Working Title: The Association of Autoimmune Disease with Cognitive Processing Speed

Primary Author Name: Alexandra Orozco (biology honors student), Chandra Reynolds

Potential Co Author(s) (enter none if not applicable): Shandell Pahlen, Robin Corley, Sally Wadsworth

Abstract

Among the extensive list of changes involved in the natural aging process are changes in cognitive functioning-- a broad term used to describe the mental operations necessary for acquiring and processing information. Characterized by a gradual decline in an individual’s cognitive domains, such as processing speed, cognitive aging is often associated with an increased risk of developing age-related diseases. At the forefront of this public health concern is Alzheimer’s disease, a debilitating condition marked by impaired mental processing, memory loss, and personality change. A growing body of research suggests that neuroinflammation may play a critical role in the development and severity of Alzheimer’s disease. Inflammatory processes underlie autoimmune diseases and studies focused on specific autoimmune conditions have observed poorer performance (compared to unaffected individuals) on tasks tapping processing speed among other cognitive domains. We will investigate the connection between neuroinflammation resulting from autoimmune conditions and cognitive performance by analyzing data collected by CATSLife. Through self-reported questionnaires and in-person testing, thorough profiles of the participants’ health and cognitive functioning performance have been developed. We will contribute to the ICD-10 and ICD-11 coding efforts of illnesses and disorders reported by CATSLife participants. Afterward, we will focus attention on the participants who reported autoimmune conditions and assess whether these findings are associated with how they performed on cognitive tests, particularly skills related to processing speed. Specifically, we will examine whether individuals approaching midlife with autoimmune conditions show reduced cognitive speed performance compared to those who do not report autoimmune conditions. Additional cognitive outcomes may be considered in the future.

Sample(s): CATSLife

Process Stage: Analyses, and Capstone write up completed (May 6, 2022)

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