

Automated measurement of recreational reading performance on electronic devices as an indicator of visual frailty diagnostic aid and in aging

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Background

- Reading is an everyday activity that sits at the heart of physical and emotional wellbeing for many people (1-3).



- Measured reading performance can be indicative of people who are at a pre-clinical stage of disability but are at risk for progression to clinical disability (4).

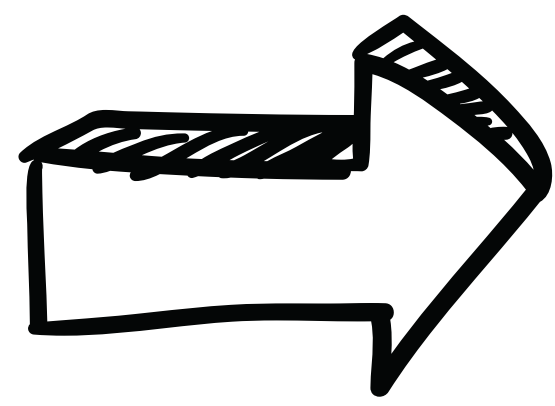


- It is among the best predictors of patient-reported visual ability (5) and vision-related quality of life (6).



Aim

To explore the feasibility of using reading performance to monitor trends in visual and other physiological functionalities related to ageing.



Objectives

- Develop the capability to measure reading performance automatically during recreational reading on an electronic device.
- Monitor recreational reading performance routinely over the medium to long term in a cohort of elderly patients.
- Correlate recreational reading performance with clinical measurements of visual and other physiological functionalities linked to ageing.



Methodology

- Ethical clearance from University of Edinburgh Medical school.
- Proposal to be reviewed by ACCORD team
- Implementation to be done in **four** phases:

Phase 1:

Designing a software to measure reading performance

Phase 2:

Recruitment of participants (aged 50 and above)

Phase 3:

Assessment of self-reported reading ability & measurement of recreational reading performance. Assessment of frailty.

Phase 4:

Data analysis & Report writing

Impact

- The role of visual frailty diagnosis in aging
- Identify individuals at pre-clinical stage of disability.
- Basis for patient-centred care for individuals at risk of developing frailty



References

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