Comparison of the Effect of Transdiagnostic Therapy and Cognitive-Behavior Therapy on Patients with Emotional Disorders: A Randomized Clinical Trial

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Article information	Abstract
  *Corresponding author at: Department of Clinical Psychology, Shahid Beheshti University of Medical Sciences, Tehran, Iran. E-mail: m.lotfi@sbmu.ac.ir	***Background***: Transdiagnostic cognitive-behavioral treatments for emotional disorders are a new approach that empirically supported. Despite this most of the researches in this field have no control group and so there is a little information about comparing of the effect of transdiagnostic approach to others. The current study was compared transdiagnostic with cognitive-behavior therapy on patients with depression and anxiety disorders. ***Materials and Methods***: This study was a pretest-post test randomized control trial. A diagnostically heterogeneous clinical sample of 23 patients with a principal depression and anxiety disorders that randomly assigned in two groups and participated in eight sessions. Participants were recruited from clinical psychology and psychiatry clinics of Taleghani hospital, Tehran, Iran. Beck Depression Inventory (BDI-II), Beck Anxiety Inventory (BAI), and Quality of life Scale (IRQL) were completed pre and post intervention by participants. The results were analyzed by dependent sample *t*-test and analyses of covariance (ANCOVA). ***Results***: Data analyses showed that transdiagnostic therapy was effective for decreasing anxiety and depression symptoms, and have more effect for anxiety in comparing to cognitive-behavior therapy. ***Conclusion***: Transdiagnostic therapy was confirmed in decreasing depressive and anxiety symptoms and improving quality of life in patients with depression and anxiety disorders and transdiagnostic therapy was more effective than cognitive-behavior therapy for decrease anxiety symptoms.

Introduction

Depression and anxiety disorders are highly prevalent and the most devastating and disabling of all psychiatric disorders [1]. It is estimated that lifetime prevalence for anxiety disorders is 29% of the population and mood disorders is 21% [2]. These conditions are often experienced concurrently with each other and with other emotional disorders [3, 4].

Clearly, effective treatments for mood and anxiety disorders are needed and thus a number of empirically supported cognitive-behavioral protocols have been developed over the past 2 decades [5-7], that increasingly widely accepted [8]. Nevertheless, because the protocols are somewhat complex and clinicians must use separate handbooks and protocols for each disorder, it can take a significant amount of training to become adequately familiar with each of the distinct protocols [9].

Considerable overlap among the various anxiety and mood disorders, at the diagnostic level this is most evident in the high rates of current and lifetime comorbidity [10, 11]. Therefore, more evidence strongly argues for a more parsimonious approach to treating the emotional disorders. Unified protocol is effective approach for treating multiple problems within a single protocol [4, 12].

Transdiagnostic is emotion-focused cognitive-behavioral therapy designed for the full range of anxiety and other emotional disorders. The unified protocol comprises 4 basic components: 1) psychoeducation about emotions, including a review of the functional nature of emotions and how emotions become disordered; 2) alteration of antecedent cognitive misappraisals; 3) prevention of emotional avoidance and 4) modification of emotion-driven behaviors [13].

Transdiagnostic treatment takes place in the context of provoking emotional expression through situational, internal, and somatic cues [14]. Based on these advances developed a treatment applicable to all anxiety and unipolar mood disorders.

The unified protocol is based on traditional cognitive-behavioral principles. With particular emphasis on emotion regulation and the goal of this treatment is to help patients learn to better understanding their emotional experience and in the other words learn to better tolerate "uncomfortable" emotions [15].

The transdiagnostic therapies have been shown their effectiveness in the treatment of wide variety of emotional disorders in the other countries [4] but in our culture did not there were not research in this field and, in the

existent background of transdiagnostic cognitive-behavior therapy there have not comparison the effectiveness of CBT and unified protocol treatment.

The current study was aimed to investigate the effectiveness of unified protocol on patients with depression and anxiety disorders and so was compared to cognitive-behavior therapy.

Materials and Methods

A randomized clinical trial study, comparing the transdiagnostic to cognitive-behavioral treatment condition was conducted. Patients were random selelected and random assigned to transdiagnostic or cognitive-behavioral conditions. Participants assessed before and at the end of treatment.

Participants: The statistical population of the study was the patients with depression and anxiety disorders. Participants were recruited from clinical psychology and psychiatry clinics of Taleghani hospital, Tehran, Iran.

Patients had to receive a principal diagnosis of mood or anxiety disorders. The following criteria were established for inclusion in the study: (a) age 18 or older (b) be fluent in Persian (c) be able to attend all treatment sessions and assessments and provide informed consent (d) do not have evidence of dementia or other neuro-cognitive conditions that impair ability (e) do not have clinical conditions that require immediate treatment, suicidal attempts and substance abuse disorders. Sixty of 88 patients were excluded from the trial, finally 28 patients declined to participate the trial.

A total of 28 patients consented to treatment and were randomized to either the transdiagnostic or CBT. The transdiagnostic group consisted of 4 males and 7 females (mean age= 33.9±7.5 years) and the CBT group included 4 males and 8 females (mean age= 34. 5±6.6 years). The 2 groups did not differ in mean age. Seven individuals were taking psychotropic medications at the time of enrollment and randomization and no medication changes were reported during the trial. No one individual had received prior psychological treatment for anxiety and depression. Principal diagnoses represented included generalized anxiety disorder (N=9), social anxiety disorder (N=4), panic disorder with agoraphobia (N=1), anxiety disorder not otherwise specified (NOS) (N=4) and major depressive disorder (N=5). One participant had co-principal diagnose. Two of the 14 patients assigned to transdiagnostic treatment group failed to complete it and three patients were randomized to CBT group failed to complete the treatment sessions.

Treatment in the transdiagnostic condition consisted of 8 weekly 45 min sessions following unified protocol. The unified protocol consists of 5 core treatment modules: (a) increasing present-focused emotion awareness (b) increasing cognitive flexibility (c) identifying and preventing emotion sensations and (e) emotion-focused exposure [13, 14]. The first session was focused on motivation enhancement for treatment engagement and change. The second session emotional understanding was focused, and the third session cognitive reappraisals were

trained. The focus of fourth and fifth sessions was emotional avoidance and emotion-focused behaviors, and the content of sixth session was awareness and tolerance of physical sensations. The final 2 sessions was focused on introceptive and situational emotion exposures.

In the CBT condition, we conducted 8 weekly 45 min session following cognitive-behavioral specific disorder manual.

Beck depression inventory (BDI-II): The Beck Depression Inventory-Second Edition [16] is a 21 items questionnaire, a four-point scale ranging from 0 to 3, that is routinely used to assess affective, cognitive, motivational and behavioral symptoms of depression. It has high internal consistency (0.92) and reliability (0.91) [17].

Beck Anxiety Inventory (BAI): The BAI is a 21 items scale questionnaire that is routinely used to assess anxiety symptoms [18]. The respondent was asked to rate how much he or she had been bothered by each symptom over the past week on a four-point scale ranging from 0 to 3. The scale obtained high internal consistency and item-total correlations ranging from 0.30 to 0.71 (median=0.60).

Quality of life scale (IRQOL): The IRQOL is Iranian version of world health organization quality of life scale (WHQOL-BRIEF), this scale has 26 item and assess psychological health, body health and social relations. The respondent was asked to rate on a five-point scale ranging from 1 to 5. This scale obtained high internal consistency (0.84) and high reliability (0.67-0.87) [19].

Ethical considerations: Ethical issues (Including plagiarism, Informed Consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc) have been completely observed by the authors.

Statistical approach: The raw data were analyzed by SPSS-16, dependent sample *t*-test for evaluate the effectiveness of transdiagnostic treatment and CBT and analyses of covariance (ANCOVA) was used for comparison between two groups. Results: this study was aimed to investigate the effectiveness of trans-diagnostic therapy on patients with depression and anxiety disorder.

Results

This study was aimed to investigate the effectiveness of transdiagnostic therapy on patients with depression and anxiety disorders and compared it to cognitive-behavior therapy.

Independent *t*-test was used to determine the age difference between two groups. The results showed that the two groups did not differ in mean age. Also there were no significant differences between two groups in gender ratio.

The two groups were compared to determine the differences between two groups in anxiety, depression and quality of life in pretreatment. The results showed that there were no differences between groups in pretreatment in anxiety, depression and quality of life.

Effectiveness at post treatment on depression, anxiety and quality of life: In order to assess the impact of transdiagnostic treatment, a series of dependent t-test was conducted. Results from these tests are presented in table 1 that shows transdiagnostic therapy was significant. Of note, transdiagnostic treatment was significant in reducing anxiety (p=0.001) and depression symptoms (p=0.001) and promoting quality of life (p=0.001).

In order to evaluate the effectiveness of CBT on variables, we use dependent t-test. The results are presented in table 2 shows that the CBT also demonstrated significant reduction on anxiety (p=0.001) and depression symptoms (p=0.002) and promotion of quality of life (p=0.001).

Clinical significant at post-treatment: In order to evaluate the clinical significant of the effects at post-treatment between two groups, analysis of covariance (ANCOVA) was used. The results of ANCOVA are reported in table 3 and showed that trans-diagnostic treatment was effective in reducing anxiety (p=0.001) Compared to CBT, but there was no significant difference between two groups in reducing depression and promotion of quality of life.

Table 1. Analyses of pre and post-test of transdiagnostic treatment

Masseurs	Mean±SD Pre-test	Mean±SD Post-test	Mean±SD Difference	p-Value
BDI-II	13.25±4.67	8.91±2.87	4.33±2.77	0.001
BAI	17.66±2.70	8.83±1.40	8.83±2.40	0.001
IRQOL	49.91±3.20	55.33±3.39	-5.41±2.27	0.001

Table 2. Analyses of pre and post-test of CBT

Masseurs	Mean±SD Pre-test	Mean±SD Post-test	Mean±SD Difference	p-Value
BDI-II	12.72±5.12	8.09±2.21	4.63±3.74	0.002
BAI	18.27 ±4.29	12.36±2.80	5.90±2.58	0.001
IRQOL	52.36 ±4.12	57.09±4.63	-4.72±2.49	0.001

Table 3. Descriptive statistics and ANCOVAs of BDI-II, BAI and IRQOL

Measures	Transdiagnostic Mean±SD	CBT Mean±SD	F	p-Value	$\eta2$
BDI-II	8.91±2.87	8.09±2.21	0.79	0.38	0.03
BAI	8.83±1.40	12.36±2.80	25.08	0.001	0.55
IRQOL	55.33±3.39	57.09±4.63	0.021	0.87	0.001

Note: F= frequency; η2= partial eta squared

Discussion

The current study had two primary goals. The first goal was to further evaluate the effectiveness of unified protocol for anxiety, depression and patient's quality of life in our country, and second, this study sought to compare transdiagnostic therapy with CBT. Treatment with the unified protocol resulted in significant reductions in depression and anxiety and improvement in quality of life. But in compare to CBT, it is superior just in reduction of anxiety, that consistent with the unified protocol principles. The unified protocol consists of five core treatment modules that were designed to enhancing

emotional processing and regulation of emotional experiences [15]. Also it is focused on countering emotional avoidance and emotion-driven behaviors and emotion exposure. Unified protocol provides an overview of the functional, adaptive nature of emotions, be they positive or negative for patients the helps to decrease anxiety symptoms [15].

The findings of current study are consistent with the Farchione et al., Norton, Norton and Erickson et al. [20-23].

Overall, the published studies show that transdiagnostic treatment can improve anxiety disorders significantly [24]. Norton and Philipp reported a meta-analysis on the efficacy of transdiagnostic anxiety disorders with strong effect size (d=1/29) [25]. Norton and Price reported strong effect size (d=1/68) from meta-analytic results suggesting that effect sizes from transdiagnostic treatments were comparable to those reported in meta-analyses of diagnosis-specific CBT for anxiety [7].

Results of this study showed that transdiagnostic treatment and CBT statistically equivalent and significant efficacy. These findings are consistent with Farchione et al., Ellard et al. and Boisseau et al. [20, 26, 27]. The findings of Ellard et al. showed that transdiagnostic treatment was effective in reducing depressive symptoms [26]. Boisseau et al. finding's was the same [27].

The results of the present study provide support for the transdiagnostic treatment for improving quality of life in patients with depression and anxiety disorders. Consistent with the findings of Ellard et al. that showed unified protocol can improve work and social adjustment in patients [26]. Dear et al. findings showed that transdiagnostic treatment decreases disability and improve general health in patients [28]. Transdiagnostic treatment and CBT statistically equivalent in improving quality of life because the two treatments have significant effect on the reduction depression and anxiety.

Generally, the transdiagnostic approach has benefits in the treatment of mental disorders including the dissemination and accessibility, high capacity in applying for most of emotional disorders in many cultures. Because, an important concept for understanding emotional disorders is emotion regulation that is a universal factor, and principle focused of unified protocol is emotional reprocessing and regulation.

Recommending the future studies apply transdiagnostic interventions in a variety of samples such as children, adolescents, elderly and in different areas, hospitals and clinics. Furthermore, a long-term follow up for outcomes of transdiagnostic therapy is suggested. Finally, it seems that transdiagnostic interventions need to more investigations to compare specific intervention and the other disorders with unified protocol.

Overall, Transdiagnostic therapy was confirmed in decreasing depressive and anxiety symptoms and improving quality of life in patients with depression and anxiety disorders because of the common factors that is underlie the emotional disorders. Transdiagnostic therapy was more effective than cognitive-behavior therapy for decrease anxiety symptoms.

Authors' Contributions
All authors had equal role in design, work, statistical analysis and manuscript writing.

Conflict of Interest
The authors declare no conflict of interest.

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