

Current Evidence of Cognitive Behavioral Approaches Trauma Among Women Exposed to Trauma

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Abstract

Exposure to trauma in females is considered a major mental health issue on a global level, associated with high levels of prevalence, complicated presentations of symptoms, and high psychosocial dysfunction. Women tend to be susceptible to acquiring trauma-based disorders, including Post-Traumatic Stress Disorder (PTSD), depression, dissociation, and complex PTSD in particular, especially in the setting of interpersonal trauma including intimate partner violence and sexual abuse. CBT is known to be an evidence-based approach that is used primarily in the treatment of trauma-related issues. This review intends to consider the efficacy of CBT in treating women's trauma through a review of current empirical studies. Types of trauma, neurobiology and cognition behind it, types of CBT interventions like TF-CBT, CPT, and PE will all be discussed. CBT has been found effective in reducing comorbid symptoms associated with depression, anxiety, as well as guilt and shame associated with traumatic experiences, along with improving emotional regulation and cognitive restructuring. CBT variants that include phase-specific therapy for complex trauma and culturally based interventions also show higher levels of patient involvement and more successful results among multicultural women. Nevertheless, there are still some obstacles that exist, such as stigmatization, lack of access to qualified therapists, economic issues, lack of security, as well as early dropout from treatment due to fear and anxiety. To sum up, CBT has proved to be one of the most efficient therapeutic techniques among women affected by trauma. Nonetheless, the best results can be achieved only through implementation of culturally based strategies and empowerment methods.

Keywords: Trauma Exposure; Trauma-Focused Cognitive Behavioral Therapy (TF-CBT); Cultural Adaptation; Interpersonal Trauma; Trauma Recovery

Introduction

Trauma is a multifaceted biopsychosocial phenomenon, whose impact on neurobiological stress responses, cognitive schemas, emotion regulation, and interpersonal processes cannot be overstated. In particular, exposure to traumatic experiences has been found to have a negative influence on mental health, and women are more likely than men to develop Post-Traumatic Stress Disorder (PTSD) following trauma (Olf, 2017). The vulnerability of women with respect to the development of PTSD has been reported to be particularly pronounced in relation to interpersonal traumas, for example, IPV and sexual assault.

Recent findings from neurobiology studies conducted in 2015 or later point out that there are differences in the reactions to trauma between sexes, which manifest themselves in HPA dysregulation, heightened amygdala activation, and decreased prefrontal cortex inhibition (Yehuda et al., 2015). The neurobiological changes listed above lead to the development of core symptoms of PTSD, namely hyperarousal, intrusive re-experience, and inability to extinguish fear. Moreover, according to the theories of cognition, beliefs about permanent harm and dangerousness of the world are thought to play an important part in maintaining PTSD (Dworkin et al., 2017).

As a response to the aforementioned processes, Cognitive Behavioral Therapy (CBT) has been developed as an initial psychological therapy for patients suffering from trauma-related disorders. According to clinical practice guidelines established by the American Psychological Association, trauma-focused CBT interventions such as Prolonged Exposure (PE) and Cognitive Processing Therapy (CPT) have been found to be much more effective than medications used to treat PTSD (American Psychological Association, 2017). Likewise, trauma-focused CBT has been recognized as the preferred method of treatment for adult patients diagnosed with PTSD according to NICE guidelines. There is a large body of research evidence that supports the recommendation to use CBT interventions for PTSD based on meta-analyses conducted between 2015 and 2025 (Cusack et al., 2016; McLean & Foa, 2020). In view of the increasing number of empirical studies that have been conducted, the purpose of the following review is to analyze existing literature regarding the use of cognitive behavioral therapy in treating trauma in women. Key areas that will be covered include the underlying process of CBT, CBT models, and barriers to implementing CBT.

Cognitive Impact of Women Exposed to Trauma

Women exposed to traumatic events show considerable changes in their cognitive abilities regarding attention, memory, executive function, and cognitive appraisals. Current literature highlights the presence of considerable neurobiological and affective changes in trauma-related disorders, such as PTSD, and shows how these changes work together to lead to maladaptive cognitive processes (Augsburger & Galatzer-Levy, 2020).

One of the most obvious cognitive changes in trauma-exposed women is the deterioration in memory processes, particularly in memory encoding and retrieval, especially of autobiographical memories. Women exposed to trauma have been known to suffer from intrusive memories and flashbacks, resulting from impaired memory control in the prefrontal cortex. On the other hand, there can also be impaired encoding and/or retrieval of the memory of the traumatic event, implying some sort of hippocampal dysfunction (Eder-Moreau et al., 2022).

Apart from memory issues, trauma also impacts attention and executive function. According to various studies, females who undergo trauma show problems with cognitive flexibility, attentional control, and decision making. Such conditions have been found to be associated with the activation of the threat-related brain pathways, mainly amygdala, where there is a tendency for individuals with trauma to be more focused on the threatening aspects while minimizing goal-directed thinking (Eder-Moreau et al., 2022). Similarly, the impact of IPV on survivors, when coupled with physical injuries, can lead to impaired cognitive functions such as diminished processing speed and executive dysfunction (Karr et al., 2024).

Another vital area in which women with trauma backgrounds may struggle is emotion-related cognition, in particular problems with emotion recognition and regulation. Women who suffered from abuse are

known for struggling with recognizing emotions and regulating their reactions, leading to excessive reactivity and inappropriate ways of dealing with their emotions. There are indications of disturbances in implicit emotion regulation processes shown by neuroimaging data, indicating the separation between emotional and cognitive networks in women suffering from trauma (Weaver et al., 2020) .

The experience of trauma is also known for creating maladaptive schemas and beliefs, for example, self-blame, helplessness, or the idea that one lives in a hostile and dangerous world. This type of cognitive distortions plays a significant role in the development and maintenance of PTSD and other related conditions. Moreover, women tend to internalize their negative schemas and beliefs about themselves more than men do.

Further, there are studies suggesting that trauma can lead to neurocognitive deficits as well as issues in working memory and information processing ability. Post-traumatic stress disorder has been shown to correlate with executive dysfunction and inefficient cognition, which could influence one's daily life and social relations (Susanty et al., 2024) .

In general, the effects of trauma on cognition among females is complex, encompassing alterations in areas of memory, attention, executive function, and cognitive emotional interaction. In addition to sustaining the existing symptoms of trauma, the cognitive dysfunctions associated with trauma make the use of cognitive therapies like CBT necessary.

Background of Cognitive Behavioral Therapy

Cognitive Behavioral Therapy (CBT) is a systematic, time-limited, and scientifically validated form of psychotherapy based on the interactions among thoughts, emotions, and behaviors. The theory behind Cognitive Behavioral Therapy (CBT) is based on the idea of the cognitive model, which argues that mental problems occur because of unhealthy thought patterns, which ultimately affect one's behavior and emotional well-being (Beck, 1976). In other words, it suggests that irrational thoughts and cognitive distortions like catastrophizing, overgeneralization, and personalization lead to mental illness.

CBT emerged through the convergence of behavioral and cognitive traditions. Earlier approaches based on behavioral theory, which were largely informed by concepts of classical and operant conditioning, used methods of reinforcing and exposing clients to help them achieve changes in their observable behaviors (Skinner, 1953). On the other hand, the cognitive revolution, which occurred within the field of psychology in the 1960s, highlighted the importance of mental processes in the regulation of emotions. Some notable pioneers of cognitive theories included Aaron T. Beck and Albert Ellis, who emphasized changing irrational thoughts and beliefs (Beck, 1976; Ellis, 1962).

Gradually, CBT developed into a more comprehensive therapy approach that integrates both cognitive restructuring techniques and behavioral interventions. Key elements in CBT include psychoeducation, identification of negative automatic thoughts, cognitive restructuring, behavioral activation, exposure treatment, and skill training techniques.

When applied to trauma, CBT has evolved into several other forms of treatment like TF-CBT, CPT, and PE. These therapies involve components of emotional processing, trauma narration, and exposure to stimuli that remind the patient of their traumatic experience, with the objective being to diminish avoidance behavior and change any negative beliefs related to the trauma (Resick et al., 2017; Foa et al., 2019). Due to its structured approach and focus on skills training, CBT is especially adept at tackling the cognitive and behavioral aspects of trauma disorders.

New developments within CBT include an expansion of the scope of application through third wave CBT interventions that focus on metacognitive strategies and psychological flexibility. These include mindfulness based cognitive therapy, along with other acceptance-based CBT models (Hayes et al., 2011). Moreover, technology has also contributed to the dissemination of these therapies.

Importance of Cognitive Behavioral Therapy in Trauma Care Intervention

The significance of CBT lies in the fact that it has a firm theoretical base coupled with solid empirical evidence in the management of trauma disorders, especially Post-Traumatic Stress Disorder (PTSD). Trauma affects cognitive, emotional, and behavioral aspects negatively and creates unhealthy beliefs, avoidance reactions, and excessive physical arousal. CBT deals effectively with all these aspects of trauma by altering the core aspects of traumatic experiences, hence becoming one of the most effective strategies for managing trauma (Cusack et al., 2016).

The reason behind the significant value of CBT in trauma care interventions can be attributed to cognitive restructuring techniques used in CBT. Trauma patients tend to hold many irrational and dysfunctional beliefs about themselves or others. Women who experience trauma are likely to blame themselves and consider themselves as inadequate while viewing their surroundings as very dangerous. Cognitive restructuring techniques include Socratic questioning and cognitive reframing, which are very effective (Resick et al., 2017).

An additional benefit offered by CBT lies in exposure therapies which are vital to minimizing patients' tendency towards avoidant behavior—a common symptom of PTSD. Interventions such as Prolonged Exposure (PE) help patients engage in gradually exposing themselves to the memories and situations associated with the traumatic experience in the safety of a therapy session. It facilitates emotional processing and assists the patient in unlearning the idea that trauma-related triggers pose any threat, thus helping to reduce their anxiety and hypervigilance levels (Foa et al., 2019; McLean & Foa, 2020).

CBT intervention also includes teaching the patient effective emotion regulation and coping skills as a means to control their emotions and reduce negative symptoms. Strategies such as relaxation, grounding, and mindfulness help to stabilize patients emotionally (Cloitre et al., 2019). This particular aspect of treatment proves especially helpful for patients exposed to interpersonal or prolonged trauma and experiencing emotional instability and dissociation as a consequence.

Additionally, CBT therapy has a very structured and goal-directed approach that ensures high levels of adherence by patients while at the same time providing a solid framework for both the therapist and patient. Collaborative nature of CBT facilitates the development of a strong therapeutic relationship that enables patients to take control of their treatment process. This element is important for trauma patients, especially women who might feel powerless after experiencing the traumatic event (Iverson et al., 2011). Another benefit of CBT therapy is flexibility and culture sensitivity. It means that CBT approaches can be adjusted to the specific needs of the client, taking into account such factors as cultural norms and values, gender aspects, social barriers, and socio-economic limitations. Culture-sensitive application of CBT proved to be effective for patients from various cultural backgrounds (Naeem et al., 2015).

More importantly, there is sufficient empirical evidence of the effectiveness of CBT from several randomized controlled trials and meta-analyses. Studies show that trauma-focused cognitive behavioral therapy does not only lessen the presence of PTSD, but it also addresses comorbidities such as depression and anxiety in patients, with improvements sustained throughout follow-up sessions (Cusack et al., 2016; Karatzias et al., 2019). Hence, CBT is a first-line treatment modality recommended by

various guidelines from organizations such as the American Psychological Association and the National Institute for Health and Care Excellence. The recent development of new ways of administering CBT, such as through digital and telehealth approaches, adds another aspect of importance to the application of CBT to trauma-related issues, especially among women constrained by stigma, finances, or geography.

Principles and Application of CBT for Trauma

CBT for traumatic experiences is based on the theory that negative thoughts and avoidance behaviors are responsible for maintaining distressing symptoms related to traumas. According to the cognitive approach, the victim processes a trauma through a certain lens that creates negative thoughts or beliefs about oneself, other people, and the environment that results in PTSD (Ehlers & Clark, 2000). Therefore, cognitive behavioral therapy aims at restructuring distorted thinking while allowing emotional processing of trauma.

The process of cognitive restructuring is an essential aspect of CBT that involves the identification of negative thoughts like feelings of guilt and self-blame. Socratic questioning and use of cognitive worksheets help achieve this goal (Resick et al., 2017).

Another important principle is that of exposure, which targets avoidance as one of the most critical maintaining factors in PTSD. By slowly exposing people to their traumatic experiences (imaginal exposure) and their everyday environment (in vivo exposure), people can learn how to decrease their fear reaction and incorporate positive information (Foa et al., 2019).

Skills training is an equally significant principle that involves learning techniques to cope with high emotional reactions. It is especially useful for patients with dissociative reactions. Methods include relaxation techniques, grounding, and mindfulness (Cloitre et al., 2019).

In reality, CBT for trauma treatment entails evidence-based structured therapies like TF-CBT, CPT, and PE. These therapies involve components like psychoeducation, trauma storytelling, cognitive restructuring, and relapse prevention. CBT that follows a phase-based approach is frequently implemented when treating persons with complicated traumatic experiences. The first phase involves stabilization and skill building, followed by processing and integration (Karatzias et al., 2019). Moreover, culturally adapted CBT and gender-sensitive CBT are effective for diverse clients (Naeem et al., 2015).

Effectiveness of CBT for Trauma

The application of Cognitive Behavioral Therapy is considered one of the most effective techniques in psychology used in treating patients suffering from disorders associated with their experience of traumatic events. Numerous randomized trials and meta-analyses show the effectiveness of trauma-focused CBT in symptom relief and decreasing psychological suffering.

For example, a recent meta-analysis conducted by Cusack et al. (2016), involving more than 100 articles on CBT, shows that trauma-focused CBT was found to have the highest effectiveness among other techniques in reducing PTSD symptoms. In addition, previous research by Bradley et al. (2005) has shown that about 67% of people treated with CBT no longer had PTSD according to DSM IV after treatment.

In addition, there is significant research demonstrating that CBT produces large effect sizes for alleviating symptoms of depression, anxiety, and guilt and shame caused by trauma experiences

(Dworkin et al., 2017). Prolonged Exposure therapy has proved highly efficacious in managing avoidance and physiological hyperarousal (McLean & Foa, 2020). Cognitive Processing Therapy can be used effectively to change distorted beliefs regarding safety, trust, and self-worth in those suffering from PTSD due to interpersonal traumas (Resick et al., 2017).

Moreover, there is strong evidence that CBT is efficacious in managing cases of complex PTSD using phase-based interventions aimed at regulating emotions, changing self-concept, and enhancing interpersonal relations (Cloitre et al., 2019; Karatzias et al., 2019). Recent research also shows the usefulness of digital and telehealth CBT in helping women who experience difficulties accessing psychological services.

Challenges of Implementation of CBT for Trauma

Despite its strong empirical support, several challenges limit the effective implementation of CBT for trauma, particularly among women.

One major barrier is structural and socioeconomic constraints, including limited access to trained trauma therapists, financial difficulties, lack of transportation, and childcare responsibilities. These factors often restrict access to consistent and quality mental health care (World Health Organization, 2021).

Stigma and sociocultural factors also play a significant role. In many cultural contexts, women who experience trauma, especially interpersonal violence, face victim-blaming attitudes, shame, and fear of social repercussions, which delay help-seeking and reduce treatment engagement.

Another critical challenge is ongoing safety concerns. Exposure-based interventions may be difficult to implement when individuals continue to live in unsafe or abusive environments, limiting the effectiveness of therapy.

The presence of comorbid psychiatric conditions, such as depression, substance use disorders, dissociation, and personality disorders, further complicates treatment. These conditions often require integrated or phase-based approaches to ensure effective outcomes (Cloitre et al., 2019).

Treatment dropout is also a concern, particularly due to avoidance symptoms inherent in PTSD. Exposure-based therapies may initially increase distress, leading some individuals to discontinue treatment prematurely (McLean & Foa, 2020).

Additionally, therapist-related challenges, such as burnout and vicarious traumatization, as well as the lack of trauma-informed organizational systems, can hinder effective service delivery.

Conclusion

Cognitive Behavioral Therapy is considered one of the most empirically proven treatments for trauma in women. As this therapy involves cognitive modification, avoidance reduction, and regulation of emotional responses, it can successfully address the underlying pathophysiology of trauma disorders. Numerous meta-analyses and studies have shown that CBT treatment significantly decreases PTSD symptoms. Trauma therapy, however, involves more than addressing symptoms. It necessitates the integration of a holistic method that considers empowerment, safety planning, and cultural and gender sensitivity aspects. The need to overcome the structural, stigma-related, and co-morbidity issues is important to enhance treatment accessibility and effectiveness. There are future avenues to consider when addressing the issue of trauma. They include the development of culturally relevant interventions, e-mental health interventions, and empowerment approaches.

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