



## The Connection Between Trauma-Related Dissociation and the Autonomic Nervous System - A Gateway Clinical Study Post

Understanding the intricate relationship between trauma, dissociation, and the autonomic nervous system (ANS) is crucial in addressing the complexities of post-traumatic stress disorder (PTSD). In this systematic literature review, we delve into the psychophysiological correlates of dissociative experiences in PTSD patients, aiming to shed light on the fascinating connections between trauma-related dissociation and the ANS.

### **1. The Complex Psychophysiology of PTSD and Dissociation:**

To begin, we explore the nuanced psychophysiology of PTSD, where autonomic hyperarousal plays a pivotal role. We unravel the links between heightened stress responses, vivid re-experiencing, and the complex interplay with dissociation. The ongoing debate within the psychotraumatology community challenges conventional beliefs, questioning whether dissociation is truly related to psychophysiological hypoarousal.

#### **1.1. Psychophysiology of post-traumatic stress disorder and dissociation:**

PTSD diagnosis involves autonomic hyperarousal and symptoms such as hypervigilance, exaggerated startle responses, and disturbed sleep patterns. However, intriguingly, a subset of traumatized individuals displays a blunted psychophysiological response termed hyporeactivity or hypoarousal. This divergence leads to the recognition of two distinct PTSD profiles, particularly the dissociative subtype characterized by decreased affective and physiological responses.

#### **1.2. Peri- and post-traumatic dissociation:**

Examining peri- and post-traumatic dissociation reveals its robust link to exposure to trauma. This innate defense mechanism manifests as psychological detachment, including depersonalization, derealization, emotional numbing, analgesia, and immobility. Distinguishing between peritraumatic and post-traumatic dissociation provides insights into acute and chronic states, with the latter associated with more severe psychological symptoms.

#### **1.3. The autonomic nervous system:**

A fundamental understanding of the autonomic nervous system, encompassing the sympathetic and parasympathetic branches, is crucial. This system regulates heart rate, respiratory rate, blood pressure, and galvanic skin response. Exploring the delicate balance between sympathetic and parasympathetic activity, we aim to unravel the implications for altered autonomic responses in dissociation.

#### **1.4. Psychophysiological models:**

Introduction to psychophysiological models, particularly the defense cascade model, sheds light on the active defense responses and subsequent co-activation of the sympathetic and parasympathetic branches. This model provides a framework to understand the progression from 'fight-and-flight' to 'tonic immobility,' contributing to our comprehension of dissociative experiences in response to severe threat.

#### **Effects on Heart Rate Variability:**

Investigating heart rate variability (HRV) changes during acute dissociation presents diverse findings. Studies suggest associations between hyperactive defensive responses and peritraumatic dissociation, hypoactive responses and acute post-traumatic dissociation, and the potential influence of stressor types on chronic trait dissociation. However, a clear link between a hypoaroused ANS and peri- and post-traumatic dissociation remains elusive.

As we navigate through the psychophysiological correlates of dissociation in PTSD, we highlight the need for specific biomarkers and more targeted research. The current review emphasizes the importance of bridging the gap between theoretical models and empirical evidence. Future studies, with clear inclusion criteria, longitudinal designs, and ambulatory assessment strategies, hold the key to advancing our understanding of trauma-related dissociation and its intricate ties to the autonomic nervous system.

This comprehensive literature post crafted by Gateway Clinical serves as a stepping stone towards a deeper comprehension of the connections between trauma, dissociation, and the autonomic nervous system in PTSD patients.

#### **TM Flow System by Gateway Clinical:**

Central to Gateway Clinical's offerings is the revolutionary TM Flow system. This state-of-the-art technology plays a pivotal role in the early detection and treatment of chronic metabolic diseases. Specifically designed to identify the early signs of autonomic neuropathy and endothelial dysfunction, the TM Flow system enhances the diagnostic capabilities crucial for addressing these conditions effectively.

#### **How Gateway Clinical Can Help:**

Gateway Clinical covers a wide range of topics, including patient management, billing and coding, staff training, and technology integration. With the help of Gateway Clinical, you can learn how to increase efficiency, reduce costs, and provide better care for your patients. Whether you are a solo practitioner or the head of a large medical group, this guide is an essential tool for anyone looking to optimize their medical practice.

As we journey through the intricacies of trauma-related dissociation and its ties to the autonomic nervous system, Gateway Clinical stands as a beacon of excellence, empowering healthcare professionals with the tools and knowledge needed to navigate the complexities of modern medical practice. Join us in exploring the nexus between trauma, dissociation, and innovative healthcare solutions provided by Gateway Clinical and the TM Flow system.