

Risk for Alzheimers Disease and Cognitive Decline in Project TALENT

<https://neurodegenerationresearch.eu/survey/risk-for-alzheimers-disease-and-cognitive-decline-in-project-talent/>

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Country

USA

Title of project or programme

Risk for Alzheimers Disease and Cognitive Decline in Project TALENT

Source of funding information

NIH (NIA)

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Start date of award

15/09/2016

Total duration of award in years

1

The project/programme is most relevant to:

Alzheimer's disease & other dementias

Keywords

Acquired Cognitive Impairment... Aging... Alzheimer's Disease... Alzheimer's Disease including Alzheimer's Disease Related Dementias (AD/ADRD)... Basic Behavioral and Social Science... Behavioral and Social Science... Biomedical Information Resources... Biomedical Information Resources and Informatics Research... Brain Disorders... Clinical Research... Clinical Research - Extramural... Dementia... Neurodegenerative... Neurosciences... Pediatric... Prevention

Research Abstract

RISK FOR ALZHEIMER'S DISEASE AND COGNITIVE DECLINE IN PROJECT TALENT

ABSTRACT [rev. June 15, 2016] Higher educational attainment is associated with preserved cognitive performance in older age and reduced risk for Alzheimer's Disease (AD) and other dementias. The mechanisms underlying these associations are unclear, but possible explanations include: direct protective effects of more education; preserved capacity or enhanced functioning due to greater cognitive complexity of occupational and leisure activities among people with more education; indirect effects via individual, family, or community-level correlates of educational level; and genetic factors that contribute to both educational level and later-life cognitive functioning. Distinguishing among these alternatives is critical for informing intervention programs to prevent and delay the development of AD and to remediate age-related cognitive decline. These mechanisms will be evaluated using the unique twin/sibling/schoolmate design of Project Talent (PT), a longitudinal study begun in 1960 with a U.S. representative sample of 377,000 high school students who had detailed measures of cognitive abilities, family and school characteristics, educational aspirations and vocational interests. The sample includes 86,000 siblings in 42,000 families, including 2,300 sets of twins and triplets. The twins have been recently located and surveyed (R01-AG043656, PI: Prescott; Co-PI: Lyter). Proposed aims are to: (1) locate Project Talent participants in a new follow-up sample of 2500 sibling sets; (2) assess dementia outcomes and cognitive decline in the previously-recruited twin/sibling sample and in the new sample of siblings; (3) combine this outcome information with data collected since 1960 to evaluate the association between educational attainment and risk for dementia and later-life cognitive decline, accounting for cognitive abilities assessed in adolescence; (4) evaluate alternative mechanisms for the association of education with dementia and cognitive decline, including: (a) direct protective effects of higher education; (b) protective effects of cognitive activities; (c) indirect association via early-life cognitive abilities; and (d) indirect association via genetic, family and/or macroenvironmental factors; and (5) document and archive the twin and sibling data for use by other researchers studying the antecedents of cognitive decline. Participants will be assessed with a contemporary battery of cognitive measures harmonized with several of the original 1960 PT measures, allowing direct measurement of change across 1960 to 2017 on multiple cognitive domains; use of adaptive testing to reduce participant burden; and assessment via mailed tablet computers to facilitate measurement of memory and visuospatial abilities. This unique merger of within-family, between-family, within-school and between-school designs controls for genetic and environmental factors that are confounded in other cohort studies and provides an unprecedented opportunity to address causal hypotheses about the mechanisms underlying individual differences in risk for AD, other dementias and cognitive decline.

Lay Summary

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Further information available at:

Types:

Investments > €500k

Member States:

United States of America

Diseases:

Alzheimer's disease & other dementias

Years:

2016

Database Categories:

N/A

Database Tags:

N/A