

The Efficacy of Cognitive-Behavioral Therapy for Patients with Posttraumatic Stress Disorder (PTSD)

Mohammad Saleh Shokouhi Qare Saadlou¹, Firoozeh Abolhasani Zadeh², Arman Jafaripour³, Saeid Motevalli⁴ and Motahhareh Isarizadeh^{1*}

¹Department of Clinical Psychology, Islamic Azad University, Sirjan, Iran

²Department of Surgery, Kerman University of Medical Sciences, Kerman, Iran

³Islamic Azad University, Science and Research Branch, Kerman, Iran

⁴Department of Psychology, Faculty of Social Sciences & Liberal Arts, UCSI University, Kuala Lumpur, Malaysia

Abstract

Most people who experience trauma like terrorism, war, natural disasters, physical/sexual abuse, emerging diseases, road accidents, and migration would suffer from Post-Traumatic Stress Disorder (PTSD). PTSD is a psychological result of an event or a stressful situation with a threatening/disastrous nature which can be a comorbid condition with behavioral disorders, physical problems, and other psychological maladaptive conditions like depression. PTSD treatment by medication interventions, e.g. antidepressants, anticoagulants, Beta-adrenergic antagonists, and opioid drugs have led to discouraging results. Hence, a wide range of psychotherapies like Cognitive-Behavioral Treatment (CBT) has been used in managing PTSD. As a psychosocial intervention, CBT emphasizes changing behaviors and cognitive deviances (i.e. thoughts, beliefs, attitudes), improving emotional regulation, as well as developing personal coping strategies targeting the current problems. The present review investigates experimental evidence for CBT as an effective treatment for PTSD.

Keywords: Post-traumatic stress disorder • Cognitive-behavioral disorder • Trauma • Treatment

Introduction

Traumatic experiences like war, diseases, natural disasters, attacks, accidents, and death are common among general populations, so that, more than two-thirds of individuals might experience one traumatic event in life [1]. Most of these people would get better normally (without therapy) after having a traumatic experience; however, some would end up with mental health problems. A widely common problem among such people after experiencing trauma is post-traumatic stress disorder (PTSD) [1,2]. PTSD is a chronic long-lasting condition with considerable vocational and social dysfunction, lower life quality, and higher personal and social costs [3]. Additionally, PTSD brings higher rates of suicide probability and suicidal thoughts, as well as adverse clinical consequences like frequent headaches after trauma [4]. Due to the holistic nature of threatening/disastrous trauma, PTSD is growing increasingly [5], so that the results of epidemiological studies show that about 6.8% of the U.S. population suffer from PTSD [6]. Data from current studies have also shown that the increased prevalence rate of PTSD is the result of the current pandemic conditions of COVID-19 [7].

Individuals with PTSD symptoms, sufficient good treatments to decline the symptoms and increase daily function is of great importance. Generally, appropriate interventions consist of two main categories: Cognitive-Behavioral Treatment (CBT) and psycho-pharmacological treatment [8]. Results from various clinical trials and meta-analyses support the idea that non-pharmaceutical interventions are effective in decreasing PTSD symptoms [9]. Among non-pharmaceutical methods, CBT has proved effective for treating PTSD by strong experimental evidence [10]. CBT refers to a set of scientific studies that seek direct manipulation of the way of thinking and dysfunctional behavior patterns to decrease psychological suffer [11]. Main components of CBT for PTSD consist of four primary interventions: psychoeducation, stress management, exposure,

and cognitive restructuring [8]. From 1980, when CBT was introduced to diagnostic classification systems, considerable studies have been conducted on CBT as a treatment for PTSD. This amount of research on this issue indicates the importance of therapy for PTSD patients and employing the CBT method for that. However, CBT effectiveness for PTSD patients in a review study helps deeper understanding of the importance of CBT for PTSD patients. Therefore, the present study aimed to evaluate the effectiveness of CBT for PTSD patients after different traumas.

Literature Review

CBT for PTSD patients the following terrorism

Annual terrorist attacks have led a large number of researchers to use CBT as a therapy for PTSD [12]. In a study on 91 patients following experiencing a car bombing in front of a mall in Omagh, Northern Ireland, in August 1998, who suffered from PTSD, Gillespie, et al. used CBT to treat these people. Their findings after 8 sessions indicated CBT efficacy and considerable improvement in patients [13]. Likewise, in a study aiming at the evaluation of CBT effectiveness on PTSD and persistent symptoms related to it among survivors of terrorist attacks of 9/11 in World Trade Centre, Levitt, et al. found that CBT significantly lowered the symptoms of PTSD and the comorbid depression [14]. Bryant, et al. examined CBT effectiveness on PTSD among individuals who had been under direct threat of terrorist attacks. In that study, 28 survivors of the terrorist attacks of the South of Thailand, who were still exposed to these attacks, had 8 sessions of CBT treatment. After the therapy was completed, the results showed a significant decrease in PTSD symptoms, depression, and grief [15]. Two studies were also conducted through the Internet on CBT effectiveness on adult survivors of the Iraq war for 14 weeks. In both trials, a significant decrease in PTSD symptoms was observed after the therapy [16,17]. Moreno, et al. investigated the influence of CBT for terrorism victims who

*Corresponding Author: Motahhareh Isarizadeh, Department of Clinical Psychology, Islamic Azad University, Sirjan, Iran; Email: isarizadeh.motahare@gmail.com

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maintained to experience emotional disorders even years after the attacks. In their study, 74% of the patients suffered from PTSD that declined to 3.2% after the therapy [18]. Similar results were found in a recent study by García Vera, et al. [12]. According to the above mentioned, at present, trauma-based CBT is the best treatment for the recovery of terrorism victims with PTSD.

CBT for PTSD patients who are victims of war as well as police officers

PTSD is a common psychiatric disorder among wounded war survivors, people in war, or those in military occupations like police officers. It can lead to social, occupational, or interpersonal disorders [19,20]. Results of the efficacy of CBT in a group of male veterans suffering from acute or chronic PTSD indicated declined PTSD symptoms as well as improved emotional and social performance which proved CBT as a promising therapy for these people [21]. Results of a randomized controlled trial evaluating the efficacy of CBT on PTSD among Congolese female victims of war showed that PTSD symptoms, depression and anxiety symptoms, behavior, and social conduct problems significantly declined in the participants of the intervention [22]. Results of another study confirmed the positive effects of CBT on life quality among the wounded survivors of the Iran-Iraq war with PTSD [23]. Jasbi, et al. researched 48 wounded male victims and found that CBT-based interventions had a significant effect on declining PTSD, depression, anxiety, and stress among these participants [19]. Results of a study by Aligholizade Moghadam, et al. confirmed the efficacy of CBT in decreasing the symptoms of PTSD among wounded war victims [24]. To our knowledge, the literature lacks studies of CBT efficacy for police officers suffering from PTSD; however, with extrapolation from successful CBT approaches for veterans, according to recommended guidelines for this population, CBT can be an effective treatment for PTSD among police officers.

CBT for PTSD patients following natural disasters

Since natural disasters occur on large scales, the consequences would be disastrous because they influence a high number of people. About 225 million people are exposed to such disasters annually [25,26]. Of them, 13.5 million might develop PTSD after the disastrous event in the first or second year following the disaster. The first strategy to treat PTSD following natural disasters that comes to therapists' minds is CBT [26]. Universal guidelines recommend that CBT be used a few weeks after the disaster to decline PTSD symptoms. Group CBT for patients with PTSD following earthquakes of Athena, Greece (1999) and Bam, Iran (2004) led to lower average scores of PTSD symptoms as well as avoidance symptoms (intrusion, avoidance, arousal) [27,28]. Evidence also shows that group CBT for depression symptoms or PTSD symptoms showed great efficacy for students affected by the big earthquake of Eastern Japan [29]. In a study, Sugiyama, et al. addressed the effects of CBT on senior students after the Hiroshima heavy rain disaster. The results of the study indicated positive effects of CBT-based treatment on declining PTSD symptoms after the intervention [30]. Hayati, et al. reported the positive results of CBT in the treatment of teenagers with PTSD following the flood in Garot, Indonesia [31]. In systematic research to identify the best intervention for children with PTSD or the like symptoms after a natural disaster, Galvan, et al. found that CBT was the most universal and one of the most influential therapeutic methods for children who experience PTSD following a natural disaster [32].

CBT for children suffering from PTSD following abuse or sexual assault

CBT-based therapies have been identified as the golden standard to treat PTSD symptoms among victims of sexual assault. Results indicated that improving PTSD symptoms among victims of sexual abuse could maintain in the long run [33]. Results of a study showed that short- and long-term treatments with CBT declined PTSD symptoms significantly in female victims of sexual abuse [34]. O'Cleirigh, et al. used CBT-based therapies to address distress and PTSD symptoms related to sexual abuse. Their findings indicated that after 6 month and 9 month periods, distress

and PTSD symptoms were declined [35]. Hébert, et al. also explained how CBT-based intervention decreased the symptoms of PTSD in younger victims of sexual abuse [36].

CBT for patients with PTSD following emerging diseases

The emerging literature shows a significant increase in PTSD symptoms among the relatives and families of those with critical diseases. After the Ebola outbreak in 1976, PTSD was observed among the relatives of the victims [37]. In addition, with the recent COVID-19 outbreak, mental diseases have been reported widely among patients. For example, Wu, et al. found that 2 out of 8 COVID-19 patients had PTSD [38]. Therefore, effective psychological intervention in the early stages of an emerging disease would be of great importance. Waterman, et al. showed that the CBT was an effective intervention to decline PTSD symptoms among the staff of Ebola healthcare centers [39]. In another research, Weiner, et al. researched intending to compare the effectiveness of two therapies, CBT and EMDR, on PTSD symptoms of patients with COVID-19. EMDR and CBT were conducted online. 38 patients with PTSD symptoms were assigned randomly to CBT and EMDR groups. Psychometric tests were done before, after, and following a month to evaluate the symptoms of PTSD, depression, and anxiety. Results indicated that both therapies were efficient. Both of the therapies declined anxiety to 30% and PTSD and depression symptoms to 55% [40].

CBT for PTSD patients following road accidents

Among road accidents, Motor Vehicle Accidents (MVA) is one of the reasons for PTSD prevalence. Beck, et al. provided evidence promising CBT as an efficient intervention to decline PTSD symptoms following MVA [41]. Zoellner, et al. conducted a randomized controlled trial to investigate CBT efficacy on declining PTSD symptoms in AVN survivors. Their findings indicated a significant effect of CBT on declined PTSD symptoms [42]. Mousavi Nik, et al. found similar results related to the efficacy of CBT on declined PTSD symptoms following car accidents [43]. Nevertheless, sufficient responses have not been reported in some of the cases. For example, in a 12-week therapy with CBT treatment for patients with PTSD following MVA, a relative response in 40% of the cases was reported.

CBT for PTSD patients the following migration

Most immigrants experience traumatic events like starvation, near-death experience, torture, illnesses, injury, family or friends' loss, or murder following migration. Reports say that PTSD is prevalent among these people [44,45]. One of the very first options of therapy for PTSD in these individuals is CBT. Paunovic and Lars-Göran evaluated the efficacy of CBT as a therapy for PTSD among refugees. For this study, 16 outpatient clients with PTSD participated in the therapy for 16-20 sessions. The results indicated that CBT declined PTSD symptoms, general anxiety, and acute depression for about 53%, 50%, and 57%, respectively [46]. Recently, Lawton and Spencer conducted a systematic review aiming at investigating the effects of CBT on PTSD symptoms, anxiety, and depression among refugee children. In the present study, 16 studies met inclusion criteria. Results indicated that, in all selected studies, PTSD symptoms, anxiety, and depression were declined after the intervention [47].

CBT for patients with insomnia

Insomnia is considered a major feature of PTSD. As literature shows, CBT is among the most effective therapies for insomnia. In a study, 40 martial wounded survivors of war (with PTSD and insomnia) who served in Afghanistan and/or Iraq were randomly treated by CBT in four sessions. After the therapy sessions, the participants of the intervention group reported an improvement in sleeping and PTSD [48]. Talbot, et al. reported similar results among adults suffering from PTSD and comorbid insomnia [49]. Gehrman, et al. investigated the efficacy of remote CBT intervention by videos on 116 wounded survivors with PTSD who have comorbid insomnia. The results of their study showed CBT moderate effectiveness on PTSD and insomnia [50].

Conclusion

Based on the findings of the present review, CBT has historically been used as a safe effective intervention to treat PTSD patients. The result from experimental studies mentioned in the present study indicated the positive effects of CBT on treating PTSD patients. Using CBT as a treatment for PTSD has been effective for different age ranges. Therefore, CBT is strongly recommended as a PTSD treatment to different therapists from all nations and cultures.

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