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“Relationship Between Perceived Stress and Cognitive Impairment in Parkinson’s Disease”

Background: Parkinson’s disease is a neurodegenerative condition that is characterized by myriad symptoms which include motor dysfunction, speech disorders, swallowing problems, and cognitive decline among many others. Parkinson’s disease affects around 6 million people worldwide, and the prevalence of Parkinson’s disease increases with age (Bloem et al., 2021). The disease is associated with a loss of dopaminergic neurons in the substantia nigra, leading to a depletion of dopamine, which is responsible for the motor dysfunctions (Bartels & Leenders, 2008). Initial diagnosis requires presentation of bradykinesia, which is slowness in movement, and either muscular rigidity, a tremor, or postural instability (Sveinbjornsdottir, 2016). The clinical presentation of Parkinson’s disease is highly variable, but the motor symptoms can greatly disrupt the overall daily functioning of patients with this disease. It is thought that chronic stress worsens both motor and non-motor (cognitive) symptoms of Parkinson’s disease and could even potentially be a trigger for the condition (Djamshidian & Lees, 2013). The objective of this study is to examine whether perceived stress in Parkinson’s patients is correlated with severity of cognitive impairment.

Methods: Participants diagnosed with Parkinson’s disease that were enrolled in our study completed both a cognitive assessment, the Montreal Cognitive Assessment (MoCA), and a stress assessment, the Perceived Stress Scale (PSS). Analyses were completed to investigate the hypothesis that higher levels of perceived stress will be associated with worse performance on the MoCA.

Resources:

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- Bloem, B. R., Okun, M. S., & Klein, C. (2021). Parkinson's Disease. *The Lancet*, 397, 2284-2303. doi:10.1016/S0140-6736(21)00218-X.
- Djamshidian, A. & Lees, A. (2013). Can stress trigger Parkinson's disease? *Journal of Neurosurgery, Neurology, and Psychiatry*, 85, 879-882. doi:10.1136/jnnp-2013-305911.
- Sveinbjornsdottir, S. (2016). The clinical symptoms of Parkinson's disease. *Journal of Neurochemistry*, 139, 318-324 doi: 10.1111/jnc.13691.