

# Mindfulness-based CBT for treatment of PTSD

## Abstract

Experiencing traumatic events may often lead individuals to post-traumatic stress disorder (PTSD). Traditional psychotherapies (e.g., CBT) and their variations have proven efficacious in their ability to target PTSD symptoms. Moreover, recent research integrating mindfulness within psychotherapeutic interventions has shown promising results. This paper briefly highlights the importance and use of mindfulness-based interventions in treating PTSD and trauma-related symptoms.

**Keywords:** mindfulness, cognitive-behavioural therapy, post-traumatic stress disorder, treatment, psychotherapy

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**Abbreviations:** PTSD, post-traumatic stress disorder; DSM-5, diagnostic and statistical manual of mental disorders; CBT, cognitive-behavioural therapy; PE, prolonged exposure; CT, cognitive therapy; CPT, cognitive processing therapy; TFCBT, trauma-focused CBT; REBT, rational emotive behavioural therapy; PST, problem solving therapy; ST, schema therapy; MBCT, mindfulness-based cognitive therapy; MBSR, mindfulness-based stress reduction program

## Introduction

Experiencing adverse life events, whether direct, indirect or vicarious, has always been an inseparable element of the human condition. Not every person, however, recovers from a traumatic experience the same way. Although it is normal for most people to start to feel better after few weeks or months, for some people, trauma may lead to significant distress – a mental health condition known as post-traumatic stress disorder (PTSD).<sup>1</sup>

PTSD is a condition that can occur following an exposure to a direct or indirect, actual or perceived threat to life or safety of the individual or another person. Types of traumatic events that can cause PTSD include combat or military experience, sexual or physical assault or abuse, experiencing or witnessing serious accident, natural disasters, and terrorist attacks.<sup>2,3</sup> For instance, in a military context, this may include, but is not limited to, threat of death, serious injury, viewing or handling dead bodies, death or injury of a colleague, friend, or family member, exposure to hazardous agent or disease, witnessing human misery and degradation, and moral injury.<sup>3</sup>

The Diagnostic and Statistical Manual of Mental Disorders (5<sup>th</sup> ed.; DSM-5)<sup>1</sup> proposes four diagnostic clusters for PTSD including exposure to life-threatening event; presence of intrusive thoughts; persistent avoidance of stimuli associated with event; and negative alterations in cognitions and mood. Neuroimaging studies have shown that PTSD causes lasting changes to the neural circuitry of stress where hypoactive hippocampus and challenged ventromedial prefrontal cortex fail to manage hyperactive amygdala, thereby creating a dysfunctional loop.<sup>4-7</sup> Studies have also reported that individuals with PTSD experience heightened sympathetic nervous system activity that was absent before the trauma which manifests symptoms of hyperarousal or hypervigilance, poor concentration, anhedonia, elective hypoamnesia, and dysfunctional mood regulation.<sup>8,9</sup> They also tend to experience repetitive flashbacks or upsetting memories, intrusive thoughts, and behavioural avoidance, which may be attributed to the prefrontal cortex failing to regulate the fear response.<sup>10</sup> It is, therefore, evident that, in PTSD, an individual's psychophysiological homeostasis becomes dysfunctional causing significant distress.

One of the most effective psychotherapeutic approaches for the treatment of PTSD is cognitive-behavioural therapy (CBT)<sup>11</sup> which encourages challenging cognitions; reappraisal of dysfunctional schemas through exposure to feared stimuli; psychoeducation; and training in arousal reduction strategies.<sup>2,12-18</sup> Several variations of CBT, such as prolonged exposure (PE), cognitive therapy (CT), cognitive processing therapy (CPT), trauma-focused CBT (TFCBT), rational emotive behavioural therapy (REBT), problem solving therapy (PST), schema therapy (ST), acceptance and commitment therapy (ACT), and dialectical behaviour therapy (DBT), have also proven to be efficacious.<sup>19,17</sup> All of them are considered to fall under the rubric of CBT due to the shared theoretical assumption of cognitions mediating emotional and behavioural responses to the environment.

One such variation, based on empirical research on mind-body connection that has garnered significant attention in the recent years is mindfulness. Mindfulness may be described as involving intention to direct one's attention to the present moment in a non-judgemental way that leads to a state of acceptance and inner calmness.<sup>20</sup> Psychotherapies that have efficaciously incorporated mindfulness within a CBT framework include mindfulness-based stress reduction program (MBSR),<sup>21</sup> DBT,<sup>22</sup> ACT,<sup>23</sup> mindfulness-based cognitive therapy (MBCT),<sup>24</sup> and mindfulness-based relapse prevention (MBRP).<sup>25</sup>

Research on mindfulness-based interventions has shown promising outcomes for symptoms relevant to PTSD. For instance, studies using mindfulness with individuals suffering from PTSD have consistently shown that mindfulness not only helps alleviate intrusive thoughts, repetitive flashbacks, behavioural avoidance, hyperarousal, and dysfunctional mood, but also improves concentration and attention, cognitive appraisal, emotional regulation, and re-adjustment to normal life, family, and work e.g.<sup>8,9,26-29</sup> Neuroimaging studies have shown that mindfulness causes increased activity in prefrontal cortex and decreased activity in amygdala, thereby suggesting a mediating functional relationship between the two.<sup>30-32</sup> It is, therefore, plausible to believe that mindfulness practice may assist in improving prefrontal cortex functioning thereby balancing the cognitive-emotive interaction of the hippocampus and amygdala.

Mindfulness-based interventions strive to inculcate a non-attached, non-judgemental, present, and objective self that develops the perspective and resilience to acknowledge unpleasant emotions or memories thereby alleviating the stress they cause whilst simultaneously maintaining focus and functionality. This stands diametrically opposite to the symptomatology that is typical of PTSD. Future research should, therefore, investigate the clinical benefits of incorporating mindfulness within a structured CBT framework

to examine its effectiveness for PTSD. Future research should also examine the efficacy of mindfulness in treating trauma symptoms, both as an adjunct and stand-alone intervention.

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## Conflicts of interest

Author declares there are no conflicts of interest.

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