drugs, while others benefit from having medicines with CBT.

Benzodiazepines can impede CBT. The rapid reduction in anxiety reduces the motivation to change and the patient may not achieve mastery, especially at higher doses. However, if a patient is very anxious, a small dose of a benzodiazepine can help with the first steps in taking risks, facing their fears and gaining mastery over symptoms.

For depression, panic disorder, obsessive-compulsive disorder, generalised anxiety disorder and social anxiety disorder antidepressants can be effective with CBT.

For those with schizophrenia, the use of an antipsychotic drug will usually improve their condition enough to enable them to benefit from CBT for other elements of their illness.

An outline of CBT in practice

Initial appointment (Table 1)

For some patients the 'initial' evaluation will be spread over two or three visits. General practitioners are usually familiar with the patient's problems and can often complete the initial evaluation quickly. The evaluation should include a physical examination so that any general medical illnesses can be managed appropriately.

After the evaluation give the patient some initial education, including an estimate of how long it will take to respond (usually 6–8 weeks). They can be asked to compile a list of their problems (Box 1). If patients are given any exposure tasks they can record their responses (Box 2). To help them monitor their feelings they can fill in another chart (Box 3).

For patients with mild depression or anxiety, CBT may be useful alone. If the disorder is severe, drug treatment may be started at this session.

Second appointment (Table 2)

This may be two or three days, or one to two weeks after the first appointment, but is better sooner than later. If the patient was given some tasks at the first appointment, their charts can be reviewed to assess progress.

The patient will inevitably have further additions to their story. They may have dealt with some issues and some symptoms will have already changed. For example, a patient may have a fear of public transport. They may have said 'I don't like to use it' in a non-specific way. They may rate the severity as 9/10. Discussion and exploration of the issue may elicit that they fear having a panic attack in a setting like public transport where they cannot escape. Defining the issue may itself reduce the self-rating of severity as the known is often less fearful than the unknown. Working at panic control may further reduce anxiety as escape becomes unnecessary.

Third and subsequent appointments (Table 3)

The charts help both doctor and patients see what progress has been made by the third visit. Depending on the patient's progress new tasks can be set.

Table 1

Suggested approach for cognitive behaviour therapy: first appointment

Evaluation
- take detailed history
- perform physical examination
- make the diagnosis, or diagnoses and rate severity of symptoms and the disorder
- consider possible antecedents, especially alcohol, caffeine and illicit drugs

Delineation of core therapeutic issues
- identify problems, automatic thoughts, feelings, perceptions and behaviours that are troublesome to the patient
- define the patient's disabilities, what they cannot do and want to overcome

Education
- provide education, and outline CBT as one element of treatment
- explain physical symptoms that represent an emotional disorder
- reassure that the disorder is real and can be treated
- explain you will not conduct investigations unless clearly indicated on history or examination

Teach basic skills and self-evaluation
- begin hyperventilation control and relaxation techniques
- encourage the patient to develop a hierarchy of problem issues, and rate their severity
- explain how to self-monitor
- consider concomitant pharmacotherapy, if indicated

Table 2
Suggested approach for cognitive behaviour therapy: second appointment

- reappraise the patient and any changes and additions to their story
- continue education about the illness, and the therapeutic process
- continue hyperventilation control and relaxation techniques
- work with the patient on their hierarchy – delineate specific problems, how the patient perceives these problems and their severity
- set initial exposure tasks
- encourage positive self-statements to settle anxieties
- reassure that CBT management skills take time, but can help
- rate the severity of symptoms on the patient's charts
- address any medication issues

Subsequent appointments involve reviews and reinforcements. If medication has been prescribed the duration of treatment should be adequate, for example 6–12 months for depression. Remember that benzodiazepines may impede CBT and raise issues of tolerance, dependence and discontinuation. Changes are normally effected over about twelve or so appointments. Some patients can achieve change more quickly, while others take much longer.

End of therapy

Once the patient's symptoms are under reasonable control without disability, or the ongoing disability is minimised as much as is practical, the initial period of CBT can cease.

The patient should be encouraged to maintain their CBT activities, skills and behaviours to help sustain their improvement. Review and booster sessions can be scheduled at three, six and twelve months, or as appropriate, after the initial treatment course. Medicines should also be continued as long as is normally indicated for relapse prevention. CBT can be especially effective in reducing the occurrence, severity and disability of relapses that may otherwise occur after stopping pharmacotherapy.

How to respond to relapses

The patient should be encouraged to contact you if there is any appreciable relapse. Early intervention for a relapse can result in rapid recovery, whereas a prolonged period of relapse can necessitate an extended repetition of therapy. Any severe return of symptoms should prompt the patient to contact their doctor for further treatment, as should a lesser return of symptoms if there is persisting or recurring disability which lasts, for example, more than four days.

Conclusion

CBT is a useful, effective, practical and economic treatment for use by doctors in all areas of medicine. It is progressive treatment over time, which can be effected in a series of relatively brief appointments. The patient does the majority of the work in their own time. The doctor's role is to help delineate the problem, identify the targets for intervention, then assist the patient in successful mastery of these targets.

The doctor also has an important role in advising and prescribing relevant concurrent pharmacotherapy, if necessary. In particular, it is important that the doctor is aware of those medicines that may assist the therapeutic process and those that may impede CBT. It should be regarded as a mainstream treatment that can be usefully applied by all doctors in the evaluation and the treatment of their patients.

Table 3
Suggested approach for cognitive behaviour therapy: third and subsequent appointments

Third appointment

- reinforce relaxation and hyperventilation control
- review the patient's hierarchy and set further tasks to evaluate and work on
- work with the patient to develop and practise more adaptive thinking and behavioural patterns
- encourage progress and help over difficulties
- rate the severity of symptoms on the patient's personalised schedule
- revise targets as progress occurs

Subsequent appointments

- review and reinforce progress
- ensure adequate medication, if medicine is indicated
- involve spouse, partner, or other family member if that may help
- set further tasks if prior tasks have been dealt with adequately
- plan coping strategies that can be implemented during these additional tasks
- rate improvements
- repeat this process over subsequent sessions until there is reasonable symptom improvement
- discuss relapse prevention

NOTE
Examples of problem charts and self-monitoring charts can be printed for use. Click here.

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FURTHER READING

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Self-test questions

The following statements are either true or false *(answers on page 47)*

1. Cognitive behaviour therapy eliminates the need for drugs for anxiety disorders.
2. Cognitive behaviour therapy treatment is only for use by clinical psychologists, not medical practitioners.