

# Cognitive-Behavioral Therapy for Depression\*

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## 1. Introduction

Depression has a substantial impact on the lives of patients and their families, significantly affecting their social and occupational lives as well as causing other functional impairments (Murray & Lopez, 1996).

The objective of this chapter is to present the use of cognitive-behavioral therapy (CBT) in patients with depression by describing the techniques used and the efficacy of this therapeutic strategy. To achieve this aim, a search was accomplished to identify the principal relevant clinical trials by conducting a non-systematic literature review using the Medline, SciELO and PsychInfo databases, supplemented with textbooks on the subject. A description of the CBT model is followed by a discussion on efficacy studies.

## 2. Epidemiological aspects

Major depressive episode (MDE) is one of the most prevalent psychiatric disorders. A study carried out in the United States using the DSM-IV (American Psychiatric Association, 1996) criteria reported lifetime prevalence of 16.2%, and 12-month prevalence of 6.6% (Kessler et al., 2003).

For many patients, the disorder is chronic and recurrent. Follow-up studies have shown that up to 30% of patients remain depressed after one year, 18% after two years and 12% after five years. Many treated patients retain residual and subsyndromal symptoms that are associated with unfavorable outcomes such as higher risk of recurrence and suicide, poorer psychosocial functioning and elevated mortality resulting from clinical diseases. Of the patients who recover from a depressive episode, more than 50% relapse (Kennedy et al., 2004). The return of depressive symptoms during maintenance therapy with antidepressants occurs at rates that vary from 9 to 57% (Byrne & Rothschild, 1998).

The greatest concern in the follow-up of these patients is suicide, which is significantly associated with major depression. Based on the results of a meta-analysis, the estimated risk

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\*This chapter is an update of Powell et al.'s (2008) article.

of suicide was 2.2% in less severe outpatients and 8.6% in those with more severe depression and a history of hospitalization (Bostwick & Pankratz, 2000). Because of its high prevalence and resulting disability (major depression is classified as the second greatest cause of disability, adjusted for years of life, in developed countries) (Murray & Lopez, 1996). The concern in preventing recurrences of MDE is relevant and has been the target of research both with pharmacological treatment and psychotherapy (Antonuccio et al., 1995; Fava et al., 1996; Fava et al., 1998a; Fava et al., 1998b; Hollon et al., 2005).

### 3. The cognitive model and depression

In the 1960s, Albert Ellis and Aaron Beck reached the important conclusion that depression was the result of extremely deeply established thought habits, and described the fundamental concepts of cognitive-behavioral therapy. Beck (1963; 1967) observed that negative moods and behavior were usually the result of distorted thoughts and beliefs and not of unconscious forces, as the Freudian theory suggested. In other words, depression may be understood as being the result of the patient's own cognitions and dysfunctional cognitive strategies. Patients with depression believe and act as if things were worse than they really are. This new treatment approach emphasizing thought was referred to by Beck as cognitive therapy (Beck, 1963). To this date, more than 300 controlled clinical trials have confirmed the efficacy of this therapy, which makes it the psychotherapeutic option with the greatest empirical support (Beck, 2005; Butler et al., 2006).

As developed by Aaron T. Beck, cognitive behavioral therapy (CBT) for depression is currently the best-researched therapeutic strategy for any psychological disorder (Beck, 2005). Many studies and meta-analyses have confirmed its efficacy for the treatment of mild, moderate or severe depression. Furthermore, CBT is at least as effective as pharmacological therapy or any other form of psychological intervention [e.g. interpersonal therapy (IPT) or supportive treatment] (Dobson, 1989). An additional benefit of CBT has been recorded in many treatment studies; it results in a more durable response compared to drug therapy and may be protective against recurrence (Hollon et al., 2005; Hollon et al., 1991).

### 4. Cognitive triad

Beck's cognitive theory of depression assumes two basic elements: the cognitive triad and cognitive distortions (Beck, 1963). The cognitive triad consists of a negative vision of oneself in which the person tends to see him/herself as inadequate or inept (e.g. "*I am a boring person*", "*I am uninteresting*", "*I am too sad for anyone to like me*"), a negative view of the world, including relationships, work and activities (e.g. "*No one appreciates my job*") and a negative view of the future, which appears to be cognitively linked to the degree of hopelessness. The most typical thoughts and verbal expressions with respect to a negative view of the future include: "*Things are never going to get any better*", "*I will never be worth anything*" or "*I'll never be happy*". Such thoughts, when coupled with hopelessness and suicidal ideation may make death seem like a relief from psychological pain or suffering or an escape from a situation perceived to be unbearable (Beck, 1976).

Beck et al. (1979) observed that the depressed patients describe their experience negatively and expect unfavorable outcomes to occur. This manner of interpreting events and

expectations makes inactivity and inertia seem logical, which in turn, serves to reinforce the depressed person's feelings of inadequacy, low self-esteem and hopelessness.

## 5. Cognitive distortions

Cognitive distortions, defined as systematic errors in the perception and processing of information, occupy a central role in depression. Individuals with depression tend to be absolute and inflexible in structuring their experiences, leading to errors of interpretation with regard to personal performance and judgment of external situations (J. S. Beck 1995; Scher et al., 2006).

The most common cognitive distortions in depressed patients were classified by Beck et al. (1979) into a typological system that includes, among others, arbitrary inference (formulating a conclusion in the absence of sufficient evidence), selective abstraction (tendency of the person to select proof of his/her poor performance), overgeneralization (tendency to consider that one negative event or performance will occur other times), and personalization (personal attribution, often negative). A larger series of distortions has been described by Beck and others (Beck et al., 1979; Scher et al., 2006). Recently, de-Oliveira (chapter 1) developed the Cognitive Distortions Questionnaire (CD-Quest), a questionnaire to help therapist and patient to assess and follow changes in cognitive distortions frequency and intensity during therapy.

Cognitive distortions logically follow the patient's internal rules and assumptions, which are stable patterns of thinking developed throughout the lifetime of every individual. These rules and beliefs are sensitive to activation by primary sources such as stress or losses and often lead to ineffective interpersonal strategies (Scher et al., 2006).

## 6. Use of cognitive therapy in depression

Cognitive therapy for depression is a treatment process that helps patients alter beliefs and behaviors that produce certain mood states. The therapeutic strategies of cognitive-behavioral management of depression occur in three phases: 1) education, forming the therapeutic relationship and making behavioral changes to confront problems with poor self-care and vegetative symptoms; 2) focus on automatic thoughts; and 3) focus on dysfunctional core beliefs.

One of the advantages of cognitive therapy is the way in which patients actively participate in their own treatment, helping them to: a) identify distorted perceptions; b) recognize negative thoughts and seek alternative thoughts that more closely reflect reality; c) find evidence supporting negative and alternative thoughts; and d) generate more believable and accurate thoughts associated with certain situations in a process called cognitive restructuring; d) behave in more functional ways; and e) manage life problems more effectively (Beck, 1979).

## 7. Behavioral activation

One of the theories that guides the procedures involved in the treatment of depression is Lewinsohn's (1974, 1975) theory that social learning and the level of positive reinforcement

are factors that contribute towards the onset and maintenance of depressive states. This theory states that patients become depressed because they are experiencing a decrease in the general reinforcement they receive from the outside world – as a result of a decreased positive reinforcement and/or an excess of aversive experiences. Depression is conceived in this model as a vicious circle in which the patient gradually withdraws from positive activities and experiences the exponential loss of positive reinforcement. Therefore, the therapist must work incisively to increase the involvement of depressed patients in activities that should result in positive reinforcement and social interaction.

The behavioral strategies used in CBT originate from Lewinsohn's (1974, 1975) model of psychopathology and are used flexibly. These strategies are planned in accordance with each individual patient and are used in such a way as to engage the patient, relieve symptoms and obtain information that is relevant to therapy.

The initial strategy, consisting of the scheduling and monitoring of activities, is a powerful tool to be used by patients with depression. In fact, some patients with depression may respond to behavioral activation alone (Dimidjian et al., 2006). The scheduling of activities may be used flexibly by clinicians and patients to monitor activities (to correct distortions in the way patients think they are spending their time and to evaluate activities associated with control and pleasure), to schedule enjoyable activities and productive activities (particularly for depressed patients who do not allow themselves to participate in these activities) and to identify activities related to very positive or very negative feelings. This technique provides the patient and the therapist with data on how the patient is functioning. Scheduling of activities may be used to plan behavioral tasks and to record results. Acting according to a plan rather than waiting for a “feeling” is much more effective for depressed patients. Moreover, this procedure gives patients control over their time, recognizes their efforts with respect to performing activities and records true accomplishments. This technique is a powerful tool to be used with patients under pharmacological treatment, since it will give them the opportunity to record side effects, activities and changes in symptoms. This relatively simple intervention can illustrate the relationship between depressive symptoms and lack of intentional, positive behaviors, thereby opening a pathway towards solving problems (Beck et al., 1979).

In CBT, skill deficits are also conceptualized as factors that may contribute to the risk for depression. For example, if the individual is unable to be assertive in interpersonal relationships, he/she misses out on an important opportunity for positive reinforcement. One significant contribution of Beck and other investigators to this model is the idea that, besides the reduction in positive reinforcement, depressed patients also increase the magnitude of their symptoms through the cognitive evaluations and conclusions that they reach from the lack of positive reinforcement. For example, depressed patients carry out fewer and fewer activities and conclude that it is hopeless to try and do anything. When therapists help patients modify this behavior, this brings direct evidence that their cognitive evaluations are incorrect. Patients then have a powerful example of how errors in their way of thinking have led to dysfunctional emotions and behavioral responses, and the treatment advances by cognitive and behavioral means to solving problems (Sudak, 2006).

## 8. Cognitive restructuring

The initial sessions are also directed towards defining the patients' problems by elaborating the conceptualization or formulation of the case. In these sessions, therapists will help patients identify: 1) the particular dysfunctional beliefs they have associated with depression; 2) their most common cognitive distortions and classification of automatic thoughts; 3) the physiological, emotional and behavioral reactions arising from these thoughts; 4) behaviors that were developed to confront dysfunctional beliefs; and 5) how previous experiences have contributed towards maintaining the patients' beliefs (J. S. Beck, 1995).

### 8.1 Evoking thoughts and assumptions

Depression generates immobility and pessimism; therefore, patients find it difficult to begin any task and fail to identify any advantage in performing any activity. An initial step in treating patients, following behavioral activation is to help the patient to identify such thoughts.

Of note, the goal of cognitive therapy in MDE is to facilitate the remission of depression and to teach patients to be their own therapists. Cognitive techniques should help achieve the objectives of therapy and should be understood by the patient as tools that they can use in the future. Patients should be stimulated to confront the problems related to mood complaints and therapists should not help them with each problem, since this may prevent strengthening their own abilities (Beck et al., 1979). An extensive series of cognitive techniques and the discussion of their applications may be found in Leahy's excellent textbook (Leahy, 2003). Some of the techniques that have proven more effective in the treatment of MDE are presented below.

### 8.2 Explanation on how thoughts are related to feelings

A direct question by the therapist such as "*what were you thinking about at that moment?*" or "*what went through your mind right now?*" when the patient exhibits a shift in emotion or relays an emotionally-laden situation, may be supplemented by a table with two parallel columns describing: 1) I think that ...; and 2) Hence, I feel... When the therapist uses this type of resource, difficulties may arise for the patient to correctly identify thoughts and feelings, and the therapist's help may be necessary (Leahy, 2003).

### 8.3 Recording dysfunctional thoughts

This technique increases objectivity and encourages the individual to remember events, thoughts and feelings that occurred between sessions. Generally, the individual needs training to use this daily thought diary, initially being able to identify automatic thoughts by first identifying emotional states. The tool comprises a register in which the patient writes down sequentially an event and the subsequent thought that occurs at a time of problematic emotions or behaviors. There is an additional column to give a note related to what extent the patient believes that thought is true. This column will progressively help the individual identify which dysfunctional automatic thoughts are most likely to be a productive focus of attention. Next, the emotion is recorded and the degree of emotion is evaluated on a 0-10 or

0-100 scale. To help the patient, comparison may be made with the most intense emotion (sadness, for example) in order to reach a more realistic evaluation (Beck et al., 1979). Thought records also include an evidence-gathering column, and a column to generate an alternative thought about the situation. Finally, the patient is asked to rate the believability of the new thought as well as to rate the intensity of the emotion (Padesky & Greenberger, 1995).

#### **8.4 Trial-Based Thought Record (TBTR)**

De Oliveira (2008) has developed the TBTR, a 7-column thought record designed to address core beliefs by means of sentence-reversion and the analogy to a judicial process. This method might be useful in restructuring negative beliefs in depressed patients. Despite the lack of clinical trials comparing this method with other psychological approaches used to treat depression, case reports indicate its potential in this regard. The inspiration for its development came from the surreal novel by Franz Kafka, *The Trial* (Kafka, 1998; first published in 1925). The rational basis to propose the TBTR is that it could be useful to make patients aware of their core beliefs about themselves (self-accusations) and engage them in a constructive trial to develop more positive and functional core beliefs (De-Oliveira, 2011). TBTR incorporates a structured format and sequentially presents several techniques already used in conventional cognitive therapy: downward arrow technique, examining the evidence, defense attorney technique, thought reversal, upward arrow technique, developing a more positive schema, and positive self-statement logs, and the empty chair approach (see chapter 3 in this book).

#### **8.5 Downward arrow**

As patients become more capable of identifying and restructuring automatic thoughts, it is important to investigate the underlying beliefs that lead to such thoughts, and make the person vulnerable to negative events. Changing such beliefs increases the durability of recovery from depression (DeRubeis et al., 1990; Hollon et al., 1990).

A form of Socratic questioning called downward arrow can be used to help identify such beliefs about the self and others (Burns, 1980; De-Oliveira, 2011). The Socratic method is also used to help the patient develop autonomous reasoning to question the evidence and create alternative thoughts and evaluations. Confronting the evidence of thoughts may help patients reduce the power of the thought, decreasing their feelings of fear, sadness or discouragement. The downward arrow is a very useful technique that helps to oppose beliefs that maintain the state of depression.

### **9. The duration of treatment and remission of symptoms**

Although patients with axis 2 co-morbidity or significant anxiety symptoms associated with depression may require longer treatment with cognitive therapy, this therapy normally is short-term (Blenkiron, 1999). Structured sessions also help patients develop a sense of personal control and enhance the efficiency of treatment. Patients with personality disorders may require more time in therapy, even more than 12 months (Byrne & Rothschild, 1998). Often, these patients tend to drop out from treatment more easily and the therapist should be attuned to the therapeutic alliance. Some research has indicated the patients with Axis 2

disorders who cannot receive longer courses of CBT might benefit more from managing symptoms with medication (Fournier et al., 2008), or behavioral activation (Coffman et al., 2007).

In addition, the therapist should also be attentive that patients may drop out or interrupt their treatment following the remission of the first symptoms that had previously maintained them less active and less confident. As these symptoms improve, there may be a tendency to drop out treatment prematurely.

## 10. Prevention of relapses

The final sessions are aimed at evaluating the advances made in therapy and at preventing recurrences. The patient's improvement may be used as a resource for confronting new situations that include losses and adaptations to current problems. From the beginning, it should be emphasized that the duration of therapy is limited; the procedures involved in therapy should be demystified by relating them to the identification of thoughts, their questioning and restructuring; the patients' confidence should be increased based on their gains; and, gradually patients increase their role in the process of change. All these procedures facilitate progress towards the termination of therapy and generate confidence in patients to proceed with their lives. The therapist must teach patients to deal with the possibility of a recurrence of depressive symptoms, since depression is a highly recurrent disorder (Deckersbach et al., 2000). Therefore, another important strength of cognitive therapy is its durability in recurrent unipolar depression, as compared to pharmacological treatments (Fava et al., 1998).

Fava et al. (1996) suggested that cognitive therapy for the residual symptoms of a depressive episode treated with medication leads to substantially fewer recurrences. In a preliminary study involving 40 patients, those with recurrent major depression who had been successively treated with antidepressants were randomly allocated into two groups, one treated with cognitive therapy for the residual symptoms and the other with conventional clinical management. After 20 weeks of treatment, the administration of antidepressants was reduced and then ceased in both groups. Patients were followed up for two years during which no medication was used except for cases of recurrence. The group in which cognitive therapy was given was found to have significantly fewer residual symptoms compared to the group that received conventional clinical management. Cognitive therapy also resulted in lower recurrence rates (25%) compared to clinical management (80%).

Data referring to the patients of the above-mentioned study were published after 4 and 6 years of follow-up (Fava et al., 1998a; Fava et al., 1998b). Treatment with cognitive therapy resulted in a significant reduction in recurrence rates at 4 years (35% versus 70%) (Fava et al., 1998a). After 6 years of follow-up (Fava et al., 1998b), 10 of the patients in the cognitive therapy group (50%) and 15 of the patients in conventional treatment (75%) had suffered relapses; however, this difference was not statistically significant. When multiple recurrences were considered, the patients submitted to cognitive therapy had significantly fewer episodes and responded to the same antidepressant used in the basal episode of the study. The authors concluded that cognitive therapy seems to offer a protective effect for up to four years of follow-up, and this effect becomes weaker afterwards. Nevertheless,

cognitive therapy for the residual symptoms led to a long-term reduction in the number of episodes of major depression (Fava et al., 1998a). According to Fava et al. (1998b), these results challenge the established belief that prolonged pharmacological treatment is the only way of preventing relapses in patients with recurrent depression.

However, in what way would CBT prevent recurrences in patients with MDE? One proposal denominated "metacognitive awareness" may explain this phenomenon. Instead of considering the modification of dysfunctional beliefs as a tool for preventing recurrences, the metacognitive awareness approach suggests that the negative thoughts and feelings in MDE are experienced as mental events and not as an expression of reality. As patients evolve in their depressive state, they cease to automatically accept the negative thoughts. This hypothesis, still under investigation, seems useful as an explanation for the success achieved with cognitive therapy in the prevention of recurrences.

Another study (Murphy et al., 1984) followed patients with MDE for two years. Patients who had had a mean of three episodes of moderate to severe MDE were divided into three treatment groups: 1) antidepressants (AD); 2) CBT with monthly maintenance; and 3) AD in the acute phase plus CBT with monthly maintenance. Patients were distributed as follows: AD: 31%; monthly CBT: 36%; AD + monthly CBT: 24%. At the end of 24 months, there was no statistically significant difference in recurrence rates. This study showed that cognitive therapy was at least as effective as AD in maintaining remission and preventing relapses. Maintenance pharmacotherapy may be necessary for some patients while cognitive therapy is a viable alternative for others.

## 11. Cognitive therapy and pharmacotherapy

The first study on CBT for depression was published in 1977 (Rush et al., 1977). The authors compared CBT to imipramine and reported significantly better results with CBT. This study was not, however, placebo controlled. Another significant limitation was that the research team was not blinded with respect to the form of treatment, so further investigation was necessary to confirm efficacy. By 1989, a sufficient number of studies had been performed to allow a review and meta-analysis to be carried out (Dobson, 1989). Twenty-eight studies were included in that sample, which found better results for CBT compared to medication and other psychological treatments. In subsequent years, various studies confirmed the significant efficacy of CBT in the treatment of major depression and its increased durability compared to pharmacological therapy. The sole exception to this was the NIMH's Treatment of Depression Collaborative Research Project (TDCRP), a large, multi-centered trial of CBT versus IPT versus medication (imipramine) versus placebo. CBT performed as well as IPT/imipramine in cases of mild to moderate depression, but in cases of more severe depression, IPT and imipramine gave better results (Elkin et al., 1989). Further analysis carried out by DeRubeis et al. (1999) on the data from this study indicated that there were significant differences in the efficacy of CBT across sites. In Philadelphia, where therapist fidelity to the model was more robust, CBT performed as well as IPT or medication. DeRubeis and Feeley subsequently studied therapist fidelity to the model and found that therapist fidelity early in treatment is predictive of patient response in depression.

Following TDCRP (Elkin et al., 1989), a significant number of studies went on to expand the empirical basis for the use of CBT in acute and chronic depression, both alone and in



combination with medication (Jarrett et al., 1999; Hollon et al., 1992). Many studies evaluating efficacy were conducted in order to establish CBT as being at least as effective as or superior to a pharmacological intervention. Greenberg and Fisher (1997, 1989) described a number of well-conducted clinical trials comparing active and directive psychotherapies (such as cognitive and interpersonal therapies) with antidepressants and suggested that outpatients submitted to psychotherapy evolved just as well or at times better than those receiving medication. They also concluded that, although medication improved sleep-related symptoms, psychotherapy was more effective in helping patients with depression and apathy. Moreover, unlike psychotherapy, medication was unable to help depressed outpatients to adjust socially, and to recover their interpersonal relationships and their professional performance (De-Oliveira, 1998).

Systematic reviews and meta-analyses have noted that CBT has efficacy similar to that of antidepressant treatment (Dobson, 1989; Hollon et al., 1991; Conte et al., 1986; Robinson et al., 1990; Wexler & Cicchetti, 1992). Treatment with psychotherapy also conveyed an advantage with respect to dropout rates and recurrences (de Jonghe, 2001). Another large clinical trial (Keller et al., 2000) was conducted with 681 patients with chronic and recurrent major nonpsychotic depression, and compared nefazodone, cognitive behavioral-analysis system of psychotherapy (a recently developed form of cognitive therapy), and the combination thereof. A total of 16-20 sessions were conducted over 12 weeks. Taking into consideration only patients who completed the study, remission or a satisfactory response was achieved in 85% of cases in the group that received the combined treatment and in 55% of cases in the group treated with nefazodone or therapy alone.

Most combined treatment studies accomplished to date are heterogeneous regarding the medications evaluated and did not employ adequate pharmacotherapy as implemented in clinical practice; hence, it is difficult to draw adequate conclusions with respect to the added benefits of combined treatment versus the use of either modality alone. Nevertheless, several reviews and one interesting meta-analysis indicate that in cases of more severe depression there may be a significant added benefit with the combined use of medication and cognitive behavioral treatments (Hollon et al., 1991; Friedman et al., 2006). Several studies have been conducted to counter the objections raised about data acquired in earlier studies of CBT for depression. Most impressively, DeRubeis et al. (2005) published a definitive study comparing CBT to medication, which included a placebo control group and an augmentation protocol for non-responders to the initial study medication. This study included patients who were moderately to severely depressed, and who had co-morbid anxiety and personality disorders. CBT and medication performed equally well for the acute treatment of moderate to severe depression.

As previously discussed, the most impressive finding in studies of CBT for depression is the durability of its effect. Patients who are CBT responders have a significantly more durable response than patients whose depression is treated with medication. Many recent reviews describe substantial decrement in response to antidepressant medication even if the patient continues taking the medication properly, an event that occurs only 26% of the time (Bockting et al., 2008).

Recurrence of major depression is common. Several studies have attempted to forestall this recurrence by employing novel strategies in CBT. Jarrett et al. (1999) have shown that

booster sessions of CBT have a substantial effect on the recurrence of depression in chronic patients who are CBT responders. Several studies have evaluated the sequential treatment with medication and CBT using a brief CBT protocol applied either individually or in groups following treatment with medication, including Fava's studies previously described (Fava et al., 1998a; Fava et al., 1998b; Fava et al., 1998; Bockting et al., 2008 and Paykel et al. (1999) achieved similarly impressive results using individual and group treatment strategies with a very short-term treatment protocol. Mindfulness-based cognitive therapy has also been successfully used in chronic depression to forestall recurrence after successful remission has been achieved (Teasdale et al., 2000).

In conclusion, CBT in the treatment of depression is one of the therapeutic alternatives with the highest empirical evidence of efficacy, whether applied alone or in combination with pharmacotherapy.

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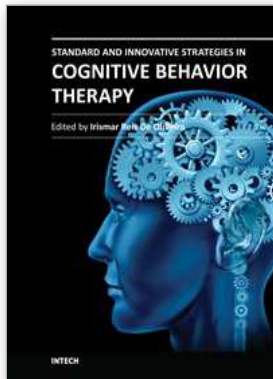
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## **Standard and Innovative Strategies in Cognitive Behavior Therapy**

Edited by Dr. Irismar Reis De Oliveira

ISBN 978-953-51-0312-7

Hard cover, 190 pages

**Publisher** InTech

**Published online** 14, March, 2012

**Published in print edition** March, 2012

Cognitive-behavioral therapy (CBT) is the fastest growing and the best empirically validated psychotherapeutic approach. Written by international experts, this book intends to bring CBT to as many mental health professionals as possible. Section 1 introduces basic and conceptual aspects. The reader is informed on how to assess and restructure cognitions, focusing on automatic thoughts and underlying assumptions as well as the main techniques developed to modify core beliefs. Section 2 of this book covers the cognitive therapy of some important psychiatric disorders, providing reviews of the recent developments of CBT for depression, bipolar disorder and obsessive-compulsive disorder. It also provides the latest advances in the CBT for somatoform disorders as well as a new learning model of body dysmorphic disorder. Two chapters on addiction close this book, providing a thorough review of the recent phenomenon of Internet addiction and its treatment, concluding with the CBT for substance abuse.

### **How to reference**

In order to correctly reference this scholarly work, feel free to copy and paste the following:

Neander Abreu, Vania Bitencourt Powell and Donna Sudak (2012). Cognitive-Behavioral Therapy for Depression, Standard and Innovative Strategies in Cognitive Behavior Therapy, Dr. Irismar Reis De Oliveira (Ed.), ISBN: 978-953-51-0312-7, InTech, Available from: <http://www.intechopen.com/books/standard-and-innovative-strategies-in-cognitive-behavior-therapy/cognitive-behavioral-therapy-of-depression>

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