# A research on the relationship between Age(gender) and the incident rate of the Parkinson’s disease

Yundi Zhou(Dino), Hao Huo(Emery), Yushu WU(Nathan)

G12 AP Statistics

Beijing National Day School, Beijing China

Proposal:

1.Research question:

The group will investigate the statistical relationship between age and the indent rate of Parkinson’s disease. We noticed that several factors contributed to the incident of Parkinson’s disease, including age, gender, genetic factor and so on. In this case, we decide to put our focus on the relationship between age and the incident of Parkinson Disease.

2.Background research:

Idiopathic Parkinson's disease is a degenerative neurological disorder classically presenting in old or late middle age, The brain shows characteristic ell loss and depigmentation in pigmented brain stem nuclei. The presence of rounded eosinophilic intra-cytoplasmic inclusions, known as Lewy bodies, in some of the affected neurons is a sine qua non for definitive pathological diagnosis.(N. P. Quinn, 1986)

3.Sampling and experiment design:

Independent Variables: People’s Age

Dependent Variables: The Indent rate of Parkinson Diseases.

Type of Studies：Observational Studies because there is no treatments or placebo in this studies. We will randomly select the clinical history of patients in the neurology departement from the Tiantan Hospital and detect the relationship between the ages and the indent rate of Parkinson Diseases.

Data Selection: We will record the ages of people who had Parkinson Diseases by randomly selecting the clinical history and find the relationship.

Scope of Inference: These data can collect the relationship of people who had Parkinson diseases from all Chinese population.

5. Group Task Assignments and Timeline：

In this project, Dino is responsible for the introduction part and data gathering part, Emery design the study and come up with the conclusion, Nathan will analyze the data. The proposal and data collection will be done by May 18th. The main research part will be done May 25th, and the project will be finished by may 27th.

7. References:

Quinn, N. P., and F. A. Husain. “Parkinson’s Disease.” *British Medical Journal (Clinical Research Edition)*, vol. 293, no. 6543, 1986, pp. 379–82. *JSTOR*, http://www.jstor.org/stable/29524136. Accessed 18 May 2023.