

Original Work Proposal

One of the most prominent neurodegenerative diseases today is Parkinson's disease. Parkinson's disease (PD) is a neurodegenerative disorder featuring progressive loss of midbrain dopaminergic (DA) neurons that leads to motor symptoms. Parkinson's disease is an age-related neurodegenerative disorder with increasing prevalence, disability, and deaths worldwide due to the rise of the aging population. As there is a rise in the population of people of older ages, there is a rise in Parkinson's and other neurodegenerative diseases. A potential method to decrease the number of cases and even prevent deaths is to find ways to diagnose the disease early as well as creating more efficient methods of diagnosing as a whole; an earlier diagnosis leads to earlier treatment.

As I research this topic, I plan to find and gather data on multiple research articles and studies that detail the methods in which Parkinson's disease can be diagnosed and potential early biomarkers/causes for the disease. I will research the properties of different causes and diagnosing methods that make them significant. Finally, with this data, I will be able to determine ways in which Parkinson's disease can be diagnosed earlier and more efficiently which in the long run may lead to a decrease in deaths.

The data would be determined through the use of a trial system from various research articles in which different causes and methods of diagnosing are compared to find the most efficient. After reviewing these trials, it can be determined whether or not the study yielded results. If one of the methods or causes proves to be efficient, then a conclusion can be reached concerning Parkinson's disease diagnoses.

Once the data is collected, I will compile the data and determine a method to diagnose Parkinson's earlier as well as diagnose Parkinson's with a higher success rate. I will take into account the economic feasibility as well as how I will be able to spread this information to medical professionals to put to use with their patients.

Through conducting this research, I wish to be able to find a method/system that can efficiently diagnose patients with PD earlier thus allowing them to get treatment earlier and possibly decreasing the mortality rate of the disease. If the studies yield results, I will determine the methods of implementation of the systems in real life. With the findings of my research,

many patients may be able to get an earlier diagnosis and be treated earlier before later stages of the disease.