Building a Low Cost High Density Data Gathering Platform For Studying High-functioning Elders

https://neurodegenerationresearch.eu/survey/building-a-low-cost-high-density-data-gathering-platform-for-studying-high-functioning-elders/

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Building a Low Cost High Density Data Gathering Platform For Studying High-functioning Elders

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Research Abstract

By the time an individual is diagnosed with Alzheimer’s Disease (AD) or dementia, they have

often already experienced both gradual and dramatic changes to their health, cognitive function, employment and financial status, among other life events. A number of key interview-based studies like The National Health and Aging Trends Study (NHATS) and The Health and Retirement Study (HRS) have provided us with tremendous insight into the transitions that occur as individuals experience the early stages of AD or dementia, but we have less information about these changes at the most granular levels of daily life and this lack of data limits both our search for preventative strategies and our understanding of social and environmental factors which can mitigate the severity of the disease. We propose to develop an easy to use, quickly configurable smartphone-based application for data gathering, which would drop the cost of high granularity measurements by three orders of magnitude – making it possible for scholars of AD, and ageing more generally, to gather new kinds of high-granularity measurements about how every aspect of health, finance, time and family interact in caregiving. Our proposed smartphone based data collection platform has data types that will be highly overlapping with existing studies of the elderly, including HRS and NHATS, and once validated, this tool could be employed broadly in scientific research, dramatically lowering the cost of doing research with elders thus dramatically increasing the ability of researchers to engage protective and mitigating events at high fidelity. We estimate that the validated platform could be deployed at an annual cost of less than $750/subject and would yield up to 1M data points per subject per year for the AD research community.

Further information available at:

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