

Columns

Book Reviews

Science and Practice of Cognitive Behavior Therapy

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Introduction :

The term cognitive behavior therapy was first used in the scientific literature in the mid- 1970s and the first controlled trials of the treatment were published towards the end of that decade. In the relatively short period of time since then, cognitive behavior therapy has become a leading psychotherapy in most Western Countries.

I. General Considerations :-

1) The evolution of cognitive behavior therapy (CBT)

The evolution of (CBT) took place in three stages. Initially, behavior therapy emerged in independent but parallel developments in the United Kingdom and United States, in the period 1950-70. The second stage, the growth of cognitive therapy, took place in the United States in the mid 1960s onwards. The third stage, the merging of behavior and cognitive therapy into cognitive behavior therapy, gathered momentum in the late 1980s and is now well advised in Europe and North America. CBT is widely accepted and is practised by growing numbers of clinicians; in all likelihood, it is today the most broadly and confidently endorsed form of psychological therapy. CBT dominates clinical research and practice in many parts of the world.

2) The scientific foundations of CBT

To obtain an adequate understanding of the techniques of CBT we have to satisfy two minimum prerequisites. First, we should have a reasonable grounding in essential scientific method. Second, we should have acquired a knowledge of modern learning theory (especially Hull and Skinner). Studies of normal subjects were followed by a number of well-conducted clinical trials, mainly with phobic and obsessional disorders, which produced a better understanding of the value and limitations of the procedures. Increasing experience convinced many clinicians that the main limitation was the failure to take account of patients' attitudes and beliefs and a search began for ways of incorporating these important elements in treatment. In recent years CBT has been linked much more effectively with cognitive and behavior science

and this linkage has led to substantial advances in treatment. The experimental studies can be divided into three groups, designed to:

- * Characterize key cognitions in psychiatric disorders.
- * Test predictions about the role of these cognitions.
- * Study factors that maintain cognitions.

3) Information -processing biases in emotional disorders

Because some degree of selection among varieties of available information is inevitable, decisions have to be taken as to what is to be processed, and what is discarded. Bias is used here to describe any systematic preference in the priorities used in making such decisions, particularly those influencing the selection or rejection of information having emotional meaning. Individuals prone to negative emotional states such as anxiety or depression should be more likely to select information congruent with negative mood. Selection of this sort can occur at many points in the processing of emotional information, and for purposes of convenience, the relevant findings will be grouped in three points :

A) Perceptual encoding

The simplest way of investigating perceptual encoding is to present emotional stimuli, such as words or pictures, and assess the ease with which different subject groups can identify them. Depressed patients recognize a higher proportion of negative to neutral words than did controls, when these were presented very rapidly (7-100 milliseconds). It was found that the more accurate identification of negative words in depressed students applied only to words given extreme ratings by that individual on a self-description task. Equivalent effects emerged when the students were divided according to their score on a measure of trait (but not state) anxiety, suggesting that some enduring characteristic is involved. Although response bias may thus account for some effects, it does not seem sufficient to account for all of them, since significant effects in a mood-congruent direction were found when two stimuli were presented simultaneously in a lexical decision task.

B) Interpretation of meaning.

A different sort of selection is made when encountering ambiguous events: many alternative meanings may be

accessed, of which one will become dominant while others are suppressed. Many real-life social situations have considerable potential for ambiguity; for example, a friend or partner who seems to be ignoring you may really disapprove of something you have done, or may merely be distracted by his/her own problems. Equally, physical sensations are often ambiguous in meaning. The way in which such ambiguous events are interpreted often seems to play an important part in anxiety disorders.

C) Implicit and explicit memory

Biases in attention and interpretation suggests that patients with emotional disorders will select congruent information from their experience and store it in memory. Thus, whether or not they have experienced more objectively negative events in real life, they may well recall more of them.

Indeed, there is good evidence from tests of autobiographical memory, that when asked to recall past events both depressed and anxious patients will produce more negative examples in a limited time than will normal controls. Depressed patients consistently show a memory bias in that they recall fewer positive words, and (relatively) more negative words, than do normal mood controls. However, there appear to be definite limiting conditions to this phenomenon. The effect is stronger for words describing negative personality traits and disappears when subjects encode the words by judging whether the words describe someone else.

II. Specific Problems and Disorders

1) Panic disorder

Treatment starts by reviewing with the patient a recent panic attack and identifying the main sensations and the negative thoughts associated with the sensation. Once patient and therapist agree that the panic attacks involve thoughts about the sensations, a variety of procedures are used to help patients challenge their misinterpretations of the sensations.

A) Identifying the trigger for an attack

Many patients interpret the unexpected nature of their panic attacks as an indication that they are suffering from cardiac or other physical abnormality. For these patients, it can be helpful to identify the triggers which may be emotional state (anger), exercise, (palpitation) , drinking too much coffee, sudden standing (dizziness), or rapid circadian eye movement (world seems to move).

B) Cognitive procedures

One of the most useful cognitive procedure involves helping patients to understand the significance of past events which are inconsistent with their negative beliefs. Education about the nature of anxiety can also be helpful, especially if it is tailored to patients' idiosyncratic concerns. Images of feared outcomes (dying or going mad) that often accompany panic attacks can be treated as equivalent to a negative thought and dealt with in the same way.

C) Behavioral Procedures

Most of the behavioral procedures used with panic patients fall into one of two categories:

Inducing feared sensations in order to demonstrate possible causes of the patients' symptoms.

Stopping safety behaviors in order to help patients disconfirm their negative beliefs about the consequences of the sensations.

2) Social phobia

Treatment of social phobia starts by reviewing several recent episodes of social anxiety.

A) Safety behavior experiment

Changing safety behaviors is often the best way to start. Patient is asked to role play a feared social interaction under two conditions. In one condition, they are asked to use all their normal safety behaviors, and in the other condition, they are asked to drop their safety behaviors and focus their attention on the other person (s) in the interaction. After each role play patients rate how anxious they felt and compare both situations.

B) Video and audio feedback

Normally, we would videotape the safety behavior experiment and show the patient the video during the next session. In order to maximize the amount of cognitive change produced by each treatment session, it is advised to audiotape sessions and ask patients to listen to the tape as part of their homework. In this way they can consolidate and develop further answers to their negative thoughts which were identified in the session.

C) Modifying assumptions

The assumptions which lead social phobics to interpret social situations in a threatening fashion can be modified by the use of Socratic questioning. For example, the assumption: "If someone doesn't like me, it means I am inadequate" can be modified by questions such as "How do you know that someone does not like you?" "Are there any reasons why someone might not respond well to you other than your adequacy?"

Other methods include testing predictions about negative evaluation by others and dealing with the 'post-mortem'.

3) Generalized Anxiety Disorder

Constructing a model of problematic worry in terms of meta-worry, and underlying positive and negative beliefs about worrying, shifts the emphasis of cognitive therapy of the disorder. Early non-worry, and non-meta-cognitive-driven treatments such as anxiety management and generalized cognitive therapy have produced relatively modest results. It is hoped that treatment based on the specific meta-cognition will lead to the development of more effective treatments. The central aim of meta-cognitive therapy is the modification of dysfunctional beliefs about worrying. Typically, meta-worry should be challenged initially. This is achieved through a combination of behavioral experiments targeted at challenging negative beliefs that drive meta-worry. The modification of meta-worry and negative beliefs relies on the modification of behavioral responses, such as avoidance and thought control attempts, that prevent disconfirmation of beliefs. Thus an important aspect of therapy is the reversal or abandonment of avoidance and worry control behaviors in a way that facilitates belief change.

4) Obsessive-Compulsive Disorder

A) Stage 1: assessment and goal setting

In the assessment stage the therapist focus on getting a description of a recent episode and identifying within that episode the specific sequence that occurred. By the end of this phase, two targets should have been reached. The first of these is that a formulation or shared understanding of the problem should be agreed and secondly that the goals of therapy should have been negotiated.

B) Stage 2: normalizing and considering non-threatening alternative explanations.

This stage involves further clarification of the formulation and helping the patient to understand the mechanisms by which their problem with intrusive thoughts is being maintained. Several strategies are employed in this phase in order to help the patient to understand the significance of their intrusive thoughts.

C) Stage 3: reconsidering the problem

The patient is invited to contrast directly the two alternative views of their problem. The differences and similarities are highlighted and the requirement to be able to experience the thoughts without experiencing distress is discussed in details.

D) Stage 4: Audiotape exposure and belief modification.

A tape loop is used to elicit the patient's intrusion; emphasis is placed on identifying responsibility appraisals and how they link to urges to neutralize identified at this point. Response prevention is initiated with a cognitive rational, usually by helping the patient to challenge their appraisal of the intrusions.

E) Stage 5: Further behavioral experiments in vivo

The next stage, again using tape, is using the natural occurrence of intrusive thoughts as a cue for the use of the tape. During the latter stages of the tape's sequence, self-directed exposure and response prevention for other thoughts is initiated and recorded. Part of the response prevention recording is picking-up on particular beliefs and modification of these.

F) Final stage: relapse prevention

Possible future difficulties are identified and a set-back pack compiled by the patient. The patient, throughout therapy, should have been recording what I have learned during therapy. At this stage, the emphasis is placed on the patient's own efforts to bring about such changes, with the therapist playing a minimal monitoring role as far as possible. This helps to maximize the extent to which the patient takes responsibility for their own thoughts and actions.

5) Eating Disorders

A) Bulimia Nervosa

1) Stage One

* *Explaining the cognitive view of the maintenance of bulimia nervosa* : this is done in the first session. The major point to be stressed is that there is more to the patient's eating problem than just binge eating. Although most patients present complaining of binge eating (and possibly purging), they need

to appreciate that they must make changes in other areas if they are to make a lasting recovery.

* *Self monitoring* : In the first session, patients are also asked to start monitoring their eating. The rationale for monitoring should be clearly explained.

* *Monitoring body weight* : With this form of treatment patients are not weighed by the therapist, they are asked to start weighing themselves once a week on a morning of their choice. Weighing at weekly intervals is an important part of treatment.

* *Education* : An important element of treatment is the education of patients about their weight and eating since many harbour misconceptions that maintain the eating disorder.

* *Advice regarding eating, vomiting, and the misuse of laxatives and diuretics*: This advice is central to the regaining of control over eating. It is introduced gradually over stage one.

* *Interviewing key friends or relatives* : Toward the end of stage one, the therapist should consider arranging one or two joint interviews with the patient and any key friends or relatives. These interviews serve three functions. First, they encourage patients to bring the eating problem into the open, thereby removing the secrecy that typically accompanies and maintains it. Second, having patients describe the treatment to these friends and relatives gives the therapist an opportunity to check that its principles have been fully understood. Third, by educating key friends or relatives, and answering their questions, patients can be helped to provide an environment which, will facilitate their own efforts at overcoming the problem.

2) Stage Two

This stage in treatment generally consists of eight weekly appointments. There is continuing emphasis on regular eating, the use of alternative behavior, and weekly weighing, but in addition the focus broadens to tackle all forms of dieting, concerns about shape and weight, and more general cognitive distortions. The techniques consist of a combination of behavioral and cognitive procedures such as:-

* *Tackling diet.*

* *Enhancing problem – solving skills*

* *Addressing concerns about shape and weight*

* *Addressing other cognitive distortions*

3) Stage Three

This, the final stage in treatment, consists of three appointments at two – week intervals. The aim is to ensure that progress is maintained in the future. With patients who are still symptomatic (the majority) and who are concerned at the prospect of finishing treatment, reassurance should be given that it is usual for there to be continuing improvement in the months following the end of treatment. The final step is to prepare for difficulties in the future (relapse prevention).

B) Anorexia Nervosa

In principle, it ought to be possible to treat anorexia nervosa using an adaptation of the CBT for bulimia nervosa. This is because the maintaining mechanisms are very similar as are the cognitions and behaviors.

1) *Enhancing motivation to change*

The poor motivation of these patients needs to be addressed from the outset. It is important that therapists make it absolutely clear that they are working on behalf of the patients and not their relatives or concerned others. The main emphasis is on establishing a sound therapeutic relationship, accepting the patient's beliefs and values as genuine for her and adopting an experimental approach in which the therapist and patient together explore the use of different treatment strategies. To help motivate the patient, the therapist also needs to identify clinical features that the patient regards as a problem.

2) *Restoring a healthy weight*

Before emphasizing the need for weight gain, however, it is best to devote several sessions to the establishment of a collaborative working relationship. Thereafter, weight gain must become a non-negotiable part of treatment. It is best to decide on a target weight range in excess of a body mass index of 19.0. Patients should be reassured that care will be taken to ensure that they do not exceed this weight range.

C) *Other Eating Disorders*

The cognitive behavioral approach of bulimia nervosa can be regarded as modular in form since it contains groups of procedures directed at particular facets of the specific psychopathology of the disorder. Simple dietary / behavioral treatment may be very effective.

6) **Depression**

The cognitive theory and therapy of depression

There are three main components of Beck's cognitive theory of emotional disorders. The first component is the presence of negative automatic thought – "automatic by virtue of their coming out of the blue, often seemingly unprompted by events and not necessarily the results of directed thinking. The second component is the presence of systematic logical errors in the thinking of depressed individuals. The third component of the cognitive model is the presence of depressogenic schemata. Following from the theory, Beck's cognitive behavior therapy aims to deal with negative thoughts, memories, and beliefs which maintain depression and make the person vulnerable to future episodes. Various techniques aim first at making patients re-conceptualize their thoughts and memories as simply thoughts and memories with the use of experiments (homework) to test out the truth of the interpretations and gather more data for discussion. The major techniques used include the following: thought-catching, task assignment, reality testing, cognitive rehearsal, and dealing with underlying fears and assumptions.

7) **Hypochondriasis**

A) *Engagement in treatment*

Establishing engagement usually follows from assessment. If the patient has been engaged in treatment, the therapist summarizes what the patient has said, emphasizing the role of the patient's symptoms, thoughts, beliefs, and behaviors, and presents the conceptualization in these terms. The acceptability of this conceptualization is discussed with the patient.

B) *Changing beliefs about the nature and consequences of the problem*

Anxiety about health involves the interpretation of bodily sensations, physical changes, or medical communications as more dangerous than they really are. The combination of discussing the basis of negative beliefs, self-monitoring, and behavioral experiments is applicable to a wide range of reactions involving anxiety or depression as a response to physical symptoms or fears. Ratings indicate to the therapist and patient how successful belief change has been. Sometimes, the very sensitivity of the patient to misinterpretation can be used to good effect in therapy. At the end of each therapy session the patient is asked to summarize the main things that he/she has learned. The aim is to have the patient make allowances for this type of misinterpretation.

C) *Changing behavior*

The majority of behaviors involved in somatic problems are perceived by the patient as serving a preventive function, and are therefore relatively difficult to modify without attention to the underlying beliefs. When illness behavior is prominent, treatment strategies aim to elicit and demonstrate the role of behaviors in maintaining anxiety, preoccupation, and physiological disturbance. The use of questioning as part of guided discovery can be helpful. Direct demonstration is particularly convincing when changing behavior can be shown to have an effect on symptoms. The patient and therapist design experiments to: (1) test the patient's belief that the behavior is keeping him / herself safe from serious harm; and (2) to see if behaviors which the patient believes relieve symptoms really do so.

D) *Reassurance*

In patients anxious about their health, a variety of behaviors can occur which have the same effect as obsessional checking. These reassurance-seeking behaviors focus attention on patients' worries, reduce their anxiety in the short term, but increase preoccupation and aspects of the problem in the longer term. The role of reassurance-seeking in maintaining patients' problems must be explained to them in a way which they clearly understand. Where reassurance – seeking is a major feature of a patient's difficulties, it is helpful to devise a behavioral experiment demonstrating the effects of reassurance. The demonstration also engages the patient in treatment and establishes a collaborative relationship. It provides a clear rationale for controlling reassurance-seeking and thereby helps the patient to tolerate the initial anxiety caused by behavior change. Families and others involved with the patient must be included in treatment and shown how to deal with requests for reassurance. A role-play may be used, in which the patient asks the relative for reassurance and the relative answers (without non-verbal criticism) in previously agreed terms.

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How to read a paper (The basics of evidence based Medicine – 2nd Edⁿ)

By

Trisha Greenhalgh
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Introduction

As clinical practice becomes busier and time for reading and gaining knowledge of best practice from the medical literature becomes even more precious, the excellent approach to how to make best use of medical literature and the benefits of evidence based medicine (EBM) in this lively book of T. Greenhalgh provides essential skills for doctors. It helps a person who reads papers to develop a pragmatic and at times unconventional system for testing their merits. This book has become a standard reader in many medical and nursing schools, offering different angles on the 12 topics covered briefly in its chapters.

Why read paper at all?

[EBM in reading medical papers]

EBM means "The conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients". Moreover it is "the enhancement of a clinician's traditional skills in diagnosis, treatment, prevention and related areas through the systematic framing of relevant and answerable questions and the use of mathematical estimates of probabilities and risk"

Essential steps in EBM

To convert our information needs into answerable questions (i.e. to formulate the problem), to track down, with maximum efficacy the best evidence answering these questions-which may come from the clinical examination, the diagnostic laboratory, the published literature or other sources, to appraise the evidence critically (i.e. weigh it up) to assess its validity (closeness to truth) and usefulness (clinical applicability), to implement the results of this appraisal in our clinical practice and to evaluate our performance.

Decision making in clinical practice

Decision making by anecdote, press cutting, expert opinion (EBM) sponsored by pharmaceutical company, and by cost minimization.

Searching the literature

3 levels of reading literature are present:

1. Browsing, in which we flick through books and journals looking for anything that might interest us.

2. Reading for information, in which we approach the literature looking for answers to a specific question, usually related to problem we have met in real life.
3. Reading for research, in which we seek to gain a comprehensive view of the existing state of knowledge, ignorance, and uncertainty in a defined area. "Where is the wisdom we have lost in knowledge, and the knowledge we have lost in information", after Richard Smith.

Getting your bearings (what is this paper about?)

If you are going to trash a paper, you should do so before you even look at the results.

Common reasons why papers are rejected for publications

1. The study did not examine important scientific issue.
2. The study was not original-that is, someone else has already done the same or a similar study.
3. The study did not actually test authors' hypothesis.
4. A different study design should have been used.
5. Practical difficulties (e.g. in recruiting subjects) led the authors to compromise on the original study protocol.
6. The sample size was too small.
7. The study was uncontrolled or inadequately controlled.
8. The statistical analysis was incorrect or inappropriate.
9. The authors have drawn unjustified conclusion from their data.
10. There is a considerable conflict of interest (e.g. one of the authors or a sponsor might benefit financially from the publication of the paper and insufficient safe guards were seen to be in place to guard against bias).
11. The paper is so badly written that it is incomprehensible.

Q.1:

Three preliminary questions to get your bearings

Why was the study done and what hypothesis were the authors testing?

Q.2:

What type of study was done?

Primary (First hand research) or secondary study (interrogative) that summarizes and draws conclusions from primary studies.

Primary studies are grouped into 3 categories:

- a) Experiments, on animals or volunteers.
- b) Clinical trials, in which intervention (drug treatments offered) then follow up to show results.