EDITH COWAN UNIVERSITY

Project Details

Project Title:

Effects of Mindfulness Practice on Cognitive Performance and Biomarkers of Brain Health

Project Summary:

Currently, there is no cure for Alzheimer's disease (AD) and its prevalence continues to increase globally. Therefore, it is essential that effective and broadly applicable approaches to prevent or delay disease onset are developed. To date, Mindfulness based stress reduction (MBSR) is increasingly being used to improve outcomes in a range of chronic and neurodegenerative diseases. However, little research has been conducted to fully characterise the impact of MBSR on brain health and cognitive function associated with AD prevention.

The primary aims of this study are:

1) To examine the impact of mindfulness on cognition using longitudinal data from large well-characterised cohort studies of older adults.
2) Assess the relationship between mindfulness, cerebral Aβ-amyloid load and brain structure volumes at baseline and over 126 months.
3) Examine whether the results vary by subgroups defined by baseline characteristics (age, sex) and genotype (Apolipoprotein E; major genetic risk factor for AD).
4) Examine whether improved mindfulness following a multimodal lifestyle intervention impacts cognitive function and biomarkers of brain health.

Preferred Applicant Skillset:

Possess strong analytical and critical thinking skills, enabling them to interpret complex data and solve research problems. Excellent written and verbal communication is vital for articulating ideas and publishing findings. Time management and self-motivation are essential for navigating the nature of doctoral work. Adaptability to help persist through potential setbacks. Technical proficiency in relevant statistical software. Collaboration skills for working within research teams. Strong ethical foundation ensuring integrity in research practices. Passion and commitment.

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