

Subjective Cognitive Decline and Cognitive Task Performance: Patient Selection via Social Media and Digital Assessment Validity

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The Methodological Question Being Addressed

COVID-19 imposed restrictions has restricted the use of standard research and recruitment methods. We investigated the potential of online (web based) testing to determine whether it was possible to reliably identify participants with subjective cognitive decline (SCD) to participate in experimental studies.

Introduction

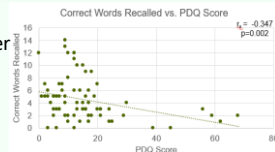
- Improving recruitment methods, in terms of recruitment efficiency and assay sensitivity of recruited samples, is important in accelerating drug development for disorders of cognitive decline.
- Establishing the relationship between reported subjective impairment and actual performance on cognitive tasks would also increase the efficiency of recruitment
- We conducted an online study (VICOG) to explore the potential of social media to access, remotely, individuals with SCD, and determine the validity of this sample using a short battery of questionnaires and computerized cognitive tests

Methods

- Participants, aged 65 - 85 years of age, were recruited via targeted Facebook advertisements. Data collection occurred from March – June 2020 inclusive.
- Participants completed, via the online P1vital[®] ePRO Clinical system, the IQCODE and PDQ as self-reported measures of SCD, together with a (i) word recall and recognition task, (ii) a digital version of the DSST and (iii) a Facial Expression Recognition Task (FERT).

Results

- 74** participants were recruited. **37** scored ≥ 52 on the IQCODE, indicative of at least mild levels of subjective cognitive decline over the prior 10 years.
- Correct word recall was significantly lower in individuals scoring ≥ 52 on the IQCODE compared to those scoring 48-51 (indicative of little subjective change in cognition).



- PDQ score significantly negatively correlated with number of words correctly recalled, and significantly positively correlated with number of word recognition false alarms.
- No significant relationships observed between subjective cognitive impairment measures and DSST and FERT performance

Conclusions

- Recruitment via Facebook was successful in recruiting a sample of participants in which SCD was prevalent. Evidence of objective cognitive decline was confirmed in participants with greater self-reported subjective impairment.
- Social media and other online recruitment strategies, paired with selected subjective and objective measures of cognitive impairment, may be valuable to clinical trials both in terms of reach and assay enrichment for clinical trials. Resource requirements, including the need of social media specialists, will be important in making such approaches successful.

Disclosures: Financial support for this study was provided by Syndesi Therapeutics SA. GR Dawson is co-owner and shareholder in P1vital LTD. JA Kemp, J Savidge and TM Madsen are shareholders in Syndesi SA.

