in epidemiologic studies for community sample or general population.

Key Words: Korean version of Center for epidemiologic studies depression scale-revised (K-CESD-R), depression, screening

PS224

Online working-memory testing: feasibility, reliability and impact of self-reported depression and anxiety.

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Abstract

Introduction: Cognitive impairment is increasingly considered a target for intervention in psychiatric conditions. Online cognitive testing may provide cost-effective screening and assessment. There is, however, a legitimate concern regarding reliability and validity of unsupervised testing. In this study we compare performance in a laboratory setting to that obtained through remote online testing. We were interested in: 1) identifying markers of inattention in online behaviour based on benchmarking in a laboratory setting 2) comparing participants with and without a self-reported history of mental health issues (depression/ anxiety) on these metrics.

Methods: 400 participants completed an on-line assessment of spatial working memory (SWM), a Cantab test known to be affected in a range of psychiatric disorders, such as depression and schizophrenia. Participants were asked to report whether they had a history of depression, anxiety or other neurological or psychiatric condition, and 200 participants completed the PHQ8 rating scale of depression symptoms. In addition to standard outcome measures (errors and strategy) we extracted trial-by-trial data related to timing, and browser information (whether the participant stayed on task or not). We compared performance of the online groups that of a benchmark sample of 94 participants tested in controlled laboratory conditions. Repeatability data was collected in both samples.

Results: Results indicated no significant performance difference between online and laboratory based testing. Within web-based testing participants with a self-reported history of depression or anxiety were not more likely than others to display off-task behaviour, and their reaction times, variability in reaction time and task performance were also comparable.

Conclusions: Participants with a self-reported history of depression or anxiety perform just as consistently as those with no such history in online testing, suggesting that this method of cognitive testing can be reliably used in this sample for screening into clinical trials or remote monitoring of cognitive performance.

PS225

High-frequency monitoring of cognition, mood and behaviour using wearable devices: proof of concept and applications

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Abstract

Background: Many psychiatric conditions are characterised by a fluctuating course, which may impact on daily functioning, but are difficult to characterise on the basis of infrequent laboratory or clinical assessments. Detecting and characterising these fluctuations may also enable timely, tailored interventions to be provided.

Wearable devices and mobile phones are equipped with increasingly sophisticated array of sensors and processing capacity. This technology is capable of generating large volumes of multidimensional data, which is increasingly being linked to changes symptoms and functional status. In this study we address the challenges in translating these data into clinically actionable information. Firstly, extraction features from such complex data. The second is the validation of the derived metrics against existing tools. Thirdly, the tolerability, acceptability and compliance, and therefore the ability to generate meaningful data need to be ascertained.

Methods: We describe the development and testing of a wearable device to address these challenges, allowing collection of both cognitive and mood data, alongside sensor data. Low-frequency, laboratory measurements of cognition, depression and anxiety were also collected for validation purposes, as were assessments of user experience.

Results: Participants (n=20) showed good compliance with data collection and agreement between testing in the new device and validated measures of cognition, indicating that this may be an appropriate method for measuring cognitive function and mood.

Conclusions: Initial data shows meaningful assessment of mood and cognition in alongside physiological and movement parameters. This has the potential to complement periodic in-person assessment of cognition and symptoms in the context of clinical research or interventions.

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The efficacy of light therapy in the treatment of seasonal affective disorder: A meta-analysis of randomized controlled trials

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Abstract

Objective: The aim of this meta-analysis was to assess the efficacy of light therapy for the treatment of seasonal affective disorder in adults in comparison with placebo, meta-analyzing randomized, placebo-controlled trials.

Methods: We systematically searched PubMed, MEDLINE, EMBASE, PsycINFO, CINAHL and the Cochrane Central Register of Controlled Trials (CENTRAL) for literature published from January 1980 to March 2015. The primary outcome was improvement of depressive symptom levels measured by validated psychiatric symptom scales, the secondary outcome was to assess response rates. We performed a subgroup analysis comparing studies with patients free of additional psychotropic medication with trials where bright light was given adjunctive to pre-existing psychopharmacological therapy.

Results: 23 studies finally met our pre-defined inclusion criteria. Bright light therapy (BLT) was superior over placebo with an effect size of Hedges`s g= -0.38 (95% Confidence Intervall (CI): -0.53 to -0.23, p= 0.0001) for the primary outcome (21 studies