

Applicant

Dr. Nadine Akbar, Humber River Hospital

E-mail Address

nakbar@hrh.ca

Project Title

The relationship between body mass index and cognitive function among those with severe obesity: The potential role of inflammatory markers

Project Summary

Obesity has been established as a risk factor for Alzheimer's disease (AD). However, the reason for this link is not fully understood. The current study will look at the relationship between body mass index (BMI)/obesity level and memory function using CLSA dataset. It will also compare memory function between those with severe obesity (a population that has been largely understudied) and those with a normal BMI. It is hypothesized that obesity is associated with Alzheimer's disease because it is associated with imbalances in gut bacteria (dysbiosis) that leads to greater inflammation. This inflammation then leads to worse cognitive function. To investigate this hypothesis, we will examine directly how inflammation, as measured using biomarkers of Interleukin 6 (IL-6) and tumor necrosis factor alpha (TNF-alpha), influence the relationship between BMI and memory function among those with severe obesity. This information will help further understand the mechanisms linking obesity with AD.

Keywords

Body mass index, Obesity, Cognition, Memory, Inflammation