Abstract Template

Abstract Title: A Meta-Analytic Review of the Effectiveness of Interventions for Traumatic Brain Injury with Sleep Disturbance

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Abstract (not more than 300 words)

Background: Sleep disturbance among individuals with traumatic brain injury (TBI) is a leading cause of disability with millions of Americans affected each year. Sleep disturbance can impede the healing process of TBI patients, negatively impacting their cognition, mood, appetite, motivation, personality, and overall functioning. Understanding the neurological impact of traumatic brain injury and the effectiveness of various treatment options (exercise, medication, CBT-I) is important for clinicians since rates of TBI are expected to rise as the nation ages.

Methods: Searches for articles were conducted using the MEDLINE, PsycINFO, PubMed, and PsycARTICLES databases. The following search terms were used: "traumatic brain injury," "concussion," "head injuries," "insomnia," "brain trauma," and "brain injury." Effect sizes from each of the articles were calculated using Cohen's *d*, then combined via weighted averaging to find an overall effect size for all interventions implemented.

Results: The total effect size for interventions implemented to treat insomnia associated with traumatic brain injury was 0.36, a small overall effect size for this meta-analysis. Cognitive Behavioural Therapy for Insomnia (CBT-I) was found to be the most effective form of treatment for individuals with TBI.

Discussion/Implications: While there is no current gold standard of treatment for traumatic brain injury (TBI) with sleep disturbance, CBT-I is an evidence-based treatment methodology that has been found to be effective for this population. However, without more data and research, information and literature on sleep disturbance among individuals with TBI will remain limited and patients will continue to receive uninformed, mismanaged, and non-comprehensive care.

Keywords— *Traumatic brain injury, cognitive behavioural therapy, insomnia, treatment*

Professional Biography (100-150 words)

Kami L. McManus is in her fourth year of doctoral studies in Clinical Psychology at Immaculata University located in Philadelphia, PA (U.S.A). She has a background in gender studies, human sexuality, and marriage and family therapy, but has been focusing her research and clinical work in sleep medicine. She currently serves the University of Pennsylvania's sleep behavioural medicine program as a CBT-I therapist and is also a therapist for the

University of Pennsylvania's center for women's behavioural wellness. Her doctoral dissertation will explore the neurocognitive impact of obstructive sleep apnea, with the intent to pursue neuropsychology and sleep medicine as a career. She is a member of the Society for Behavioural Sleep Medicine, the Philadelphia Neuropsychology Society, and the American Psychological Association.

