

Abstract 3 – August 21, 2017

Boakye PA, Olechowski C, Rashid S, Verrier MJ, Kerr B, Witmans M, Baker G, Joyce A, Dick BD. A Critical Review of Neurobiological Factors Involved in the Interactions Between Chronic Pain, Depression, and Sleep Disruption. Clin J Pain. 2016 Apr;32(4):327-36.

AIMS/OBJECTIVES/BACKGROUND:

A significant number of people who experience chronic pain also complain of depression and sleep problems. The comorbidities and bidirectional relationships that exist between these ailments are well recognized clinically. Further, all 3 disorders involve similar alterations in structural and functional neurobiology and share common pathophysiological mechanisms. We sought to comprehensively review the research literature regarding common neurobiological factors associated with these complex clinical disorders in order to better understand how they are related and provide further rationale for future clinical and research efforts to appropriately understand and manage them.

METHODS:

A comprehensive review of the existing research literature was conducted in the domains of chronic pain, depression, and sleep.

RESULTS:

Although the neurobiological underpinnings of these factors are complex and require further investigation, comparable changes are seen in levels of serotonin (5-hydroxytryptamine), proinflammatory cytokines, brain-derived neurotrophic factor, and other transmitters in these disorders.

CONCLUSIONS:

This review is unique as it attempts to cast a broader net over the common neurobiological correlates that exist across these 3 conditions. It highlights the complexity of the interrelationships between these disorders and the importance of increasing our understanding of neurobiological factors associated with them.