

# Cognitive Behavioral Therapy: state of the art, a review

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Protocols in Cognitive-Behavioral Therapy applied for individual or group for the treatment of anxiety and mood disorders has been found to be effective. Case conceptualization is relevant and essential in Cognitive-Behavioral Therapy because it describes and explains patient presentations in ways that inform interventions. Yet the evidence base challenges the claimed benefits of case conceptualization. A systematic review of the literature has been conducted based on data from ISI Web of Knowledge and PubMed. Articles relating to Cognitive-Behavioral Therapy Protocols in both individual and group therapy procedures were selected. We reviewed 366 articles; we discarded 141, which were not in English, 86, which were reviews and 93 because of inadequate titles. After reading the abstracts a further 18 articles were excluded, leaving 28 to be fully evaluated. Finally, 19 were selected for the final review. These articles that describe Cognitive-Behavioral Therapy treatment for panic disorder, which were effective when patients were also treated by a psychiatrist. Depressive symptoms were only mildly reduced with cognitive therapy in patients seeking the acquisition of coping skills requiring deliberate efforts and reflective thought. Actually, changes in despair thoughts and behaviors require less rumination of negative interpretation of depressive patients. Finally, the Unified Protocol is an efficient procedure for group treatment in cases of generalized anxiety and mood disorders.

**KEYWORDS:** Protocols, Cognitive-Behavioral Therapy, conceptualization.

Maia ACCO, Pereira LMN, Nardi AE, Cardoso A. Cognitive Behavioral Therapy: state of the art, a review. MedicalExpress (Sao Paulo, online). 2015;2(6):M150601

Received for Publication on July 26, 2015; First review on August 24, 2015; Accepted for publication on September 23, 2015

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## INTRODUCTION

In order to treat specific psychiatric disorders or even when there are comorbidities with other disorders, Cognitive-Behavioral Therapy (CBT) has developed protocols that are used as guides for treatment. Upon diagnosis of a psychiatric disorder in a patient, it is common for the therapist to use appropriate techniques for treatment. As a consequence, several protocols have been developed and validated with which the professional may guide patients in terms of adherence to treatment and use of medication. Most psychotherapy sessions are structured step by step, according to the degree of intensity of diagnostic hypotheses.<sup>1,2</sup>

Studies show that CBT protocols can be applied both in groups and in individuals.<sup>3-5</sup> These methods, performed by trained therapists are effective, especially when used for the treatment of anxiety and mood disorders. The individual format is used more frequently than the group format; however both show effectiveness in the treatment of anxiety and mood disorders.<sup>6,7</sup>

A Unified Protocol has been created to encompass various emotional disorders, through a refinement of techniques that promote change and strengthen the skills required to confront stressful situations.<sup>7</sup> The main advantage of the Unified Protocol is to develop a common form of treatment for a variety of specific disorders and their Comorbidities. The previous alternative would have been the use of various specific Protocols for each treatment.<sup>7,8</sup>

CBT has technical and empirical amplitude, which in addition to cognitive restructuring strategies gives

DOI: 10.5935/MedicalExpress.2015.06.01

the patient an instrument for behavioral change. This allows patients to better manage their difficulties, enabling new learning and preventing future relapses into the old problematic behavior.<sup>9,10</sup>

When CBT uses a treatment Protocol, the format is briefer, extending over 12 to 20 sessions.<sup>11</sup> The therapist is active and clearly exposes the goals and the treatment model to the patient. Once the patient accepts the concept, the treatment is planned in a structured manner.<sup>9-11</sup>

The objectives of this study are to assess whether the CBT Protocols for treatment of diagnosis-specific disorders act differently from those used in transdiagnostic disorders and to update knowledge about the use individual CVBT protocols in comparison with the results observed in groups.

**METHOD**

A systematic review of the literature was carried out. The search was performed in the ISI Web of Knowledge and PubMed databases, using the terms “Protocol”, “Cognitive-Behavioral Therapy”, “CBT” and “Unified”. The survey was conducted in February 2015, without temporal restriction for any of the two databases. To meet the inclusion and selection criteria of articles, we conducted an evaluation screening by identifying the main theme and the relevance to the theme.

As this is still a very new theme, the only articles excluded from this study were incomplete studies, review articles and articles published in languages other than English.

**RESULTS**

The survey revealed 485 articles in Pubmed and 379 in ISI Web of Knowledge. Among these, 498 were duplicated, so that the total number of articles was 366; 141 were not in English, 86 were review articles and 93 were excluded because of inadequate titles; the 46 remaining articles were evaluated by reading the abstract to check whether they were related to the theme of the review and actually relevant for the research: 18 articles were excluded at this stage, leaving 28 for further evaluation of their contents.

Out of these 28 articles, 19 were selected for this systematic review. The research prioritized adult patients and the treatment of anxiety disorders and unipolar moods. Individual and group formats with specific and Unified Protocols of CBT were chosen. The selected studies were published between 2001 and 2014. The flowchart representing the search and filtering of the articles for this study is shown in Figure 1.

Of the 19 articles selected for this review, two reported on the most used techniques and the duration

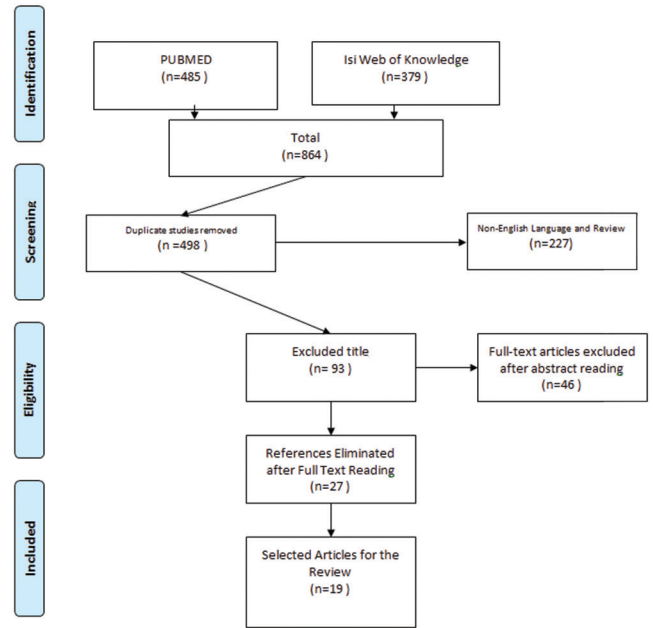


Figure 1. Results of the protocols CBT review

of treatment; four described the treatment of panic disorders with and without agoraphobia; six articles dwelled on the treatment of simple phobias; four portrayed the treatment of social anxiety disorder; one discussed the treatment of posttraumatic stress disorder; one was about obsessive compulsive disorder; two were about cognitive therapy in mood; two were about treatment with the Unified Protocol. They are summarized in Table 1.

**DISCUSSION**

The choice of treatment Protocol will depend exclusively on the diagnostic hypothesis drawn up during clinical conceptualization, which is then structured by means of empirical data such as inventories, scales, tests and interviews of anamnesis. This approach requires theoretical and practical foundations in order to be considered as scientific. The treatment plan is based on the instrumentation of valid techniques and uses patient collaboration as a motivating factor, in order to generate changes in behavior, beliefs and habits that can be self-reinforced.<sup>1-4</sup>

All the articles in this review follow the model of CBT for the treatment of psychiatric disorders, where the most used techniques for specific Protocols are: psychoeducation, cognitive restructuring, and reattribution, management of new skills, problem solving and role-play. When phobic-anxiety disorders are the focus of treatment, in addition to these techniques, systematic desensitization, relaxation and social training skills are also described.<sup>12-20</sup> Most

**Table 1** - Studies about treatment in Behavior Cognitive Therapy's protocols (CBT)

References	Sample size	Type of intervention	Psychiatric Disorders	CBT	Conclusions
Ost et al, 2001 <sup>12</sup>	46	Individual	Claustrophobia	Specific	CBT interventions are effective in treating claustrophobia. Also the exposure strategy is the most used in the treatment.
Paquette et al, 2003 <sup>13</sup>	12	Individual	Phobics Simple Disorders	Specific	Changes at the mind level and CBT interventions can functionally "rewire" the brain.
Koch et al, 2004 <sup>14</sup>	40	Group	Small animals phobia	Specific	Participants that did exposure strategy in the behavioral treatment condition reported that it was significant.
Straube et al, 2006 <sup>15</sup>	28	Group	Spiders phobia	Specific	Successful cognitive-behavioral therapy led to reduced thalamic activation; all the subjects who had spiders phobia were healthy post-treatment
Garcia-Palacios et al, 2007 <sup>16</sup>	150	Individual	Specific phobias	Specific	Virtual reality and in vivo exposure in 150 participants; good results in most of subjects.
Goossens et al, 2007 <sup>17</sup>	20	Individual	Spiders phobia	Specific	Demonstrates the effect of exposure on the amygdala in specific phobia. Findings suggest that exposure therapy can affect on subcortical structures
van Apeldoorn et al, 2008 <sup>18</sup>	150	Individual	Panic disorder with or without agoraphobia	Specific	Mono-treatment (CBT and SSRI) and combined treatment (CBT + SSRI) proved effective for PD. At post-test, CBT + SSRI was superior to CBT; differences between CBT + SSRI vs. SSRI, and SSRI vs. CBT were small
Lilliecreutz et al, 2010 <sup>19</sup>	30	Group	Injection phobia	Specific	Cognitive-behavior group therapy for pregnant women with blood- and injection phobia is effective and stable up to at least 3 months postpartum
Tworus et al, 2010 <sup>20</sup>	1	Individual	Stress post traumatic	Specific	Detailed description of therapy controlled exposition to combat stressors in virtual reality (VR), supplemented with behavioral training consisting of desensitization of an aversive reaction to contact with a weapon at a shooting range is presented.
Titov et al, 2011 <sup>21</sup>	77	Individual	Anxiety and mood disorder	Unified	Results provide preliminary support for the efficacy of transdiagnostic CBT in the treatment of anxiety and depressive disorders
Farchione et al, 2012 <sup>22</sup>	37	Individual	Generalized anxiety and mood disorder	Unified	Study provides additional evidence for efficacy of the UP in the treatment of anxiety and comorbid depressive disorders and additional support for a transdiagnostic approach to the treatment of emotional disorders.
Maia et al, 2013 <sup>23</sup>	16	Group	Anxiety Disorders and depression	Unified	An effort to establish one unified treatment protocol for a whole family of emotional disorders (primarily mood and anxiety disorders) showed benefits in the field of clinical psychology and for the treatment of patients
Doehrmann et al, 2013 <sup>24</sup>	39	Individual	Social phobia	Specific	The success of cognitive behavioral interventions and more generally suggest that such biomarkers may offer evidence-based, personalized medicine approaches for optimally selecting among treatment options for a patient.
Mantione et al, 2014 <sup>25</sup>	16	Individual	Obsessive Compulsive Disorder	Specific	CBT may be optimal for improving obsessive-compulsive symptoms in treatment-refractory Obsessive Compulsive Disorder.
Morgan et al, 2014 <sup>26</sup>	59	Group	Social phobia	Specific	Results suggest that therapist ratings have good predictive utility of client-reported change in symptoms
Hendriks et al, 2014 <sup>27</sup>	172	Individual	Panic Disorder and agoraphobia	Specific	CBT appears feasible for 60+ patients with panic disorder and agoraphobia, yielding outcomes similar, sometimes superior to those obtained in younger patients
White et al, 2014 <sup>28</sup>	168	Group	Panic disorder with and without agoraphobia	Specific	CBT aimed at reinforcing acute treatment gains to prevent relapse and offset disorder recurrence may improve long-term outcome for panic disorder with and without agoraphobia
Prats et al, 2014 <sup>29</sup>	56	Group	Panic disorder	Specific	The results show that group CBT in a specialized unit is effective for PD patients.
Adler et al, 2015 <sup>30</sup>	44	Individual	Depression	Specific	Degree of depressive symptoms only reduced with cognitive therapy in patients' acquisition of coping skills requiring deliberate efforts and reflective thought.

evidence of these studies focused on functional changes in the amygdala and anterior corticolimbic brain circuits that control cognitive, motivational, and emotional aspects of physiology and behavior.<sup>15-20</sup>

In the Unified Protocol, all the aforementioned techniques are performed, although the main objective of this process is for patients to learn how to regulate their emotions.<sup>21-23</sup> To do so, patients were induced to fully experience their emotions; to focus on the present moment, being mindful of the situation at hand; to try to deal with emotions as they arise, without avoiding or escaping from them, nor fighting against or freezing when faced with them; to be aware that emotions can be good or bad and to manage the automatic thoughts that may appear together with negative emotions.<sup>21-23</sup>

In general, the Protocols last on average from 5 to 20 sessions<sup>15,18,24-27</sup>. Hendriks et al suggest that CBT is effective in adults for the treatment of panic disorder with agoraphobia; however, it must be associated with medication.<sup>19</sup> Studies show that treatment with CBT in panic disorder without agoraphobia must also be accompanied by medication.<sup>18,26-29</sup>

After treatment with CBT the single greatest risk for relapse was found to occur between 30–40 weeks. A reasonable clinical strategy would be to continue maintenance treatment until agoraphobia as well as panic disorder symptoms are no more than minimal in any given patient. Thus, the best prognosis with the specific Protocol of CBT is related to durability of panic disorder.<sup>18</sup> Findings along these lines would move us towards the desired goal of more personalized care for anxiety disorders. Patients benefit equally from both individual and group treatment.<sup>18,27-29</sup>

For simple phobias, such as toward animals, blood, driving, or to claustrophobia or flying, among others, the specific Protocol in both group and individual treatment have been shown to yield effective results. All studies show that CBT strongly reduced phobic symptoms. Actually, after CBT protocols, significant reduction of hyperactivity in the insula and anterior cingulate cortex have been reported.<sup>14-20</sup> These studies show that patients subjected to the protocol are positively responsive in 74% to 100% of cases. One study showed a CBT protocol to be efficient even with virtual treatment through the internet.<sup>20</sup>

The treatment of social anxiety disorder with a specific protocol works better with group, rather than individual therapy. Results of such treatments account for about 40% of the variance in treatment response.<sup>24</sup> For the treatment of this disorder, the CBT Protocol has an inbuilt method for the initial assessment of hierarchies of avoidance and fear. This occurs in social confrontations before and after treatment. The effect is progressive regarding generalization with 80% of patients reporting decreased anxiety.<sup>24,26</sup>

Regarding the use of CBT for depression, Adler et al reported the results of 16 weeks of treatment in patients' acquisition of coping skills requiring deliberate efforts and reflective thought.<sup>30</sup> They claim that there were significant, large decreases in depressive symptoms from inclusion to post treatment as measured by the Hamilton Rating Scale for depression ( $p < 0.0001$ ) and Beck Depression Inventory II ( $p < 0.0001$ ). But this was not related to reduced symptoms of implicitly-assessed maladaptive beliefs. Researchers suspect that beliefs about one's value involve longer-standing patterns of thinking that are likely to be more difficult to change.<sup>21-23,30</sup>

Farchione, et al. note that there are still very few studies about the Unified Protocol; however, its effect appears to be greater for the treatment of generalized anxiety disorders with comorbidity to depression, in which the improvement shown in research was from 9% to 26%.<sup>22</sup> Another study by Titov et al. noticed that 63 patients exhibit a significant ( $p < 0.001$ ) decline in the same disorders.<sup>21</sup>

Two reports dwell on CBT Protocols specific for posttraumatic stress<sup>20</sup> or obsessive-compulsive disorders.<sup>25</sup> The findings only indicate that, as the main form of treatment, the techniques of exposure, systematic desensitization and response prevention are effective; in both disorders CBT was associated with pharmacological treatment.<sup>31-34</sup> Approximately 50% of individuals diagnosed with these disorders are considered to be refractory. However, CBT is still considered the best intervention for responsive patients.<sup>33,34</sup>

## ■ CONCLUSIONS

This review brought up interesting data about specific and Unified CBT Protocols. Following clinical diagnosis, it is necessary to select a format, individual or group and choose a Protocol. For social phobias, group therapy is the ideal format. For simple phobias, panic disorder (with/without agoraphobia), group and individual therapy protocols are effective. However, CBT for the treatment of panic attacks must be associated with medication.

The CBT protocol for mood disorder reportedly produces significant reductions in depressive symptoms, but it has not been described as capable of reducing symptoms of implicitly-assessed maladaptive beliefs.

Comparing the Unified Protocol with specific protocols for treatment of anxiety and depressive disorders, it should be realized that the results for generalized anxiety and mood disorders are significantly positive. We had no way of comparing the differences in intervention, using the Unified Protocol with individuals or in groups. This may be due to the fact that this is still a new area, with few published research reports.

**CONFLICT OF INTEREST:** Authors declare no conflict of interest regarding this article



## ■ AUTHOR CONTRIBUTIONS

Maia ACCO: planned the project, participated in the bibliographical search, performed the selection of articles, wrote the text, critically revised the manuscript; Pereira LMN: planned the project and critically revised the manuscript; Nardi AE: planned the project and critically revised the manuscript; Cardoso A: planned the project and critically revised the manuscript. All authors approved the final version of the Manuscript.

## TERAPIA COGNITIVA COMPORTAMENTAL: ESTADO DA ARTE

Protocolos de Terapia Cognitivo-Comportamental quando aplicados em grupo ou individualmente para tratamento de transtornos de ansiedade e de humor têm eficácia. A conceituação de caso é relevante e essencial na Terapia Cognitivo-Comportamental. Ela tem como função a descrição e explicação da história de vida de cada paciente, favorecendo assim como um guia informativo quanto às escolhas do terapeuta sobre as respectivas intervenções clínicas. Desta forma, o terapeuta ao conceituar o caso tem facilidade em alcançar as metas propostas na terapia com base em evidências. Uma revisão sistemática da literatura foi realizada com base em dados do ISI Web of Knowledge e PubMed. Foram selecionados artigos relativos à Terapia Cognitivo-Comportamental em protocolos terapêuticos individuais e de grupo. Encontramos 366 artigos; descartamos 141 artigos que não estavam em Inglês, 86 que eram revisões e 93 por apresentarem títulos inadequados. Após consulta aos resumos outros 18 artigos foram excluídos, deixando 28 para avaliação do texto integral. Finalmente, 19 foram selecionados para a inclusão. Todos estes artigos relatam tratamento por meio da Terapia Cognitivo-Comportamental. O protocolo para o transtorno do pânico mostra eficácia quando associado ao uso de medicamentos psiquiátricos. Os sintomas depressivos são levemente reduzidos pela Terapia Cognitiva por meio de aquisição das novas habilidades de enfrentamento que exigem esforços na atitude e na reflexão de pensamentos dos pacientes. Na verdade, os pacientes depressivos ruminam menos seus pensamentos quando os interpretam de forma negativa do que nos momentos em que estão completamente sem esperança. Finalmente, o Protocolo Unificado é um procedimento eficiente para o tratamento em grupo ou individual nos transtornos de ansiedade generalizada e de humor.

**PALAVRAS-CHAVE:** protocolos, Terapia Cognitivo-Comportamental, conceituação

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