IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

# The Role Of Mindfulness-Based Interventions In Reducing Symptoms Of Post-Traumatic Stress Disorder - A Case Study

[1]Mary Colet, [2]Dr. Mithun S., [3]Dr. Guruprasad K. G.

[1]Research Scholar, College & Allied Health Science, Srinivas University, Mangalore, India
[2]Associate Professor, College & Allied Health Science, Srinivas University, Mangalore, India
[2]Professor, College & Allied Health Science, Srinivas University, Mangalore, India

***Abstract:*** **Purpose:** This case study investigates the efficacy of mindfulness-based interventions (MBIs) in alleviating symptoms of Post-Traumatic Stress Disorder (PTSD). The aim is to evaluate how mindfulness practices can mitigate the psychological distress experienced by individuals with PTSD and to provide insights into the potential benefits of MBIs as a therapeutic approach.

**Design/Methodology/Approach:** Utilizing a qualitative case study design, this research focuses on a single participant undergoing MBIs over an 8-week period. Data were collected through in-depth interviews, self-report questionnaires, and behavioral assessments before, during, and after the intervention. The participant's PTSD symptoms were assessed using standardized measures such as the PTSD Checklist for DSM-5 (PCL-5) and qualitative feedback on their experiences.

**Finding/Result:** The study reveals that mindfulness-based interventions led to significant reductions in PTSD symptoms, including decreased frequency of intrusive thoughts, reduced emotional reactivity, and improved overall well-being. The participant reported enhanced emotional regulation, increased self-awareness, and a greater sense of control over their reactions to traumatic memories. These improvements were consistent with both quantitative and qualitative data collected throughout the study.

**Originality/Value:** This case study contributes original insights into the application of MBIs for PTSD, highlighting the practical benefits of mindfulness in a real-world context. The findings suggest that MBIs can be a valuable adjunct to traditional PTSD treatments, offering a non-pharmacological approach to managing trauma-related symptoms. This research provides a foundation for further exploration and larger-scale studies on the effectiveness of mindfulness in trauma recovery.

**Index Terms:** Mindfulness-Based Interventions, PTSD, Trauma Recovery, Emotional Regulation

## 1. INTRODUCTION

Post-Traumatic Stress Disorder (PTSD) is a complex and challenging mental health condition that emerges in response to traumatic experiences. Characterized by persistent re-experiencing of the trauma, avoidance of trauma-related stimuli, and heightened arousal, PTSD can significantly disrupt an individual's daily life, relationships, and overall well-being (Azad Marzabadi & Hashemi Zadeh, 2014). The impact of PTSD is profound, affecting not only those directly exposed to trauma but also their families and communities. Traditional therapeutic approaches, including cognitive-behavioral therapy (CBT) and pharmacological treatments, have been the cornerstone of PTSD management. However, there is growing interest in exploring alternative and complementary interventions, such as mindfulness-based approaches, which offer a different perspective on healing and recovery.

Mindfulness-Based Interventions (MBIs) are rooted in the principles of mindfulness and meditation, which emphasize the cultivation of present-moment awareness, acceptance, and non-judgmental observation of one's thoughts and feelings. The growing body of research into MBIs suggests that these practices can be effective in alleviating symptoms of various psychological conditions, including PTSD. By promoting a mindful approach to one's internal experiences, MBIs aim to help individuals develop a healthier relationship with their trauma-related thoughts and emotions (Boyd, Lanius, & McKinnon, 2018).

The theoretical underpinnings of MBIs in the context of PTSD are grounded in several key principles. Mindfulness practices encourage individuals to observe their thoughts and feelings without becoming entangled in them. This detachment can be particularly beneficial for those with PTSD, as it offers a way to manage intrusive memories and distressing emotional responses. Additionally, mindfulness practices promote self-compassion and reduce the tendency towards self-criticism, which can be prevalent in PTSD and exacerbate symptoms.

A notable mindfulness-based approach is Mindfulness-Based Stress Reduction (MBSR), developed by Jon Kabat-Zinn in the late 1970s. MBSR combines mindfulness meditation with yoga and body awareness techniques to enhance individuals' ability to cope with stress and pain. Another significant intervention is Mindfulness-Based Cognitive Therapy (MBCT), which integrates cognitive behavioral techniques with mindfulness strategies. Both MBSR and MBCT have been studied extensively in various contexts, including their effectiveness in treating PTSD (Duran et al., 2022).

Empirical research into MBIs for PTSD has demonstrated promising results. Studies have shown that mindfulness practices can lead to significant reductions in PTSD symptoms, including decreases in hyperarousal, intrusive thoughts, and avoidance behaviors. For instance, research on MBSR has indicated improvements in trauma-related symptoms and overall quality of life for individuals with PTSD. Similarly, MBCT has been associated with reductions in PTSD severity and enhanced emotional regulation.

The effectiveness of MBIs in treating PTSD is not merely theoretical but is supported by clinical evidence. For example, a study by Kearney et al. (2013) found that participants with PTSD who engaged in an MBSR program exhibited significant reductions in PTSD symptoms and improvements in overall psychological functioning. Another study by Goyal et al. (2014) found that mindfulness meditation was associated with moderate improvements in PTSD symptoms, suggesting that MBIs can be a valuable adjunct to traditional treatments.

However, despite the positive findings, there is still a need for further research to fully understand the mechanisms through which MBIs exert their effects and to determine their long-term efficacy. It is essential to explore how different mindfulness practices compare in terms of their impact on PTSD symptoms and to identify factors that may influence their effectiveness. Additionally, investigating the role of individual differences, such as trauma type and severity, can provide insights into tailoring mindfulness interventions to better meet the needs of those with PTSD (Goldsmith et al., 2014).

This case study aims to contribute to the growing body of knowledge on MBIs for PTSD by examining their role in reducing symptoms through a detailed exploration of individual experiences. By analyzing a case study, this research will provide a nuanced understanding of how mindfulness practices can be integrated into PTSD treatment and offer practical insights for clinicians and researchers in the field. The findings will have implications for enhancing therapeutic approaches and supporting individuals on their journey towards recovery from trauma (Kalill, Treanor, & Roemer, 2014).

In summary, the exploration of mindfulness-based interventions in the treatment of PTSD represents a promising avenue for enhancing mental health care. As the field continues to evolve, integrating mindfulness practices into therapeutic frameworks may offer new hope for individuals grappling with the challenges of PTSD. Through rigorous investigation and clinical application, MBIs have the potential to transform the landscape of PTSD treatment and contribute to more comprehensive and effective approaches to mental health.

## 2. Literature Review

### 2.1 Post-Traumatic Stress Disorder

Post-Traumatic Stress Disorder (PTSD) is a multifaceted mental health condition that manifests following exposure to exceptionally traumatic events. The disorder is characterized by persistent symptoms such as intrusive memories, severe anxiety, and avoidance behaviors, significantly impairing an individual's functioning and quality of life. The existing literature on PTSD provides a comprehensive understanding of its etiology, symptoms, and treatment approaches, reflecting ongoing advancements in both clinical practice and research.

Yehuda et al. (2015) explore the neurobiological underpinnings of PTSD, focusing on the hypothalamic–pituitary–adrenal (HPA) axis, which plays a crucial role in the stress response. Their research highlights that individuals with PTSD often exhibit altered HPA axis functioning, including increased secretion of corticotropin-releasing hormone and reduced cortisol levels. These neuroendocrine abnormalities are associated with the heightened stress response and the persistence of PTSD symptoms, underscoring the biological dimensions of the disorder (Yehuda, Hoge, & McFarlane, 2015).

Javidi and Yadollahie (2012) provide a comprehensive overview of PTSD, emphasizing the impact of sudden, extreme stressors on its development. They detail various types of traumatic events that may precipitate PTSD, such as war, violent personal assaults, and natural disasters. Their review underscores the critical role of these traumatic experiences in triggering PTSD, as well as the variability in individual responses to trauma (Javidi & Yadollahie, 2012). This perspective highlights the importance of considering the nature and severity of trauma when assessing risk and developing treatment strategies.

Yehuda (2002) further examines PTSD in the context of the aftermath of the September 11, 2001 terrorist attacks. This review article delves into the psychological impact of large-scale traumatic events and discusses the challenges faced by clinicians in addressing PTSD among survivors. Yehuda emphasizes the necessity of understanding trauma-related responses and the importance of effective intervention strategies in mitigating long-term psychological effects (Yehuda, 2002). The insights from this review are instrumental in shaping contemporary approaches to PTSD treatment.

In their review, Yule and Smith (2015) address the manifestation of PTSD in children and adolescents, highlighting the similarities between their responses and those of adults. This review underscores the importance of recognizing PTSD in younger populations, which was initially overlooked due to a lack of direct interviews with children. The findings suggest that children exhibit PTSD symptoms similar to adults, reinforcing the need for age-appropriate therapeutic interventions (Yule & Smith, 2015).

Shalev, Liberzon, and Marmar (2017) offer a detailed account of the clinical features of PTSD, including persistent reactivity to trauma reminders, mood disturbances, and hypervigilance. They emphasize the complexity of PTSD symptoms and the need for comprehensive treatment approaches that address the multifaceted nature of the disorder. Their work contributes to a deeper understanding of the symptomatic expression of PTSD and informs the development of targeted therapeutic strategies (Shalev, Liberzon, Marmar, 2017).

Helzer, Robins, and McEvoy (1987) provide epidemiological insights into PTSD, based on a large-scale survey of psychiatric disorders. Their findings reveal that the prevalence of PTSD is significant in the general population, with various factors influencing its development and course. This epidemiological perspective is crucial for understanding the widespread impact of PTSD and the need for effective public health interventions (Helzer, Robins, McEvoy, 1987).

Bisson (2007) reviews the prevention and treatment strategies for PTSD, emphasizing the effectiveness of cognitive-behavioral therapy (CBT) and pharmacological interventions. Bisson's review highlights the importance of evidence-based approaches in managing PTSD and provides a critical evaluation of current therapeutic modalities. This review is valuable for clinicians seeking to implement effective treatment strategies for PTSD (Bisson, 2007).

Pervanidou and Chrousos (2010) contribute to the understanding of PTSD by exploring its neuroendocrinological aspects. They discuss how stress and trauma impact the neuroendocrine system, influencing the development and persistence of PTSD symptoms. Their work offers insights into the biological mechanisms underlying PTSD and the potential for targeted treatments that address these mechanisms (Pervanidou & Chrousos, 2010).

Pitman et al. (2012) focus on the biological studies of PTSD, noting that trauma is a known causal factor for the disorder. They review various biological markers and mechanisms associated with PTSD, providing a comprehensive overview of the disorder's biological underpinnings. Their research emphasizes the importance of biological research in understanding PTSD and developing more effective treatment options (Pitman et al., 2012).

In summary, the literature on PTSD reveals a complex interplay between biological, psychological, and environmental factors. Advances in understanding the neurobiological, epidemiological, and clinical aspects of PTSD have contributed to more effective treatment approaches and highlight ongoing research areas. Integrating these insights is crucial for developing comprehensive strategies to address the multifaceted nature of PTSD and improve outcomes for affected individuals.

### 2.2 Trauma Recovery

The ecological perspective on psychological trauma and recovery offers a multidimensional understanding of the complex interplay between individual, social, and environmental factors in shaping

trauma responses and healing processes. This view contrasts with more traditional models that often focus predominantly on individual psychological mechanisms or symptoms. The ecological model, as discussed by Harvey (1996) and others, emphasizes the importance of contextual factors and acknowledges that recovery from trauma involves navigating a network of influences beyond the immediate psychological experience.

Harvey's seminal work in the *Journal of Traumatic Stress* (1996) presents a comprehensive ecological model of trauma that integrates multiple levels of influence, including individual, familial, community, and societal factors. This model posits that trauma and recovery cannot be fully understood by examining individual responses in isolation. Instead, the model suggests that individual differences in trauma responses and recovery are influenced by a range of contextual factors that either facilitate or impede the recovery process (Harvey, 1996). For example, a supportive social network can enhance resilience and recovery, whereas ongoing exposure to stressors or lack of support can hinder progress.

In the context of trauma recovery, Harvey's model aligns with broader discussions in the literature about the need for an integrated approach. Herman (1998) in *Psychiatry and Clinical Neurosciences* highlights the importance of addressing both the traumatic memories and the broader context in which they occur. Herman emphasizes that avoidance of traumatic memories can lead to stagnation in recovery, while confronting them too directly can be harmful. This aligns with the ecological view that recovery processes are influenced not just by the trauma itself but by the environment and support systems surrounding the individual.

Narrative methods further complement the ecological perspective by focusing on the individual's story and the meaning-making process in recovery. Hall's (2011) study in *Qualitative Health Research* illustrates how narrative approaches can uncover the complex ways in which individuals construct and reconstruct their experiences of trauma and recovery. This approach supports the ecological model by demonstrating that recovery involves an ongoing process of integrating traumatic experiences into one's life story, influenced by personal, social, and cultural contexts.

The idea of trauma recovery as a dynamic and contextually situated process is also reflected in the work of Joseph and Linley (2008), who explore positive psychological perspectives on trauma. In their book, they argue that resilience and growth following trauma are facilitated by a combination of individual strengths and supportive environments. This perspective reinforces the ecological model by highlighting that recovery is not solely about addressing trauma symptoms but also about leveraging personal and environmental resources to promote healing and growth (Joseph & Linley, 2008).

Calhoun and Tedeschi's (1998) article in the *Journal of Social Issues* extends the discussion by examining the implications for clinical practice and research. They propose that understanding the interaction between psychological well-being, distress, and posttraumatic growth requires a nuanced approach that considers the ecological context. Their work suggests that interventions need to address both the individual's internal processes and the external factors that influence recovery, thereby aligning with the ecological view of trauma recovery.

In contrast to these integrative perspectives, some models focus more narrowly on individual psychological processes or specific therapeutic techniques. For instance, Harris (1998) in *Trauma Recovery and Empowerment* provides a clinician's guide focused on group interventions for women, which, while valuable, may not fully encompass the broader ecological factors influencing recovery. Similarly, other studies like Fisher's (2000) on addictions and trauma recovery highlight specific therapeutic approaches without necessarily integrating the broader ecological perspective.

Overall, the ecological view of psychological trauma and recovery provides a holistic framework that acknowledges the complex interplay of individual, social, and environmental factors. This perspective is supported by a growing body of research highlighting the importance of considering these multidimensional influences in both understanding trauma and designing effective recovery interventions. By integrating individual psychological mechanisms with broader contextual factors, the ecological model offers a comprehensive approach to addressing the multifaceted nature of trauma and fostering effective recovery processes.

### 2.3 Emotional Regulation

Emotional regulation is a fundamental aspect of psychological functioning that involves managing and modulating emotional responses to achieve adaptive outcomes. The study of emotional regulation has evolved significantly, with research exploring its development, mechanisms, and implications across various contexts. This review synthesizes key findings from seminal and recent studies on emotional regulation, highlighting its developmental trajectory, biological underpinnings, and relevance in different domains.

One foundational work in the field is the review by RA Thompson (1991), which provides a comprehensive developmental outline of emotional regulation. Thompson emphasizes that emotional regulation is integral to emotional development, positing that it begins in infancy and evolves through complex interactions between biological and environmental factors. The review highlights that early emotional regulation is closely linked to the development of self-regulation skills and the capacity to manage emotional experiences effectively. Thompson also discusses how biological foundations, such as neural and physiological mechanisms, support the development of emotional self-regulation, underscoring the role of early caregiving environments in shaping these abilities.

Building on these foundational insights, more recent research has expanded our understanding of emotional regulation in specific contexts. For instance, Grandey (2000) explores the concept of emotional labor in the workplace and introduces emotional regulation as a crucial framework for understanding how employees manage their emotions in professional settings. Grandey's work integrates emotional regulation theory to elucidate the mechanisms through which emotional labor influences job satisfaction, performance, and overall well-being. The study underscores the importance of emotional regulation in navigating workplace demands and highlights how emotional strategies can mitigate the stress associated with emotional labor.

In the educational context, RE Sutton (2004) investigates the emotional regulation goals and strategies of teachers. Sutton's research reveals that teachers' emotional regulation is pivotal for maintaining effective classroom management and fostering a positive learning environment. The study examines various strategies teachers employ to regulate their emotions, including cognitive reappraisal and mindfulness practices. Sutton's findings contribute to understanding how emotional regulation in educators affects their interactions with students and their professional satisfaction, offering practical implications for teacher training and support.

The intersection of mindfulness and emotional regulation has also garnered significant attention. CLM Hill and JA Updegraff (2012) examine the relationship between mindfulness and emotional regulation, highlighting that mindfulness practices can enhance individuals' ability to manage their emotions. Their research shows that mindfulness improves emotion differentiation, reduces emotion lability, and mitigates emotional difficulties. This work supports the notion that mindfulness can be a valuable tool for enhancing emotional regulation and addressing emotional challenges across various life domains.

Automatic processes in emotion regulation are another area of interest. IB Mauss, SA Bunge, and JJ Gross (2007) distinguish between deliberate and automatic emotion regulation processes, arguing that automatic regulation involves subconscious mechanisms that influence emotional responses without conscious awareness. Their study provides a nuanced understanding of how automatic processes contribute to emotional regulation and underscores the importance of integrating these processes into comprehensive models of emotion regulation.

Further expanding on emotion regulation theories, JJ Gross (2008) presents a process model of emotion regulation in the "Handbook of Emotions." Gross's model outlines the stages of emotion generation and regulation, offering a framework for understanding how individuals can modify their emotional experiences through various strategies, such as reappraisal and suppression. This model has been instrumental in guiding subsequent research on the effectiveness of different emotion regulation strategies and their impact on psychological outcomes.

In addition, Campos, Frankel, and Camras (2004) challenge unitary approaches to emotion regulation by exploring the complex processes underlying emotion generation and regulation. Their research emphasizes the importance of understanding the interaction between emotion-generative processes and regulatory mechanisms, advocating for a more integrative approach to studying emotional development.

The effects of early caregiving on emotional regulation are also critical. Field (1994) examines how a mother's physical and emotional availability influences infant emotion regulation. Field's study highlights that disruptions in maternal availability can lead to difficulties in emotion regulation, emphasizing the role of early caregiving experiences in shaping emotional development.

In summary, the literature on emotional regulation and development reveals a multifaceted and dynamic field of study. Early research by Thompson laid the groundwork for understanding the developmental trajectory of emotional regulation, while subsequent studies have expanded our knowledge across different contexts, including the workplace, educational settings, and mindfulness practices. This body of research underscores the importance of both biological and environmental factors in shaping emotional regulation and provides valuable insights for practical applications in various domains.

Table 1 Literature Review Summary

| **A. Post-Traumatic Stress Disorder (PTSD)** | | |
|---|---|---|
| **Sl. No.** | **Findings** | **Authors** |
| 1 | Explores neurobiological aspects of PTSD, focusing on HPA axis dysregulation with altered hormone levels contributing to PTSD symptoms. | Yehuda, Hoge and McFarlane (2015) |
| 2 | Provides an overview of PTSD, emphasizing how extreme stressors like war and disasters trigger PTSD and the variability in individual responses. | Javidi and Yadollahie (2012) |
| 3 | Examines PTSD in the aftermath of the September 11 attacks, highlighting the challenges in treatment and the importance of effective interventions. | Yehuda (2002) |
| 4 | Addresses PTSD manifestation in children and adolescents, emphasizing the similarity in symptoms to adults and the need for age-appropriate interventions. | Yule and Smith (2015) |
| 5 | Discusses the clinical features of PTSD, including persistent reactivity, mood disturbances, and hypervigilance, and the need for comprehensive treatment. | Shalev, Liberzon, and Marmar (2017) |
| 6 | Provides epidemiological insights into the prevalence and factors influencing PTSD development, emphasizing the need for public health interventions. | Helzer, Robins and McEvoy (1987) |
| 7 | Reviews prevention and treatment strategies for PTSD, focusing on the effectiveness of CBT and pharmacological interventions. | Bisson (2007) |
| 8 | Explores the neuroendocrinological aspects of PTSD, discussing how stress impacts the neuroendocrine system and potential targeted treatments. | Pervanidou and Chrousos (2010) |
| 9 | Focuses on biological studies of PTSD, reviewing biological markers and mechanisms associated with the disorder. | Pitman et al. (2012) |
| | | |
| **B. Trauma Recovery** | | |
| **Sl. No.** | **Findings** | **Authors** |
| 1 | Presents an ecological model of trauma, integrating individual, familial, community, and societal factors in understanding trauma and recovery. | Harvey (1996) |
| 2 | Emphasizes the importance of addressing traumatic memories and broader contextual factors in recovery, aligning with the ecological model. | Herman (1998) |
| 3 | Highlights the role of narrative methods in trauma recovery, focusing on how individuals reconstruct their trauma experiences. | Hall (2011) |
| 4 | Explores positive psychological perspectives on trauma, emphasizing resilience and growth through individual strengths and supportive environments. | Joseph & Linley (2008) |
| 5 | Examines the implications for clinical practice, suggesting that interventions should address both internal processes and external contextual factors. | Calhoun & Tedeschi (1998) |
| 6 | Focuses on group interventions for women, which, while valuable, may not fully address broader ecological factors influencing recovery. | Harris (1998) |
| 7 | Investigates specific therapeutic approaches in addiction and trauma recovery, without integrating the broader ecological perspective. | Fisher (2000) |

| C. Emotional Regulation | | |
|---|---|---|
| **Sl. No.** | **Findings** | **Authors** |
| 1 | Provides a developmental outline of emotional regulation, highlighting its evolution from infancy and its linkage to self-regulation skills. | Thompson (1991) |
| 2 | Introduces the concept of emotional labor in the workplace, emphasizing the role of emotional regulation in job satisfaction and performance. | Grandey (2000) |
| 3 | Investigates the emotional regulation goals and strategies of teachers, revealing their impact on classroom management and professional satisfaction. | Sutton (2004) |
| 4 | Examines the relationship between mindfulness and emotional regulation, showing how mindfulness practices enhance emotion management. | Hill & Updegraff (2012) |
| 5 | Distinguishes between deliberate and automatic emotion regulation processes, emphasizing the role of subconscious mechanisms. | Mauss, Bunge, Gross (2007) |
| 6 | Presents a process model of emotion regulation, outlining stages of emotional experiences and strategies like reappraisal and suppression. | Gross (2008) |
| 7 | Challenges unitary approaches to emotion regulation by exploring the interaction between emotion-generative processes and regulatory mechanisms. | Campos, Frankel, Camras (2004) |
| 8 | Examines how early caregiving influences infant emotion regulation, emphasizing the role of maternal availability in emotional development. | Field (1994) |

## 3. NEED FOR THE STUDY

The need for this study stems from the rising prevalence of Post-Traumatic Stress Disorder (PTSD) and the limitations of traditional treatment methods. Mindfulness-Based Interventions (MBIs) have emerged as a potential therapeutic alternative, but empirical evidence on their effectiveness remains limited. This study aims to address this gap by exploring how MBIs can alleviate PTSD symptoms, providing insights into their practical application. Understanding the impact of MBIs could lead to more effective, accessible treatment options for individuals suffering from PTSD, ultimately improving mental health outcomes and contributing to the broader field of trauma recovery.

## 4. OBJECTIVES

(1) To evaluate the effectiveness of mindfulness-based interventions in alleviating symptoms of Post-Traumatic Stress Disorder (PTSD).
(2) To explore the specific mechanisms through which mindfulness-based interventions contribute to symptom reduction in PTSD.
(3) To identify any demographic or individual factors that may influence the efficacy of mindfulness-based interventions in treating PTSD

## 5. METHODOLOGY

The methodological approach in this case study is an intrinsic case study, aiming to explore the role of mindfulness-based interventions in reducing symptoms of Post-Traumatic Stress Disorder (PTSD). The philosophical paradigm guiding this study is positivism, which emphasizes objective measurement and the analysis of quantifiable data. This intrinsic case study method is chosen to provide a comprehensive understanding of a single, unique case within the broader phenomenon of PTSD and mindfulness interventions.

### 5.1 Case Selection

A single case study was selected to investigate the impact of mindfulness-based interventions on PTSD symptoms. The subject, referred to as "Anu," is a 26-year-old woman with a history of PTSD. Her background includes significant trauma resulting from her father's suicide, and she has exhibited a range of PTSD symptoms such as intrusive thoughts, hypervigilance, and avoidance behavior.

Table 2 Data Collection and Assessment Phases:

| Phases | Description | Duration | Tool Used |
|---|---|---|---|
| Phase 1: Initial Assessment | Initial evaluation of PTSD symptoms and establishment of rapport with the subject. | 1 week | ▪ Clinical interview PTSD Checklist for DSM-5, Post-Traumatic Stress Disorder Checklist (PCL-5) Genogram |
| Phase 2: Intervention | Implementation of mindfulness-based interventions and regular monitoring of symptoms. | 2 months | ▪ Mindfulness-Based Stres Reduction (MBSR) Daily symptom tracking Self-repor diaries |
| Phase 3: Mid-Term Evaluation | Continued application of mindfulness techniques and adjustment based on symptom progression. | 3 months | ▪ Modified PCL-5 Weekly symptom tracking Qualitative interviews |
| Phase 4: Follow-Up | Final assessment of symptom reduction and overall effectiveness of the intervention. | 3 months | ▪ Final PCL-5 Long-term symptom tracking Post-intervention interviews |

### 5.2 Data Collection Time Horizon

The study employs a longitudinal approach to track changes in PTSD symptoms over time. Regular assessments are conducted to capture variations and improvements in symptoms throughout the intervention period.

### 5.3 Sample

The study focuses on a single participant, Anu, who has been receiving therapeutic and pharmacological treatment for PTSD. Her prolonged history of PTSD and her response to the mindfulness-based intervention provide a unique opportunity to assess the effectiveness of such treatments in reducing PTSD symptoms.

### 5.4 Evaluation Metrics

a) **Pre-Intervention Assessment:** Baseline PTSD symptoms measured using the PCL-5.
b) **Post-Intervention Assessment:** Comparison of PTSD symptoms using follow-up PCL-5 scores and qualitative feedback from the participant.

The use of both quantitative (PCL-5 scores) and qualitative (interviews, self-report diaries) methods allows for a thorough evaluation of the intervention's impact. The semi-structured interviews and self-report diaries provide additional context and insights into the participant's experiences and symptom changes.

This case study aims to contribute to the understanding of mindfulness-based interventions in PTSD treatment and to highlight potential areas for future research and therapeutic practices.

## 6. Findings, Results, and Analysis

In this article, a detailed case study is presented to investigate the role of mindfulness-based interventions in reducing symptoms of Post-Traumatic Stress Disorder (PTSD). The study focuses on a single patient who was treated at Serenity Counseling Center over a period of 18 months, from January 2022 to June 2023. This case was selected due to the complexity and severity of the patient's PTSD symptoms, which had proven resistant to traditional therapies.

The patient, a 26-year-old female, had previously undergone various forms of therapy, including cognitive-behavioral therapy (CBT) and pharmacotherapy, without significant improvement. The treatment plan in this case study incorporated mindfulness-based interventions alongside conventional methods. The intervention included Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy (MBCT), which were integrated with ongoing CBT and pharmacotherapy.

The patient's initial assessment using the PTSD Checklist for DSM-5 (PCL-5) revealed a high level of symptom severity (PCL-5 score: 62), indicative of severe PTSD. Over the course of 12 weeks, the patient participated in weekly mindfulness sessions and practiced mindfulness techniques daily at home. Follow-up assessments were conducted every month to monitor progress.

After 12 weeks of mindfulness-based interventions, the patient's PCL-5 score decreased to 45, reflecting a moderate reduction in PTSD symptoms. Continued mindfulness practice and follow-up sessions for an additional 6 months resulted in further improvement, with the PCL-5 score dropping to 30, indicating a significant

reduction in symptom severity. By the end of the 18-month period, the patient's symptoms were classified as mild, with a final PCL-5 score of 22.

The results of this case study highlights the effectiveness of integrating mindfulness-based interventions with traditional PTSD treatments. The patient's substantial improvement over the treatment period highlights the potential of mindfulness practices in enhancing symptom management and overall mental well-being.

## 7. Conclusion

This case study has demonstrated that mindfulness-based interventions (MBIs) can significantly reduce symptoms of Post-Traumatic Stress Disorder (PTSD). Through a combination of mindfulness techniques and therapeutic support, patients experienced notable improvements in their PTSD symptoms (Fortuna, Porche, and Padilla, 2018). The integration of MBIs with conventional therapies provided a holistic approach to treatment, addressing both the psychological and emotional aspects of PTSD. This approach not only offered immediate relief but also fostered long-term resilience and well-being among patients. The findings highlight the potential of MBIs as a valuable component in the broader spectrum of PTSD treatment strategies.

## 8. Suggestions

(1) **Training for Practitioners:** Clinicians and therapists should receive specialized training in mindfulness-based interventions to effectively incorporate these techniques into their treatment plans for PTSD patients (Davis et al., 2019).
(2) **Incorporation of MBIs:** Mental health professionals should consider integrating mindfulness practices into standard PTSD treatment protocols, as they have been shown to complement traditional therapies and enhance overall treatment efficacy (ElKayal and Metwaly, 2022).
(3) **Motivational Strategies:** Employing motivational interviewing and other engagement strategies can improve patient adherence to mindfulness-based treatments and facilitate better outcomes (Hopwood and Schutte, 2017).

## 9. Limitations of the Research

(1) **Sample Size:** The case study was based on a single patient, which limits the generalizability of the findings. A larger sample size would provide more robust evidence of the effectiveness of MBIs in treating PTSD.
(2) **Treatment Duration:** The study focused on a relatively short-term intervention. Long-term efficacy and sustainability of mindfulness-based treatments require further investigation.
(3) **Resource Intensity:** Mindfulness-based interventions can be resource-intensive and may not be accessible to all patients, particularly those with financial constraints.
(4) **Confidentiality Concerns:** While supportive therapeutic measures are crucial, there is a potential risk of confidentiality breaches that must be managed carefully.
(5) **Variation in Patient Response:** Individual differences in response to MBIs may affect the overall assessment of their effectiveness. Tailoring interventions to individual needs may improve outcomes.

## 10. Scope for Further Research

(1) **Broader Trials:** Future research should include larger and more diverse samples to validate the findings and assess the generalizability of mindfulness-based interventions for PTSD.
(2) **Long-Term Studies:** Conducting longitudinal studies will help determine the long-term effects of mindfulness-based interventions and their sustainability over time.
(3) **Comparative Studies:** Comparative research between MBIs and other therapeutic approaches can provide insights into the relative effectiveness of mindfulness-based treatments for PTSD.
(4) **Integration Models:** Exploring different models for integrating mindfulness techniques with other therapeutic modalities can enhance treatment protocols and patient outcomes.

## References

[1] Azad Marzabadi, E., and Hashemi Zadeh, S. M. 2014. The effectiveness of mindfulness training in improving the quality of life of the war victims with post traumatic stress disorder (PTSD). *Iran J Psychiatry*, *9*(4), 228-36.
[2] Azadmarzabadi, E. 2013. The effectiveness of mindfulness training on psychological symptoms in veterans with post-traumatic stress disorder. *International Journal of Behavioral Sciences*, *7*(1), 67-74.
[3] Azulay, J., Smart, C. M., Mott, T., & Cicerone, K. D. 2013. A pilot study examining the effect of mindfulness-based stress reduction on symptoms of chronic mild traumatic brain injury/postconcussive syndrome. *The Journal of head trauma rehabilitation*, *28*(4), 323-331.

[4] Banks, K., Newman, E., & Saleem, J. 2015. An overview of the research on mindfulness-based interventions for treating symptoms of posttraumatic stress disorder: A systematic review. *Journal of clinical psychology*, *71*(10), 935-963.

[5] Bisson, J. I. 2007. Prevention and treatment of post-traumatic stress disorder: A review. BMJ, *334*(7592), 319-322.

[6] Boyd, J. E., Lanius, R. A., & McKinnon, M. C. 2018. Mindfulness-based treatments for posttraumatic stress disorder: a review of the treatment literature and neurobiological evidence. *Journal of Psychiatry and Neuroscience*, *43*(1), 7-25.

[7] Bremner, J. D., Mishra, S., Campanella, C., Shah, M., Kasher, N., Evans, S., ... & Carmody, J. 2017. A pilot study of the effects of mindfulness-based stress reduction on post-traumatic stress disorder symptoms and brain response to traumatic reminders of combat in Operation Enduring Freedom/Operation Iraqi Freedom combat veterans with post-traumatic stress disorder. *Frontiers in psychiatry*, *8*, 157.

[8] Calhoun, L. G., & Tedeschi, R. G. 1998. Beyond recovery from trauma: Implications for clinical practice and research. *Journal of Social Issues*, *54*(3), 393-410. Wiley Online Library.

[9] Campos, J. J., Frankel, C. B., & Camras, L. A. 2004. On the nature of emotion regulation. *Child Development*, *75*(2), 377-400.

[10] Cole, M. A., Muir, J. J., Gans, J. J., Shin, L. M., D'Esposito, M., Harel, B. T., & Schembri, A. 2015. Simultaneous treatment of neurocognitive and psychiatric symptoms in veterans with post-traumatic stress disorder and history of mild traumatic brain injury: A pilot study of mindfulness-based stress reduction. *Military medicine*, *180*(9), 956-963.

[11] Daigneault, I., Dion, J., Hébert, M., & Bourgeois, C. 2016. Mindfulness as mediator and moderator of post-traumatic symptomatology in adolescence following childhood sexual abuse or assault. *Mindfulness*, *7*, 1306-1315.

[12] Davis, L. L., Whetsell, C., Hamner, M. B., Carmody, J., Rothbaum, B. O., Allen, R. S., ... & Bremner, J. D. 2019. A multisite randomized controlled trial of mindfulness-based stress reduction in the treatment of posttraumatic stress disorder. *Psychiatric research and clinical practice*, 1(2), 39-48.

[13] Dumarkaite, A., Truskauskaite-Kuneviciene, I., Andersson, G., & Kazlauskas, E. 2022. The effects of online mindfulness-based intervention on posttraumatic stress disorder and complex posttraumatic stress disorder symptoms: A randomized controlled trial with 3-month follow-up. *Frontiers in psychiatry*, *13*, 799259.

[14] Dumarkaite, A., Truskauskaite-Kuneviciene, I., Andersson, G., Mingaudaite, J., & Kazlauskas, E. 2021. Effects of mindfulness-based internet intervention on ICD-11 posttraumatic stress disorder and complex posttraumatic stress disorder symptoms: a pilot randomized controlled trial. *Mindfulness*, *12*, 2754-2766.

[15] Duran, É. P., Hemanny, C., Vieira, R., Nascimento, O., Machado, L., de Oliveira, I. R., & Demarzo, M. 2022. A randomized clinical trial to assess the efficacy of online-treatment with trial-based cognitive therapy, mindfulness-based health promotion and positive psychotherapy for post-traumatic stress disorder during the COVID-19 pandemic: A study protocol. *International journal of environmental research and public health, 19*(2), 819.

[16] ElKayal, M. M., & Metwaly, S. M. 2022. Effectiveness of mindfulness-based intervention on post-traumatic stress symptoms among emergency nursing students. *Middle East Current Psychiatry*, *29*(1), 40.

[17] Field, T. 1994. The effects of mother's physical and emotional unavailability on emotion regulation. *Monographs of the Society for Research in Child Development*, *59*(2-3), 217-232.

[18] Fisher, J. 2000. Addictions and trauma recovery. *International Society for the Study of Dissociation*.

[19] Fortuna, L. R., Porche, M. V., & Padilla, A. 2018. A treatment development study of a cognitive and mindfulness-based therapy for adolescents with co-occurring post-traumatic stress and substance use disorder. *Psychology and Psychotherapy: Theory, Research and Practice*, *91*(1), 42-62.

[20] Gallegos, A. M., Lytle, M. C., Moynihan, J. A., & Talbot, N. L. 2015. Mindfulness-based stress reduction to enhance psychological functioning and improve inflammatory biomarkers in trauma-exposed women: A pilot study. *Psychological Trauma: Theory, Research, Practice, and Policy, 7*(6), 525.

[21] Goldsmith, R. E., Gerhart, J. I., Chesney, S. A., Burns, J. W., Kleinman, B., & Hood, M. M. 2014. Mindfulness-based stress reduction for posttraumatic stress symptoms: Building acceptance and decreasing shame. *Journal of evidence-based complementary & alternative medicine*, *19*(4), 227-234.

[22] Grandey, A. A. 2000. Emotional regulation in the workplace: A new way to conceptualize emotional labor. *Journal of Occupational Health Psychology*, *5*(1), 95-110.

[23] Gross, J. J. 1999. Emotion regulation: Past, present, future. *Cognition & Emotion*, *13*(5), 551-573.
[24] Gross, J. J. 2008. Emotion regulation. In M. Lewis, J. M. Haviland-Jones, & L. F. Barrett (Eds.), *Handbook of emotions* (3rd ed., pp. 497-513). The Guilford Press.
[25] Gross, J. J. 2015. Emotion regulation: Current status and future prospects. *Psychological Inquiry*, *26*(1), 1-26. https://doi.org/10.1080/1047840X.2015.968930
[26] Haider, T., Dai, C. L., & Sharma, M. (2021). Efficacy of Meditation-Based Interventions on Post-Traumatic Stress Disorder (PTSD) Among Veterans: A Narrative Review. *Adv. Mind Body Med*, *35*, 16-24.
[27] Hall, J. M. 2011. Narrative methods in a study of trauma recovery. *Qualitative Health Research*, *21*(5), 654-664.
[28] Harding, K., Simpson, T., & Kearney, D. J. 2018. Reduced symptoms of post-traumatic stress disorder and irritable bowel syndrome following mindfulness-based stress reduction among veterans. *The Journal of Alternative and Complementary Medicine*, *24*(12), 1159-1165.
[29] Harper, L., Jones, A., Goodwin, L., & Gillespie, S. 2022. Association between trait mindfulness and symptoms of post-traumatic stress: A meta-analysis. *Journal of psychiatric research, 152*, 233-241.
[30] Harris, M. 1998. Trauma recovery and empowerment: A clinician's guide for working with women in groups. Routledge.
[31] Harvey, M. R. 1996. An ecological view of psychological trauma and trauma recovery. *Journal of Traumatic Stress*, *9*(1), 3-23. Wiley Online Library.
[32] Helzer, J. E., Robins, L. N., & McEvoy, L. T. 1987. Post-traumatic stress disorder in the general population. *New England Journal of Medicine, 317*(26), 1630-1634.
[33] Herman, J. L. 1998. Recovery from psychological trauma. *Psychiatry and Clinical Neurosciences*, 52(2), 149-157. Wiley Online Library.
[34] Hill, C. L. M., & Updegraff, J. A. 2012. Mindfulness and its relationship to emotional regulation. *Emotion, 12*(3), 425-432. https://doi.org/10.1037/a002679
[35] Hopwood, T. L., & Schutte, N. S. 2017. A meta-analytic investigation of the impact of mindfulness-based interventions on post traumatic stress. *Clinical psychology review*, *57,* 12-20.
[36] Horesh, D., & Gordon, I. 2018. Mindfulness-based therapy for traumatized adolescents: An underutilized, understudied intervention. *Journal of Loss and Trauma*, *23*(8), 627-638.
[37] Jasbi, M., Sadeghi Bahmani, D., Karami, G., Omidbeygi, M., Peyravi, M., Panahi, A., ... & Brand, S. 2018. Influence of adjuvant mindfulness-based cognitive therapy (MBCT) on symptoms of post-traumatic stress disorder (PTSD) in veterans–results from a randomized control study. *Cognitive behaviour therapy*, *47*(5), 431-446.
[38] Javidi, H., & Yadollahie, M. 2012. Post-traumatic stress disorder. *Journal of Research in Medical Sciences*, *17*(6), 537-540.
[39] Joseph, S., & Linley, P. A. 2008. Trauma, recovery, and growth: *Positive psychological perspectives on posttraumatic stress*. John Wiley & Sons.
[40] Kalill, K. S., Treanor, M., & Roemer, L. 2014. The importance of non-reactivity to posttraumatic stress symptoms: A case for mindfulness. *Mindfulness, 5,* 314-321.