

**Applicant**

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**Project Title**

Investigating if Visual Acuity Mediates the Relationship between Chronic Kidney Disease and Cognitive Decline: A Causal Analysis from the Canadian Longitudinal Study on Aging

**Project Summary**

Kidneys remove waste products and excess fluid from the body. Chronic kidney disease (CKD) occurs when this capacity decreases below a certain level. The presence of CKD not only affects the kidneys but also the brain, with a high proportion of individuals with CKD developing cognitive impairment like dementia. However, the relationship between kidney and cognitive impairment remains poorly understood. A major issue with previous studies investigating kidney function and cognition is that they overlooked the impact of visual impairment. The presence of visual impairment and eye diseases may affect the individual's ability to perform well on cognitive tasks. The objective of this research proposal is to study how visual acuity affects the relationship between kidney function and cognitive decline in individuals from the CLSA cohort.

**Keywords**

CKD, Visual acuity, Cognitive impairment