

POSTER SESSION 2

PROTECT Norge – Platform for research online to investigate genetics and cognition in ageing

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Purpose Dementia is a major public health issue and understanding the population risk factors and finding cost-effective ways of evaluating these to develop evidence-based interventions is critical to translate emerging opportunities to protect cognition in later life and prevent dementia (Livingston et al., 2020). However, dementia risk is a multifaceted concept, involving a complex interplay between a range of factors such as age, genetics, health, lifestyle, environmental and individual cognitive factors contributing to overall risk. There is a need for more research on modifiable risk factors for dementia and sub-sequent cost-effective evaluating measures of targeted interventions in high-risk groups. **Methods** Establish a novel online platform recruiting a nationwide cohort of 2,500 people 50+ in Norway, based on the UK PROTECT platform (Huntley et al., 2018). The aim is to determine how genetics, physical and mental health, and lifestyle factors affect age-related cognitive functioning. Participants register health information data through the PROTECT Norge website, via validated questionnaires and an online cognitive battery, annually for 5 years. DNA is provided by means of saliva, to be genotyped and relevant polygenic risk scores will be calculated. Primary objective: increase knowledge about risk factors of cognitive decline in people aged 50+. A minimum dataset with a consent-for-contact cohort will be built, enabling, in combination with the PROTECT infrastructure, the delivery of cost-effective, online interventions and clinical trials to support future research into cognitive ageing in Norway. In response to the recent Covid-19 pandemic, PROTECT Norge and its online design is well placed to provide epidemiological insights and knowledge with regards to impact of the pandemic and governmental restrictions in adults 50+. A sub-study containing a series of questionnaires to address this have been added. **Results and Discussion** By increasing our understanding of modifiable risk factors of age-related cognitive decline we can potentially reduce cognitive decline thereby prevent or delay dementia. The PROTECT platform provides a unique opportunity to implement in a cost-effective way such knowledge and tailor resources towards people with increased risk, i.e. precision medicine.

References

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