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Control-focused behavior therapy resulted with decrease in the severity of PTSD, depression and pain level: A case study

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Key words
control-focused behavior therapy, post-traumatic stress disorder, pain, depression, treatment

Abstract
Control- Focused Behavior Therapy (CFBT) is a behavioral psychotherapy method that is proven to be an effective treatment of post-traumatic stress disorder with earthquake, torture, and war survivors. This case study aimed to test the effectiveness of CFBT on treating traumatic stress symptoms and chronic pain in a woman who had been exposed to physical partner violence. Ten sessions of CFBT treatment including two control interviews- one six weeks, and one a year later- were applied. Taking the patient's pain complaints into account, the level of pain was also monitored. The treatment resulted in a decrease in the levels of PTSD and depression symptoms, pain severity, and an increase in functioning. This improvement was maintained at a 1-year follow-up. The results of this study suggest that CFBT can be used as an effective treatment method for victims of partner violence, but it is necessary to prove this effect with studies with control groups to be carried out with this sample. Additionally, treating PTSD symptoms among chronic pain patients could help them to overcome severe pain without drug use.

Anahtar kelimeler
kontrol odaklı davranış terapisi, travma sonrası stres bozukluğu, ağrı, depresyon

Öz
Kontrol odaklı davranış terapisi, TSSB şiddetinde, depresyonda ve ağrı düzeyinde azalma ile sonuçlandı: Bir vaka çalışması
Kontrol Odaklı Davranış Terapisi (KODT), deprem, işkence ve savaş mağdurları ile yapılan çalışmalarda travma sonrası stres bozukluğunun (TSSB) tedavisinde etkili bir yöntem olduğu kanıtlanmış davranışsal bir psikoterapi yöntemidir. Bu vaka çalışması, fiziksel partner şiddetine maruz kalan bir kadında KODT'nin travmatik stres semptomları ve kronik ağrı tedavisinde etkinliğini test etmeyi amaçlamaktadır. Danışana biri 6 hafta, diğeri bir yıl sonra olmak üzere iki kontrol görüşmesini de içeren 10 seanslık KODT uygulanmıştır. Danışanın kronik ağrı yakınmaları olduğu için ağrı düzeyi de takip edilmiştir. Müdahale, travma sonrası stres bozukluğu ve depresyon belirti düzeyinde ve ağrı şiddetinde azalma ve işlevsellikte artış ile sonuçlanmıştır. İyileşmenin 1 yıllık takipte de devam ettiği görülmüştür. Bu çalışmanın sonuçları, KODT'nin şiddete maruz kalanlar için de etkili bir müdahale yöntemi olarak kullanılabileceğini; bu örneklemle gerçekleştirilecek kontrol gruplu çalışmalar ile bu etkinin kanıtlanmasının gerekli olduğunu göstermiştir. Ayrıca, kronik ağrı hastalarında TSSB belirtilerini tedavi etmek, ilaç kullanmadan şiddetli ağrının üstesinden gelmelerine yardımcı olabilir.

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Among the post-traumatic stress disorder (PTSD) patients who complain about physical symptoms, the most commonly reported physical complaint is pain (McFarlane et al., 1994). Although the relationship between PTSD and pain has been proven by many studies (Asmundson et al., 2002; Cohen et al., 2002; Nicol et al., 2016), it seems that studies addressing the effectiveness of cognitive and behavioral psychotherapy in chronic pain management have not been conducted with people who have been exposed to traumatic stressors such as cancer diagnosis or war (Knoerl et al., 2016). One possible explanation for the relationship between PTSD and pain can be the psychobiological aspect of the stress response. Traumatic events activate the stress response, and the hypothalamic-pituitary-adrenal system (HPA) is responsible for this stress response (Yehuda, 2000). Stress and pain are related to each other, and the HPA stress response predicts chronic pain (McBeth et al., 2007). It could be said that dysregulated HPA stress response and hyperarousal during PTSD may be related to the clients' experience of pain. On the other hand, according to Sharp and Harvey's (2001) Mutual Maintenance Model, attentional biases and anxiety sensitivity can contribute to the coexistence of these two disorders, and the limitations in the use of adaptive coping strategies may also affect these two conditions. Additionally, they proposed that pain itself may be the reminder of the traumatic experience and trigger an arousal response. The cognitive and behavioral approaches propose that anxiety sensitivity, attentional biases, or avoidant coping styles may explain the mutual maintenance of post-traumatic stress disorder (PTSD) and pain (Beck & Clapp, 2011). Especially, anxiety sensitivity, which is the fear of bodily sensations, is considered to be a common vulnerability factor. It is thought that interoceptive exposure can be an effective method to reduce PTSD and pain by reducing anxiety sensitivity (Wald et al., 2010). The case discussed in this article is presented to draw attention to the fact that the treatment of PTSD with Control-Focused Behavior Therapy (CFBT) can also be effective in the pain level of chronic pain patients who have experienced trauma.

The American Psychological Association (2013) recommended Prolonged Exposure and the other three variations of Cognitive Behavior Therapy for treating PTSD strongly. Evidence gathered from studies suggests that when combined with exposure, cognitive interventions do not offer additional benefits (Şalcıoğlu et al., 2007). Control-Focused Behavior Therapy emerged with the search for a short treatment in treating PTSD after major disasters such as earthquakes, and the studies revealed that single or two sessions of CFBT resulted in a significant decrease in PTSD symptoms (Başoğlu et al., 2003a; Başoğlu et al., 2003b; Başoğlu et al., 2005). The number of victims of domestic violence is also quite high and the prevalence of PTSD among women who have experienced domestic violence varies from 31% to 84.4% (Dutton et al., 2006). Considering the difficulties in providing mental health services to these people, it was decided to use CFBT as a short-term and effective treatment method in this case.

Control-Focused Behavior Therapy (CFBT)

Control-Focused Behavior Therapy is a specific behavior therapy protocol based on the learning theory as Prolonged Exposure Therapy (PET; Başoğlu & Şalcıoğlu, 2011). By reviewing animal models of anxiety, Başoğlu and Mineka (1992) proposed that uncontrollability and unpredictability of stressors play an important role in the development of PTSD. Based on this, they thought that a treatment aimed at increasing one's sense of control would be effective. The aim of prolonged exposure which is based on conditioning principles is to reduce the level of anxiety. Unlike PET, CFBT includes only exposure protocol, it is based on the Learned Helplessness Theory and it aims to increase the individual's resistance and sense of control over the feared stressor. Başoğlu & Şalcıoğlu (2011) summarized the differences between Prolonged Exposure (PE; Foa et al., 2007), Exposure Therapy (ET; Marks et al., 1998) and CFBT as follows:

a. PE and ET aim to reduce anxiety while the aim of CFBT is the enhancement of resilience against anxiety.
b. PE and ET use prolonged exposure as a method. CFBT uses exposure to anxiety cues.
c. The treatment rationale of PE and ET is based on the extinction of conditioned anxiety, habituation, and emotional processing of trauma. CFBT's treatment rationale is based on enhanced anxiety tolerance and a sense of control.
d. While PE and ET include therapist involvement in the administration of the treatment techniques; the therapist is involved in the administration of the

treatment techniques of CFBT only when needed.

e. CFBT does not include fear hierarchy construction or diary keeping.

As can be understood from the above, the CFBT protocol is different from other exposure treatments in terms of its purpose, rationale, technique, and procedures. Another difference of CFBT from these therapies is that treatment compliance problems are less, and relapse rates are lower. Marks (2002) reported that the refusal of the treatment or dropout rates are approximately 30% among anxiety patients. Başoğlu & Şalcıoğlu (2011) reported that the non-compliance rate is less than 10% among patients who were treated with CFBT. When the relapse rates after treatment are analyzed, it is seen that the attributions of the patients for treatment success (those who think that the decrease in their anxiety depends on what they do) decrease the probability of relapse (Başoğlu et al., 1994). The basis of the CFBT treatment protocol is to increase one's motivation and encourage them to act. The "fight your fear to take control over your life" directive, which is given to the client, increases the person's perception of control and client attributes the treatment result to his or her own success.

Today, the positive psychological approach to trauma psychology underlines the importance of the increased resilience and resistance of the survivors after the trauma (Berger, 2015). For this reason, CFBT is thought to be more suitable for victims of violence because the general aim of the treatment is to increase the individual's self-efficacy.

The CFBT protocol was tested with earthquake, torture, and war survivors (Başoğlu et al., 2003b; Başoğlu et al., 2005; Başoğlu & Şalcıoğlu, 2011) and high clinically significant improvement rates were observed in all studies. All these studies prove that CFBT is a short and effective treatment method. Table 1 summarizes the steps of the treatment protocol.

METHOD

Case Summary

A 43-year old woman who had been exposed to partner violence for ten years and then got divorced twenty-years ago was admitted to a clinic for help. Her complaints included frequent crying, social isolation, unhappiness, excessive eating, difficulty in falling asleep, intense guilt, intense pain in the head, neck, joints, and bones in arms. She experienced both physical (hit, punched, choked, etc.) and psychological forms of violence (threatened with death, humiliation, etc.). She also had hearing loss due to head trauma in one ear. In the first interview, she reported that she requested admission to the psychiatry clinic after the divorce, twenty-years ago, with the diagnosis of major depression. The patient was decided to be treated as an outpatient because she had a young child. She was previously given pharmacotherapy, but she discontinued treatment with no improvement.

Table 1. Summary of the CFBT Protocol Steps

Step 1	Defining traumatic event reminders and avoidance behaviors
Step 2	Explaining the treatment rationale and how the treatment works
Step 3	Defining treatment tasks and giving self-exposure instructions
Step 4	Following self-exposure tasks, identifying barriers and overcoming them

Clinical Assessment

The Traumatic Stress Symptom Checklist (TSSC; Aker et al., 1999) was used to assess the level of traumatic stress. TSSC was developed to measure symptoms of PTSD as defined in DSM-IV. It was reported that the scale had an 80% accurate classification rate (Başoğlu et al., 2001). The scale showed high internal consistency in different samples (Başoğlu et al., 2001; Başoğlu & Şalcıoğlu, 2011, Şalcıoğlu et al., 2017). It was reported that the cut-off score of 25 yields optimum sensitivity, specificity, and an 84% accurate classification rate (Başoğlu & Şalcıoğlu, 2011).

Depression Rating Scale (DRS; Başoğlu & Şalcıoğlu, 2011) was used to assess the level of depression. The scale consists of 14 items that measure major depressive symptoms and 5 items which measure somatization, hopelessness, crying spells, and irritability. The scale's psychometric properties were examined in earthquake survivors, and the findings supported the validity and reliability of the scale. It was reported that the cut-off score of 28 yields optimum sensitivity, specificity, and an 85% accurate classification rate (Başoğlu & Şalcıoğlu, 2011).

The depression and PTSD symptom levels were measured in the 1st, 5th, and 8th sessions. They were also measured in each follow-up session.

In the Revised Fibromyalgia Impact Survey (Bennett et al., 2009), one item is used to measure the

severity of the pain symptom which is "Please rate the severity of your pain". Based on this, the level of pain was assessed with one self-report question in which the patient was asked to rate the current severity of her pain between 0-10. The pain level was assessed in each session.

In the first session, a Traumatic Stress Symptom Checklist (patient's score = 32) and Depression Rating Scale (patient's score = 34) were applied. The pain score was 5. The diagnosis of possible post-traumatic stress disorder (PTSD) was confirmed with both clinical evaluation and scores obtained from the scales.

Treatment Protocol

The treatment was carried out by a clinical psychologist who had completed her doctoral education. The first step of the treatment consisted of initial clinical assessment (1st and 2nd session). All experienced symptoms such as negative alterations in mood and cognition (intense guilt, depressive mood), re-experiencing (flashbacks, nightmares), hyperarousal (hypervigilance, aggression), and avoidance (e.g. not to pass by places like the police station or the military where men are carrying weapons) were identified. The second step involved explaining the treatment rationale to the patient (2nd session). The rationale focused on gaining control over the feared objects and situations. The "fear" was defined as the enemy and the patient was invited to "defeat" the enemy by confronting it and fighting back. It was explained that avoidance meant surrendering to the enemy and it caused the feelings of fear and helplessness to continue. The treatment's goal was to increase anxiety tolerance and a sense of control over fear and anxiety related to trauma reminders. The final step was about setting treatment targets and giving self-exposure instructions. The treatment targets involved speaking with a policeman with a gun by asking for an address, buying a pair of white socks similar to the ones the ex-partner had and keeping them in the bedroom, keeping her face under running water in the shower, listening to the ex-husband's favorite singers' albums, and other trauma reminders of the kind. After determining what to do and agreeing with the client on the treatment protocol to be applied, instructions were given. The rest of each session involved reviewing progress, discovering and troubleshooting the problems that arise during exercises, and setting new homework. In these sessions, after the client was asked whether she could perform the confrontation exercises determined the previous week, how each experience passed was discussed. In the meantime, if there were some unforeseen avoidance and safety behaviors, new assignments were planned with the client to prevent them. If necessary, the treatment rationale was reminded to the client, and the importance of the exercises was emphasized. Assessments were done in every three sessions after treatment goals were set.

Consent

The patient gave written consent to the inclusion of material on herself, that she acknowledged that she cannot be identified via the paper; and that the researcher has fully anonymized her.

RESULTS

After the trauma reminders were identified, the rationale of the CFBT was explained. The patient was given self-exposure instructions, and homework was arranged at least three times a week to face avoidant situations. After the 5th session, the patient showed significant improvement, with decreasing symptom levels (Figures 1 and 2). When the patient started to face situations that she avoided, it was observed that pain scores first increased (3rd and 4th session) and then decreased.

To recover all identified trauma reminders, eight sessions were conducted. Follow-up interviews were conducted six weeks and one year after the treatment. The results were maintained for one- year of follow-up.

Additionally, the patient stated that she felt more self-confident after the treatment and no longer used pain killers. It was observed that the patient's self-care had significantly increased. Even if her depression level seemed to have increased 7-points after one-year, it was understood that she had broken up with her boyfriend and she was experiencing grief. In conclusion, CFBT, which was proven to be effective for PTSD treatment with disaster, war, and torture survivors, seems to be an effective treatment for women with experience of interpersonal violence.

DISCUSSION

The results of this case study showed that CFBT can be used for women exposed to partner violence. The patient's treatment motivation needs to be considered when examining the results of this study. She had

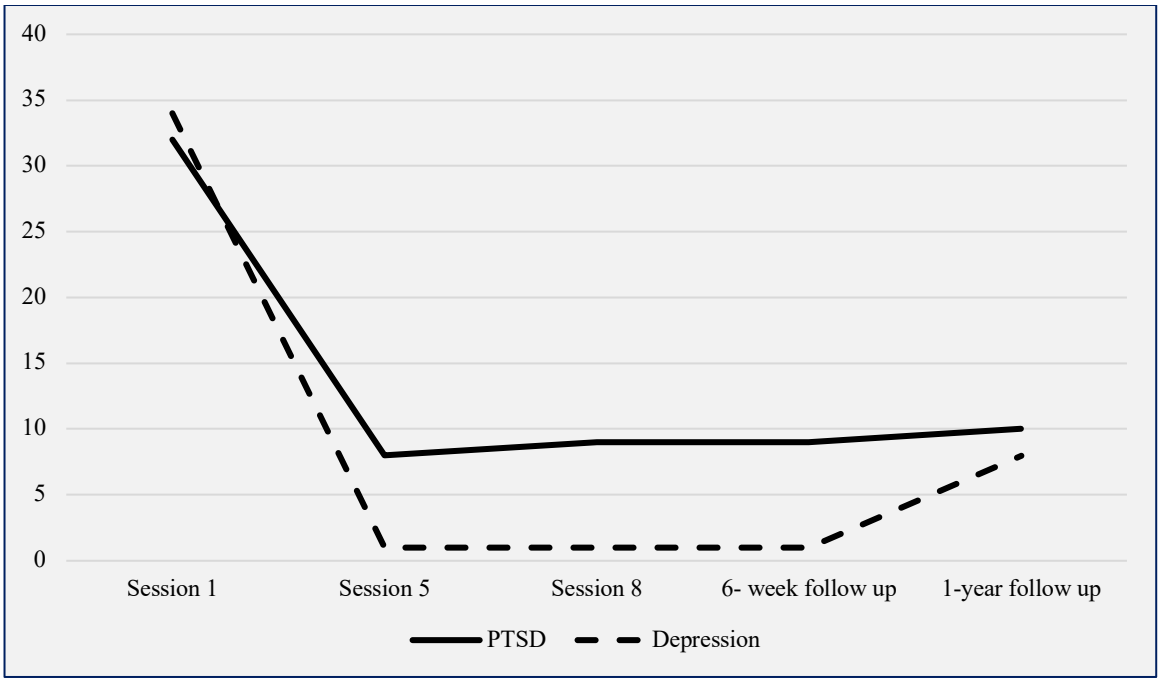

Figure 1. Patients' PTSD and Depression Levels During the Treatment Process and Follow Up

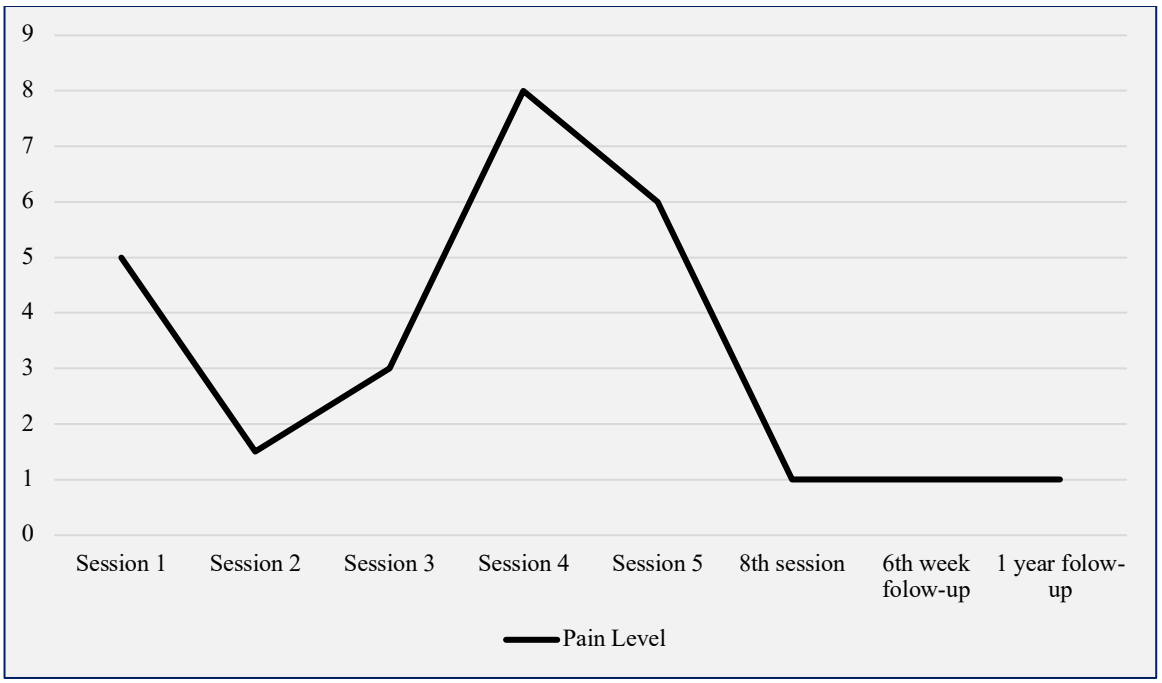

Figure 2. Patients' Pain Level During the Treatment Process and Follow Up

applied to the clinic by herself for help and she devoted herself to the treatment process (did the homework and attended the sessions regularly). Norcross et al. (2011) underlined the effect of the patient's motivation to change in psychotherapy outcomes. It is not clear whether the change in the PTSD scores is fully accounted by the therapy protocol or not. It is recommended to measure the stages of change in the patients to understand the protocol-specific success in the treatment of PTSD. Additionally, results showed that questioning the history of trauma in chronic pain patients should be a part of the assessment of these patients. In cases of pain secondary to trauma, treating psychological trauma can prevent ineffective drug- use.

The case study presented here provides evidence

of the effectiveness of the CFBT in the treatment of PTSD, depression, and chronic pain. Although it is hard to generalize the findings of this study, results are in line with other studies in the literature (Başoğlu et al., 2003b; Başoğlu et al., 2005; Başoğlu & Şalcıoğlu, 2011). Measurement tools used in the clinical evaluation are another limitation of the study. The TSSC is based on the DSM-IV and does not cover the DSM 5, but to overcome this deficiency, the evaluation was made by the clinician according to DSM 5. Another limitation is the assessment of the level of pain. Indeed, one-item self-report question is not enough to assess the pain the person is experiencing. At the same time, the level of pain reported could be measuring the patient's perceived level of pain, not the actual level of pain. Although there is an opinion that the objective measurement of pain level can be done by looking at biological markers, there is no consensus among the researchers about how this measurement can be carried out and what indicators to look at (Cowen et al., 2015). Despite all these limitations, this case study provides an important contribution to better understand pain accompanying PTSD during the treatment process. The decrease in pain level as a result of the CFBT protocol, whose main purpose is to increase anxiety resistance and sense of control over the stressors, supports the view that anxiety sensitivity is a common factor between PTSD and pain (Beck & Clapp, 2011).

Studies showed that exposure-based therapies for PTSD treatment can lead the patient to experience an exacerbation in symptoms (Foa et al., 2002; Larsen et al., 2016). Although the symptom exacerbations are common during the beginning of the exposure, Foa et al. (2002) stated that these patients can still experience significant improvement. In this case study, it was observed that the level of pain first increased and then decreased during the self-exposure exercises. The movement shown by the level of pain with anxiety supports the relationship between stress, anxiety, and pain. As it was stated before, peri-trauma distress and stress-related bodily symptoms predict traumatic stress symptoms following trauma (Cankardaş Nalbantçılar, 2018; Cankardaş, & Sofuoğlu, 2019). Accordingly, it can be predicted that people with anxiety sensitivity will be more sensitive to physical stress response during the traumatic event and they will be more prone to develop PTSD. During the treatment, when traumatic reminders are encountered, anxiety and related symptoms and pain levels increased at first. As anxiety resistance is gained, anxiety sensitivity and pain decreased as expected. However, since there is no measurement of anxiety resistance, it is not possible to say that this decrease in pain level is directly related to this. Although the relationship between PTSD and pain is not fully explained, repeating the CFBT protocol with larger samples and in studies involving a control group may also contribute to the treatment of patients who were exposed to a traumatic event and are experiencing chronic pain.

Conclusion

Unfortunately, the number of victims of interpersonal violence is high all around the world (Butchart, & Mikton, 2014). This means many people need psychological help to overcome the effects of a violent experience. It is reported that the number of mental health care providers is inadequate, and social workers, doctors, or nurses in primary care settings or shelters need to be involved delivering mental health services to the victims (Kakuma et al., 2011). CFBT is an easy protocol to learn, a short-term and low-cost treatment method that can help violence victims in overcoming the negative effects of their aversive experiences and the reconstruction of their sense of self. It is suggested to conduct controlled studies with the clinical samples to provide evidence for the effectiveness and efficacy of CFBT. By providing evidence, it could become one of the methods of choice for survivors of violence in primary care hospitals, in services provided by non-governmental organizations and in clinics.

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Informed Consent
The patient gave written consent to the inclusion of material pertaining to herself and she acknowledges that she cannot be identified via the paper and the researcher has fully anonymized her.

Conflict of Interest
The author(s) declare that they have no conflict of interest.

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