

Changing negative core beliefs with trial-based thought record

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Abstract

Background: Trial-based thought record (TBTR) is a technique used in trial-based cognitive therapy (TBCT), and simulates a court trial. It was designed to restructure unhelpful core beliefs (CBs) during psychotherapy. **Objective:** To confirm previous findings on the efficacy of TBTR in decreasing patients' adherence to self-critical and unhelpful CBs and corresponding emotions, as well as assessing the differential efficacy of the empty-chair approach relative to the static format of TBTR. **Methods:** Thirty-nine outpatients were submitted to a 50-minute, one-session, application of the TBTR technique in the empty-chair (n = 18) or conventional (n = 21) formats. Patients' adherence to unhelpful CBs and the intensity of corresponding emotions were assessed after each step of TBTR, and the results obtained in each format were compared. **Results:** Significant reductions in percent values both in the credit given to CBs and in the intensity of corresponding emotions were observed at the end of the session ($p < .001$), relative to baseline values. ANCOVA also showed a significant difference in favor of the empty-chair format for both belief credit and emotion intensity ($p = .04$). **Discussion:** TBTR may help patients reduce adherence to unhelpful CBs and corresponding emotions and the empty-chair format seems to be more efficacious than the conventional format.

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Introduction

Trial-based cognitive therapy (TBCT) is a three-level, three-phase, transdiagnostic, case formulation approach, based on Aaron Beck's Cognitive Therapy, and inspired by the work of Franz Kafka. Joseph K., the main character in Kafka's novel, "The Trial"¹, was unaware of the crime for which he was arrested and condemned without a chance to defend himself. According to de Oliveira's interpretation, a similar trial can be observed in patients seeking psychotherapy, who are constantly accusing and sentencing themselves through their negative core beliefs (CBs), but are unaware of such self-accusations and unable to organize their own self defense².

Modifying dysfunctional CBs, understood as persistent attributions that are global, negative and personal regarding life events that are potential risk factors for the recurrence of most psychiatric disorders, often plays a significant role in cognitive behavioral therapy (CBT) protocols³. These beliefs are usually developed early in life and set the scene for later beliefs, assumptions and automatic thoughts. Once patients rarely question the validity of CBs, the process of accessing and modifying them, leading to a more constructive perception of current and future events, along with more enduring treatment outcomes, has become a frequent challenge and long-term goal for CBT therapists⁴.

Over the last decade, TBCT has helped several patients around the world become aware of their CBs (self-accusations) and develop more realistic and functional views of themselves⁵ as a result of its unique approach to conceptualization and techniques that make it a distinct intervention in modifying patients' CBs⁶. One of its main techniques is the trial-based thought record (TBTR), an intervention aimed at modifying dysfunctional CBs by simulating a legal trial. TBTR incorporates elements from various techniques already known in standard CBT and other psychotherapeutic approaches⁷. The patient has the opportunity to role-play him/herself not only as the defendant, but also as the prosecutor and the defense attorney, as well as a member of the jury, as opposed to what usually happens when dysfunctional CBs are activated⁵. TBTR may be conducted using the empty chair format, an experiential approach derived from Gestalt Therapy, in which the patient moves to different chairs

to role-play different characters, or in the static format, in which the patient remains in the same chair during the session.

The first study on the efficacy of the TBTR in changing dysfunctional CBs and their corresponding emotions was conducted⁷, and significant results ($p < 0.001$) were observed in the adherence to CBs and associated emotions of 30 patients, reinforcing the hypothesis that this technique could, at least temporarily, contribute to the weakening of unhealthy CBs and their related emotions. Subsequently, the intensity of patients' dysfunctional CBs and corresponding emotions after the first use of the TBTR was assessed in a larger sample (n = 166)⁸, confirming the previous findings.

In a randomized trial in which the TBTR was compared with traditional CBT strategies, 36 patients presenting a diagnosis of social anxiety disorder (SAD) were evaluated⁹. TBTR was at least as effective as conventional CBT in the treatment of SAD, and particularly effective in decreasing the fear of negative evaluation scores, supporting the relevance of further research with larger samples, and different disorders and populations. The same intervention also provided data demonstrating that TBTR was at least as effective as conventional CBT in improving several domains of quality of life in DAD. In addition, a significant treatment effect on the role-emotional domain at 12-month follow-up denoted a sustained effect of TBTR relative to conventional CBT¹⁰.

Given this context, the present study, besides aiming at confirming previous findings on the efficacy of TBTR in decreasing patients' adherence to their self-critical negative CBs and corresponding emotions, most importantly aimed at assessing the differential efficacy of the empty chair format of the TBTR, relative to the static format.

Methods

In this multi-center, parallel-group study, 39 outpatients presenting any psychiatric diagnoses were submitted to a 50-minute, one-session, application of the TBTR technique in the empty chair or static format by previously trained therapists, in the course of their CBT treatment.

A free web-based service that offers random assignment was used for randomization. A list of even/odd numbers (simple randomiza-

tion) was used to separate the group treatments. As soon as a therapist from seven different capitals in Brazil decided to use the TBTR with a patient, he/she sent an email to the last author's secretary to inform the patient's initials and request the treatment modality (static versus empty chair) that should be used.

Patients' adherence to negative CBs and corresponding emotions were assessed after each step of the TBTR (investigation, prosecutor's plea, defense attorney's plea, prosecutor's second plea, defense attorney's second plea, jury's verdict and preparation for the appeal), and the results obtained in each format were compared. Statistical analyses involved a mixed (repeated measures) analysis of variance (ANOVA) to evaluate the efficacy of interventions. A one-way analysis of covariance (ANCOVA) was also conducted, using the baseline values from the investigation step of the TBTR as covariates. This research was approved by the Ethics Committee of Federal University of Bahia (Maternidade Climério de Oliveira), and all participants received detailed information about the study and signed an informed consent form.

Results

Results of the mixed ANOVA indicated a significant main effect, meaning that significant reductions in percent values both in the credit given to the CBs and in the intensity of the emotions were observed at the end of the session ($p < .001$), relative to baseline (investigation phase) values (Table 1). There was no significant interaction between time and treatment. However, ANCOVA showed a significant difference in favor of the empty chair approach not only in the percentage adherence to the negative CBs but also in the intensity of the corresponding emotions ($p = .04$).

Discussion

An intentional focus on changing CBs during the course of therapy has been widely emphasized in traditional CBT protocols⁴. However, as far as we know, little is understood about how cognitive change leads

to symptom reduction¹¹. Also, according to McManus *et al.*¹² little is known about the efficacy of individual components of CBT, reinforcing the relevance of further understanding critical elements responsible for the efficacy, or comparing the efficacy of the different components in CBT protocols. Thus, in the present study, the authors aimed at supporting previous data on the efficacy of TBTR in reducing the strength of dysfunctional CBs as well as their associated emotions, not only in the static but also in the empty chair format of the intervention.

Similarly to what had previously been observed, significant reductions in the intensity of both negative unhelpful CBs and corresponding emotions were found at the end of the session, relative to initial values, as well as a significant difference in favor of the empty chair format for both belief credit and emotion intensity. The empty chair format has the advantage of engaging the patient in experiential learning, which is expected to be more effective in terms of belief and symptom change than other interventions that don't reach the gut level^{12,13}, where enduring change is more likely to occur.

However, once TBTR incorporates several well-known techniques of conventional CBT and other psychotherapy approaches in its user-friendly structure, it can be quite challenging for the inexperienced clinician without proper training and supervision. Besides, addressing patients' unhelpful negative CBs often requires extra caution from therapists, who are expected to be truly empathic and respectful regarding their patients' experiences¹⁴.

Taking the above considerations into account, the TBTR may help patients reduce their attachment to negative CBs and corresponding emotions, confirming findings from previous studies, and the empty chair format seems to be more efficacious than the conventional format in reducing the intensity of associated emotions.

This study is limited by the short duration of observation (just one intervention). However, this was the only way to proceed, because TBTR is not necessarily repeated in subsequent sessions, precluding any additional comparison. Furthermore, the sample is heterogeneous, comprising patients with many different diagnoses. These are important aspects to be investigated in future studies with more homogeneous samples in order to determine the precise role

Table 1. Mean (SD) percentages of credit in the CBs and intensity of corresponding emotions in the total sample and in groups treated in the empty chair vs. static formats of TBTR

TBTR steps	Total sample n = 39	Empty chair n = 18	Static n = 21
1. Investigation			
Belief	85.13 (19.21)	82.50 (22.90)	87.38 (16.62)
Emotion	82.18 (19.99)	79.72 (19.59)	84.29 (20.57)
2. Prosecutor I			
Belief	91.15 (14.49)	92.78 (10.74)	89.76 (17.21)
Emotion	89.87 (14.44)	92.78 (11.27)	87.38 (16.55)
3. Defense attorney I			
Belief	56.54 (20.30)	57.78 (17.00)	55.48 (23.12)
Emotion	54.36 (22.98)	54.72 (21.04)	54.05 (25.03)
4. Prosecutor II			
Belief	74.10 (24.71)	73.33 (25.44)	74.76 (24.67)
Emotion	70.51 (25.59)	72.78 (26.08)	68.57 (25.65)
5. Defense attorney II			
Belief	39.62 (18.22)	38.33 (18.55)	40.71 (18.32)
Emotion	35.80 (21.83)	32.50 (19.42)	38.62 (23.80)
6. Jury's verdict			
Belief	25.90 (19.26)	20.00 (15.62)	30.95 (20.95)
Emotion	22.41 (19.72)	16.11 (13.78)	27.81 (22.60)
7. Appeal preparation			
Belief	18.08 (15.42)	12.22 (10.46)	23.10 (17.35)
Emotion	16.20 (14.70)	10.83 (10.88)	20.81 (16.18)
Improvement			
Belief	76.24 (21.81)	79.68 (24.19)	73.30 (19.66)
Emotion	79.10 (18.86)	83.45 (19.55)	75.38 (17.87)

of TBTR in helping patients to modify their negative CBs and to reduce self-criticism.

Conflicts of interest

The authors do not report any conflicts of interest. Trial-based cognitive therapy was developed by one of the authors (IRO). This research was not funded.

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