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Review Article

**COGNITIVE BEHAVIORAL THERAPY (CBT) FOR ANXIETY
DISORDERS**

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Abstract:

Introduction: The prevalence of anxiety disorders across the world is higher than 11.6%. These common disorders are related with high societal expenses and demands, and in addition noteworthy decrements in the function of the psychosocial and the life quality. CBT includes a class of scientifically informed interventions that seek to directly control dysfunctional ways of thinking and patterns of how individuals behave so as to lessen psychological suffering. For anxiety disorders explicitly, cognitive models set that overstated appraisal of threat is a center component underlying pathological anxiety.

Aim of work: In this review, we will discuss the types of cognitive behavioral therapy used for various classes of anxiety disorders.

Methodology: We conducted this review using a comprehensive search of MEDLINE, PubMed, and EMBASE, January 1985, through February 2017. The following search terms were used: cognitive behavioral therapy, anxiety disorders, post traumatic stress disorder, generalized anxiety disorder, exposure therapy.

Conclusions: The research on CBT in anxiety disorders supports the efficacy and viability of these techniques, with the majority of the current research looking into showing the usefulness of giving exposure therapy in the treatment of anxiety. Research supports the idea that anxiety disorder patients share basic psychological and biological vulnerabilities, recommending that effective treatments for anxiety are taking advantage of these common mechanisms. Further research about treatment directed towards the common mechanisms underlying effective CBT must be done.

Key words: cognitive behavioral therapy, anxiety disorder, non-pharmacological psychiatric treatments

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INTRODUCTION:

Anxiety disorders are the most commonly presented class of mental disorders, with 12-month prevalence rates of 21.3% in the United States of America and 11.6% in the whole world. These common disorders are related with high societal expenses and demands, and in addition noteworthy decrements in the function of the psychosocial and the life quality. Luckily, a sizable group of research has produced in the course of the most recent decades showing cognitive behavioral therapy (CBT) to be a great successful treatment for anxiety disorders [1].

CBT includes a class of scientifically informed interventions that seek to directly control dysfunctional ways of thinking and patterns of how individuals behave so as to lessen psychological suffering. For anxiety disorders explicitly, cognitive models set that overstated appraisal of threat is a center component underlying pathological anxiety. While differences exist in the content and triggers of anxiety crosswise over various disorders, research has progressively supported the possibility that anxiety disorders share center underlying features that make them more similar than. CBT interventions for anxiety in this manner share an attention on changing maladaptive beliefs about the probability and true cost of foreseen harms by using different cognitive [2].

METHODOLOGY:**• Data Sources and Search terms**

We conducted this review using a comprehensive search of MEDLINE, PubMed, and EMBASE, January 1985, through February 2017. The following search terms were used: cognitive behavioral therapy, anxiety disorders, post-traumatic stress disorder, generalized anxiety disorder, exposure therapy

• Data Extraction

Two reviewers have independently reviewed the studies, abstracted data, and disagreements were resolved by consensus. Studies were evaluated for quality and a review protocol was followed throughout.

The study was approved by the ethical board of King Abdulaziz University Hospital

Exposure Therapy

Exposure-based systems are the absolute most normally used CBT strategies used in anxiety disorders. One hypothetical framework for understanding the justification for exposure-based

treatment originates from emotional processing theory. According to emotional processing hypothesis, fear is represented by associative networks (cognitive fear structures) that keep up data about the feared stimulus, fear reactions (eg, escape, avoidance, psychophysiological reactions), and the meaning of the stimuli and reactions (eg, tiger = risk, increased heart rate = heart attack). At the point when a stimulus in the environment is experienced that resembles the feared stimulus, these associative networks trigger the fear structure. The fear structure is pathological when the relationship between stimuli, reactions, and their importance do not math reality, for example, when it is triggered for safe stimuli or reactions that resemble the feared ones. Moreover, the fear structure is kept up by shirking practices which do not take into consideration new learning to happen [3].

Exposure is proposed to change the pathological fear structure by first triggering it and afterward giving new data that disconfirms the pathological, unrealistic associations in the structures (eg, tachycardia does not prompt heart attack, swarmed shopping centers do not prompt violent assault). By facing the feared stimulus or reactions and integrating corrective information in the fear memory, fear is expected upon to diminish. Exposure can take a few structures including imaginal, in vivo, (in real life), and interoceptive. Imaginal exposure happens when the individual strikingly imagines the feared situation/results and does not maintain avoidance from their consequent anxiety. In vivo exposure includes continuous way to deal with places, items, individuals, or circumstances that were recently avoided although they are safe. Interoceptive exposure, which is for the most part utilized in treating panic disorder, includes deliberately initiating the physical sensations the patient fears are demonstrative of a fit panic attack. These exposure strategies are similar in their function since they enable the patient to acquire new learning so as to alter the fear structure. As a rule, exposure treatment is of restricted duration and is ordinarily finished in around 10 sessions [4].

Post-traumatic stress disorder

PTSD is regularly treated with prolonged exposure therapy (PE) which incorporates both imaginal and in vivo exposures. PE includes having the individual repeatedly return to the trauma memory by visualizing the trauma occasions in their imagination while describing the occasions out loud in session with the therapist. The revisiting to is followed by handling and processing the content of the imaginal

exposure with the goal of gaining new viewpoints about oneself, others, and the world, and moving negative recognitions into positive or neutral ones. The narrative amid imaginal exposure is recorded and patients keep on accepting exposure between sessions by listening in to the recording, which further gives chances to preparing the traumatic memory. PTSD patients are also requested to use in vivo practices as homework, regularly including continuous exposure to safe exercises, objects, or places that were recently avoided. Different types of psychotherapy for PTSD join a few components of exposure. For instance, the first original cognitive processing therapy protocol (CPT) has individuals process their trauma by composing a detailed account of the occasion and reading it aloud [5].

A meta- analysis of delayed exposure treatment studies uncovered that PE resulted in critical enhancements in PTSD symptoms and optional outcome measures at both post-treatment and follow-up compared with control conditions. Nevertheless, this study also discovered that PE was not significantly different compared with cognitive processing therapy (CPT), eye- movement desensitization and reprocessing (EMDR), cognitive therapy (CT), and stress inoculation training (SIT), which the authors recommend might be because of various yet similarly strong therapeutic mechanisms or because of the common implementation of exposure techniques in every one of the comparison treatments. Alternately, others have discovered that PE brought about better results regarding manifestation reduction, rate of improvement, and extent of participants no longer meeting criteria for PTSD compared with relaxation training and EMDR [6].

In regard to treatment combination, a few studies have discovered that the addition of cognitive therapy to PE did not yield predominant outcomes, while the addition of exposure methods to cognitive therapy enhanced the result [7].

Obsessive-compulsive disorder

Exposure and reaction prevention (EX/RP) treatment for people with OCD likewise uses both imaginal and in vivo exposure. In vivo exposures are finished both in the therapy session with the encouragement of the therapist and outside the session as homework (eg, touching faucets in public bathroom while participating in washing behavior without performing the compulsive ritual; washing with the objective of disconfirming the expected harm of getting sick). Abstaining from taking part in compulsive behaviors (response prevention) is an imperative aspect of the

treatment since compulsions function as safety behaviors that save the association among obsessions and the feared outcomes. For circumstances where it would be troublesome or difficult to conduct an in vivo exposure (eg, fear of the results of contracting HIV), imaginal exposure is used with a similar objective of exposing the patient to the feared imagined situation and letting anxiety diminish on its own without depending on compulsions. The imaginal exposure in this manner disconfirms the patient's expectation that thinking about the obsessional idea and not participating in a compulsion would prompt the anticipated harm [8].

A meta- analysis demonstrated that EX/RP brought about predominant results compared to placebo treatment. Exposure therapy was additionally observed to be superior in comparison with progressive muscle relaxation in OCD patients. Nevertheless, EX/RP has likewise shown similar effect estimates when compared with cognitive restructuring alone and EX/RP with cognitive restructuring. A more recent meta- analysis additionally found no differences among cognitive therapy alone and EX/RP in OCD treatment outcomes. Nevertheless, these outcomes depended on a considerable number of EX/RP studies, with only three studies examining cognitive therapy alone. An extra complication emerges in that numerous cognitive therapies considers on OCD consist exposures, frequently called behavioral experiments, in their treatment protocol. There is proof that the characteristics of the exposure treatment are imperative. A meta- analysis on variations of EX/RP found that exposure therapy for OCD was best when it consists therapist guided exposure instead of independently directed exposure, while requiring complete reaction prevention rather than partial or no response prevention, and when in vivo and imaginal exposure were combined as compared and using in vivo exposure alone [9].

Panic disorder

A sign of exposure treatment for panic disorder includes interoceptive exposure (eg, increasing heart rate by running or hyperventilating) which is aimed for disconfirming the idea that physical sensations will prompt hurtful occasions, for example, a heart attack or humiliating oneself openly. A metanalysis of studies on panic disorder demonstrated that CBT, which principally comprised of exposure therapy with or without cognitive therapy components, performed superior to no treatment or a placebo control. Additionally, another study found that CBT

with interoceptive exposure treatment yielded the biggest effect sizes for panic disorder patients; nevertheless, these interventions included cognitive therapy in addition to exposure. Although interoceptive exposure is usually used with panic disorder, there is less acknowledgment for the usefulness of supplementing interoceptive exposure with in vivo exposure in the treatment of panic disorder in recent studies [10].

Generalized anxiety disorder

GAD treatment can consist both imaginal exposure (eg, imagining the worst-case outcome imaginable related with their worries) and less much of the time, in vivo exposures. For instance, a GAD treatment protocol by Craske and Barlow has patients take part in independently directed exposures where patients repeatedly describe their worries using imaginal exposure to diminish the intensity of the worry. There are relatively few studies that examine at exposure-based treatment in GAD patients. Research has demonstrated that CBT including imaginal exposure resulted in greater functioning in GAD patients after a year follow-up compared with applied relaxation and nondirective therapy. A later study comparing cognitive therapy, applied relaxation with a type of imaginal exposure (self - control desensitization), and the combination of these treatments found no differences among them in terms results in treating GAD patients. Additional research is required on the adequacy of exposure therapy in treating GAD [11].

Social anxiety disorder

In vivo exposure is commonly used for social anxiety disorder (eg, taking part in social situations without using avoidance or safety behaviors). As per Rapee and Heimberg's CBT model of anxiety, those with social anxiety show distortions and biases by how they process social/evaluative information which prompts increase in anxiety [12]. Avoidance of social circumstances thus keeps up this anxiety and exposure to social circumstances can be used to give disconfirming proof in regard to cognitive distortions related with social expectations. exposure with or without cognitive therapy has been appeared to be successful in lessening social anxiety symptoms. More ongoing research found that exposure therapy with applied relaxation and cognitive therapy both brought about better outcomes over wait-list control in treating social anxiety disorder patients [13].

Nevertheless, compared with other in a similar study, cognitive therapy performed superior to exposure in addition to applied relaxation. additionally, meta-analytic outcomes exhibited that both cognitive and

exposure therapy performed superior applied relaxation or waitlist control in treating social anxiety disorder patients [14].

Specific phobias

In vivo exposure is viewed as the treatment of choice for specific phobia. In vivo exposure may include flooding (exposure to the most intense feared stimulus) or continuous exposure (systematic exposure of gradually increasing intensity). Meta-analytical studies have demonstrated that in vivo exposure therapy is exceptionally effective for specific phobias compared with no treatment, placebo treatment, and non- exposure-based active therapy conditions. Although relaxation was appeared to have some advantage for those with specific phobia, it was not observed to be more effective than exposure.36 moreover, one study compared patients receiving a solitary 3-hour session of exposure, five sessions of exposure, or five sessions of cognitive therapy and found that all three treatments performed superior to anything the waitlist control condition; nevertheless, no distinctions were found between the exposure and cognitive therapies [15].

Cognitive Therapy

Cognitive therapy is another broadly utilized strategy for treating anxiety disorders. Cognitive treatment depends on Beck's tri-part model of emotion which recommends that thoughts, feelings, and behaviors are interrelated. As per this hypothesis, changing maladaptive thoughts is proposed to adjust the patient's maladaptive effect and behavior. Cognitive treatment targets distorted thoughts using various techniques, for example, distinguishing off inaccurate thinking, analyzing the proof for and against automatic thoughts, testing and changing maladaptive thoughts, modifying problematic behaviors, and identifying with other individuals in progressively adaptive ways. Psychoeducation about the tri-part model of emotion, the diverse types of distorted thinking (eg, all-or-nothing thinking, jumping to conclusions, excluding the positive, and so forth), and cognitive restructuring is an essential part of cognitive therapy. Homework is regularly assigned to give patients chances to rehearse these abilities in their everyday life, enabling them to gain mastery of the techniques so they will have the capacity to apply what they have learned after treatment has finished. In treating anxiety disorders, cognitive therapy is regularly used in conjunction with behavioral techniques, which may include exposure exercises. Cognitive therapy is ordinarily time- limited to around 20 sessions or less and is problem-focused around the issues the patient recognizes as of

essential concern [16].

Post-traumatic stress disorder

A few cognitive therapy techniques have been proposed for treating PTSD. For instance, cognitive processing therapy (CPT) for PTSD proposes that erroneous convictions about the causes and outcomes of the traumatic event keep the patient from preparing the emotions surrounding the trauma memory. In CPT, the therapist encourages the patient to distinguish their "stuck focuses," learn better approaches to deal with upsetting thoughts, and gain a superior understanding of the adjustments in beliefs that happen subsequent to encountering a traumatic event. CPT starts with the therapist giving psychoeducation about PTSD manifestations and a method of reasoning for this treatment. Patients are requested to compose an "impact statement" or a one-page description of why the patient thinks the traumatic accident happened to them and how the occasion has changed their perspective of themselves and the world. The effect statement is utilized to start recognizing the patients stuck points or cognitive distortions about the occasion (eg, "I am a powerless individual"). Patients at that point figure out how to recognize their thoughts and feelings with the objective of understanding the interconnected connection between them. Next, two sessions of treatment include having the patient record the details of the most exceedingly bad traumatic occurrence, which are then read aloud to the therapist. Most of the resulting sessions are utilized to test the patients stuck focuses using Socratic questioning (delicately challenging the accuracy of the patient's thoughts to draw out alternative and increasingly adjusted ways of thinking). Patients are additionally taught cognitive-behavioral skills, and treatment may concentrate on specific problematic areas for the patient, for example, trust, confidence, and power/control. Different types of cognitive therapy for PTSD may include imaginal and in vivo exposures (cognitive therapy for PTSD) or may exclude any exposure exercises [17;18].

Research has demonstrated that CPT is successful in diminishing PTSD symptoms in the two veterans and nonveterans. For instance, **Resiek et al.** [19] found that CPT prompted more prominent upgrades in PTSD symptoms compared with a minimal consideration control group. CPT was likewise observed in a similar study to be similarly useful compared with delayed exposure treatment. Furthermore, cognitive therapy (CT) for PTSD has likewise been appeared to be more powerful than wait-list, self-monitoring, or self-help booklet

control groups. However, as referenced beforehand, CPT and CT for PTSD are not solely cognitive therapies since they both join varieties of exposure exercises also. Different studies have discovered similar results for cognitive treatment alone compared with imaginal exposure [18].

Obsessive-compulsive disorder

EX/RP, likewise a primarily exposure-based therapy, integrates cognitive handling following or amid consequences to permit OCD patients to pick up experiences with respect to their dreaded consequences. However, EX/RP does not mandate the use of an explicit specific techniques. Cognitive therapy protocols for OCD regularly include identifying and altering twisted cognitive beliefs about the significance of intrusive thoughts (eg, intrusive thoughts mean the patient is a terrible individual). For instance, a cognitive therapy protocol tested by McLean and colleagues starts with psychoeducation about OCD manifestations and an introduction to the treatment rationale. Patients are then occupied with a discussion about the relationship between triggers that lead to intrusive thoughts and the patient's faulty appraisals of these thoughts which prompts anxiety and desires to perform compulsions. Patients are then instructed to recognize the distinctive sorts of twisted appraisals including over significance of thoughts, overestimation of danger, inflation of duty, overestimation of the outcomes of danger, overestimation of the consequences of responsibility, and requirement for certainty-control-perfectionism.⁴⁸Patients then started challenging these faulty appraisals by conducting behavioral experiments to test the proof for and against their beliefs [20].

As referenced already, a meta-analytic investigation of treatment results in OCD patients did not locate any significant differences between cognitive treatment alone and EX/RP, yet just a generally modest number of studies have examined cognitive therapy alone in OCD [8]. Furthermore, as can be found in the description of the McLean et al treatment procedures depicted beforehand, numerous cognitive treatment protocols for OCD incorporate behavioral experiments. Amid these behavioral experiments, patients go up against their feared stimuli / beliefs, which makes the patient take part in a type of exposure. Therefore, it is hard to decide the overall contributions of the cognitive aspects of these treatments from these behavioral experiments. Regardless of this, research has demonstrated that group EX/RP for OCD patients is related with

preferred results over group therapy treatment with a behavioral experiment component. Due to the generally few studies that explore the usefulness of cognitive therapy alone (without a behavioral component), it is hard to reach conclusions about the overall adequacy of cognitive therapy compared with exposure in the treatment of OCD [20].

Panic disorder

Interoceptive exposure for panic disorder is frequently joined with cognitive skills, for example, learning that physical sensations are not really constantly harmful and learning to reappraise the importance of physical manifestations rather than catastrophizing [8]. A meta-therapy on panic disorder did not discover a distinction in viability whether cognitive therapy techniques were incorporated or not with exposure-based therapy, but rather the creator found enhanced outcomes with the addition of cognitive components in individuals with comorbid depressive symptoms [21]. Furthermore, another study found that applied relaxing, exposure, and cognitive therapy were all about equally effective in treating patients with panic disorder with agoraphobia [22].

Generalized anxiety disorder

GAD treatment additionally includes a significant cognitive aspect, for example, using cognitive methods to lessen excessive worrying. For instance, Craske and Barlow's GAD treatment manual instructs patients to figure out how to change patterns of reasoning that lead to anxiety, challenge thoughts that overestimate risk, and distinguish and change catastrophic thinking. Cognitive treatment has been appeared to be powerful in the treatment of GAD patients. The aftereffects of a meta-analysis recommended that cognitive-behavioral therapy indicated preferable long-term results over applied relaxation in GAD patients [23].

Moreover, in spite of the fact that Dugas and colleagues found that CBT treatment which included both cognitive therapy and exposure was commonly comparable to relaxation in treating GAD, the authors noticed that when compared with a waitlist control group, cognitive therapy in addition to exposure was better than applied relaxation. These outcomes are restricted by the combination of both cognitive and exposure techniques in the CBT group. On the other hand, other research proposes that relaxation is similarly effective as cognitive therapy as far as symptom enhancement in patients with GAD at post-treatment and at follow-up [24].

Social anxiety disorder

Cognitive techniques are routinely utilized in treating social anxiety disorder to enable the patient to recognize and change cognitive components that keep up social tension. For instance, in Hofmann's model of social anxiety, patients discover that social anxiety is maintained to some degree by holding negative perceptions about oneself, overestimating the expense of a social incident, seeing that one has little authority over one's passionate reactions, and trusting that one's social skills are inadequate [25].

As far as viability, a meta-analysis observed individual CBT to be effective in treating social anxiety compared with a waitlist control. moreover, another meta-analysis of treatments for social anxiety issue including exposure, cognitive restructuring, and exposure in addition to cognitive restructuring found no distinctions in results between these treatments proposing approach adequacy for cognitive therapy only interventions [14].

Specific phobia

In spite of the fact that exposure therapy is viewed as the best treatment for specific phobias, exposure can be supplemented with cognitive rebuilding restructuring also. For example, treatment protocols for specific phobia may include helping the patient identify unlikely expectations and replace them with increasingly precise predictions and interpretations.⁵⁶ Research on the viability of cognitive therapy for specific phobia demonstrates mixed outcomes. For instance, one study found that one session of cognitive therapy was similarly effective as one session of exposure therapy for little animal phobia; additionally, cognitive therapy was seen by participants as less intrusive in this study. However, meta-analytic outcomes in regards to the augmentation of exposure therapy with cognitive techniques for patients with specific phobias did not demonstrate an advantage for combined treatment compared to exposure alone, supporting the general recommendation of exposure therapy as the first fine of treatment for specific phobias [15].

CONCLUSION:

In summary, the research on CBT in anxiety disorders supports the efficacy and viability of these techniques, with the majority of the current research look into showing the usefulness of giving exposure therapy in the treatment of anxiety. However, these outcomes may change as extra research is directed on cognitive therapy alone and cognitive treatment

combined with exposure. As far as future directions, it is evident from this review that extra studies are required that can dismantle effective treatments for anxiety disorders to figure out which explicit components are in charge of useful results. In the meantime, the repeated finding of equivalent or close equivalent viability across CBT therapies recommends that the commonalities underlying these treatments might be more important compared to a specific difference between the methods. Studies went for distinguishing these commonalities have been sparse and represent to a vital yet generally immature area of clinical treatment research. In addition to determining what treatments work, it is similarly vital to comprehend which patients are well on the way to profit by a given treatment or from given components. Studies went for recognizing predictors of helpful treatment result are precious in figuring out what factors and patient qualities are destined to prompt improvements. Finally, there is an expanding interest for transdiagnostic CBT methods that transcend specific diagnoses in acknowledgment of the way that anxiety disorders are frequently comorbid with one another and with other disorders like depression and in recognition of the significant overlap in manifestations between anxiety disorders. Research supports the idea that uneasiness disorder patients share basic psychological and biological vulnerabilities, recommending that effective treatments for anxiety are taking advantage of these common mechanisms. Future directions in treatment research would profit by a superior comprehension of the common mechanisms underlying effective CBT treatments.

REFERENCES:

1. **Bandelow B, Michaelis S (2015):** Epidemiology of anxiety disorders in the 21st century. *Dialogues Clin Neurosci.*, 17: 327-335.
2. **Hofmann SG, Asmundson GJ, Beck AT (2013):** The science of cognitive therapy. *Behav Ther.*, 44: 199-212.
3. **Foa EB, Kozak MJ (1986):** Emotional processing of fear: exposure to corrective information. *Psychol Bull.*, 99: 20-35.
4. **Powers MB, Halpern JM, Ferenschak MP, Gillihan SJ, Foa EB (2010):** A meta-analytic review of prolonged exposure for posttraumatic stress disorder. *Clin Psychol Rev.*, 30: 635-641.
5. **Kar N (2011):** Cognitive behavioral therapy for the treatment of post-traumatic stress disorder: a review. *Neuropsychiatr Dis Treat.*, 7: 167-181.
6. **Taylor S, Thordarson DS, Maxfield L, Fedoroff IC, Lovell K, Ogradniczuk J (2003):** Comparative efficacy, speed, and adverse effects of three PTSD treatments: exposure therapy, EMDR, and relaxation training. *J Consult Clin Psychol.*, 71: 330-338.
7. **Marks I, Lovell K, Noshirvani H, Livanou M, Thrasher S (1998):** Treatment of posttraumatic stress disorder by exposure and/or cognitive restructuring: a controlled study. *Arch Gen Psychiatry*, 55: 317-325.
8. **Rosa-Alcazar AI, Sanchez-Meca J, Gomez-Conesa A, Marin-Martinez F (2008):** Psychological treatment of obsessive-compulsive disorder: a meta-analysis. *Clin Psychol Rev.*, 28: 1310-1325.
9. **Olatunji BO, Davis ML, Powers MB, Smits JA (2013):** Cognitive-behavioral therapy for obsessive-compulsive disorder: a meta-analysis of treatment outcome and moderators. *J Psychiatr Res.*, 47: 33-41.
10. **Craske MG, DeCola JP, Sachs AD, Pontillo DC (2003):** Panic control treatment for agoraphobia. *J Anxiety Disord.*, 17: 321-333.
11. **Borkovec TD, Costello E (1993):** Efficacy of applied relaxation and cognitive-behavioral therapy in the treatment of generalized anxiety disorder. *J Consult Clin Psychol.*, 61: 611-619.
12. **Rapee RM, Heimberg RG (1997):** A cognitive-behavioral model of anxiety in social phobia. *Behav Res Ther.*, 35: 741-756.
13. **Clark DM et al. (2006):** Cognitive therapy versus exposure and applied relaxation in social phobia: A randomized controlled trial. *J Consult Clin Psychol.*, 74: 568-578.
14. **Fedoroff IC, Taylor S (2001):** Psychological and pharmacological treatments of social phobia: a meta-analysis. *J Clin Psychopharmacol.*, 21: 311-324.
15. **Ost LG, Alm T, Brandberg M, Breitholtz E (2001):** One vs five sessions of exposure and five sessions of cognitive therapy in the treatment of claustrophobia. *Behav Res Ther.*, 39: 167-183.
16. **DeRubeis RJ, Siegle GJ, Hollon SD (2008):** Cognitive therapy versus medication for depression: treatment outcomes and neural mechanisms. *Nat Rev Neurosci.*, 9: 788-796.
17. **Ehlers A, Clark DM, Hackmann A, McManus F, Fennell M (2005):** Cognitive therapy for post-traumatic stress disorder: development and evaluation. *Behav Res Ther.*, 43: 413-431.
18. **Tarrier N et al. (1999):** A randomized trial of cognitive therapy and imaginal exposure in the treatment of chronic posttraumatic stress disorder. *J Consult Clin Psychol.*, 67: 13-18.
19. **Resick PA, Nishith P, Weaver TL, Astin MC, Feuer CA (2002):** A comparison of cognitive-processing therapy with prolonged exposure and

- a waiting condition for the treatment of chronic posttraumatic stress disorder in female rape victims. *J Consult Clin Psychol.*, 70: 867-879.
20. **McLean PD et al. (2001):** Cognitive versus behavior therapy in the group treatment of obsessive-compulsive disorder. *J Consult Clin Psychol.*, 69: 205-214.
 21. **Mitte K (2005):** A meta-analysis of the efficacy of psycho- and pharmacotherapy in panic disorder with and without agoraphobia. *J Affect Disord.*, 88: 27-45.
 22. **Ost LG, Westling BE, Hellstrom K (1993):** Applied relaxation, exposure in vivo and cognitive methods in the treatment of panic disorder with agoraphobia. *Behav Res Ther.*, 31: 383-394.
 23. **Cuijpers P, Sijbrandij M, Koole S, Huibers M, Berking M, Andersson G (2014):** Psychological treatment of generalized anxiety disorder: a meta-analysis. *Clin Psychol Rev.*, 34: 130-140.
 24. **Dugas MJ et al. (2010):** A randomized clinical trial of cognitive-behavioral therapy and applied relaxation for adults with generalized anxiety disorder. *Behav Ther.*, 41: 46-58.
 25. **Hofmann SG (2007):** Cognitive factors that maintain social anxiety disorder: a comprehensive model and its treatment implications. *Cogn Behav Ther.*, 36: 193-209.