

Conclusion: The administration of TENS diminished daily restlessness after right-hemispheric stroke. Possible underlying mechanisms are discussed.

Correspondence: Wytke Kylstra; w.kylstra@heliomare.nl

Investigating the utility of the Addenbrooke's Cognitive Examination – revised (ACE-R) in predicting outcomes among adults undergoing in-patient neurorehabilitation

Lennie, Susan¹; Cullen, Breda^{1,2}; & Evans, Jonathan¹

¹*Institute of Health and Wellbeing, University of Glasgow, Glasgow, UK*

²*Physically Disabled Rehabilitation Unit, Southern General Hospital, Glasgow, UK*

Background and aims: Screening for cognitive impairment may help predict neurorehabilitation outcomes. We investigated (1) the use of the ACE-R in predicting functional gain during in-patient rehabilitation, and (2) whether ACE-R scores identified patients requiring additional therapy support during their admission.

Method: Prospective follow-up study of adults with physical disability admitted for rehabilitation. ACE-R and other clinical and demographic data were obtained soon after admission. Functional gain was measured using the Functional Independence Measure (FIM). The primary outcome measure was FIM change (FIM discharge minus FIM admission). Staff provided data on additional support/resources required by participants, over and above usual practice.

Results: Of 75 eligible patients approached, 65 consented and had baseline assessments. Complete follow-up datasets were available and analysed for $n = 60$ (mean age 49.84 years [SD = 12.01]; 62% female). No significant correlations were found between ACE-R scores and FIM change. There were no significant associations between FIM change and other baseline clinical and demographic data, except admission FIM score ($r = -0.27$, $p = 0.038$). There were significant differences in ACE-R Total ($U_z = -2.25$, $p = 0.014$), Memory ($U_z = -2.06$, $p = 0.039$) and Fluency ($U_z = -2.51$, $p = 0.012$) scores between those who did and did not require additional therapy support/resources. Only ACE-R Fluency score and gender survived a logistic regression analysis to predict additional resource needs.

Conclusions: Baseline ACE-R scores were not predictive of FIM change. ACE-R showed greater utility in identifying patients who required additional support/resources, with ACE-R Fluency score and gender appearing to be independent predictors of this.

Corresponding author: Susan Lennie; Susan.Lennie@ggc.scot.nhs.uk

Using eye-tracking glasses to evaluate the effect of visual scanning training on everyday activities

Loetscher, Tobias¹; Nicholls, Michael¹; Thomas, Nicole¹; Bulling, Andreas²; Clarke, Gayle³; Hayes, Allison³ & Chen, Celia⁴

¹*School of Psychology, Flinders University, Adelaide, Australia*

²*Max Planck Institute for Informatics, Saarbrücken, Germany*

³*NVT Systems Pty Ltd, Australia*

⁴*Department of Ophthalmology, Flinders Medical Centre and Flinders University, Australia*

Background and aims: Visual field defects are commonly found among stroke survivors and have a profound impact on activities of daily living

(ADL). Current rehabilitation approaches aim to improve the ADLs by using compensatory scanning training to improve visual search. Little is known, however, about the transfer of these training effects to dynamic everyday situations such as running errands in a shopping mall.

Recent advances in technology have seen the development of eye tracking glasses. Worn like a normal pair of glasses, they allow eye movements in the 'real world' to be captured. This single-case study examined whether the glasses can be used to investigate the effects of compensatory scanning training in everyday situations.

Method: SMI Eye tracking glasses (SensoMotoric Instruments GmbH, Berlin, Germany) were evaluated on a 47-year old man suffering from a right-sided homonymous hemianopia receiving Neuro Vision Technology (NVT) scanning training. His eye movements were assessed during a computerized visual search task and in an uncontrolled walking task. The number of fixations and time spent looking to the left and right sides of space were determined.

Results: In both tasks, a marked asymmetry for exploring the right-side over the left-side of space was found.

Conclusions: The results indicate a typical over-compensation of eye movements towards the visual field defect. While this case report cannot determine whether the compensatory movements transferred from the computerized scanning training to the dynamic walking task, it introduces a promising tool for evaluating the effect of visual scanning training on everyday activities.

Correspondence: Tobias Loetscher; tobias.loetscher@flinders.edu.au

Criterion and convergent validity between Impulsive Behavior Scale – Urgency, Lack of premeditation, Lack of Perseveration and Sensation Seeking (UPPS) and Barrat Impulsiveness Scale (BIS-11) in patients with bipolar disorder

Loschiavo-Alvares, Fabricia Quintao¹; Sedyama, Cristina Yumi Nogueira¹; Neves, Fernando Silva²; Malloy-Diniz, Leandro Fernandes¹; & Bateman, Andrew³

¹INCT de Medicina Molecular, Faculdade de Medicina, Universidade Federal de Minas Gerais, Brazil

²Faculdade de Medicina, Universidade Federal de Minas Gerais, Brazil

³The Oliver Zangwill for Neuropsychological Rehabilitation, Ely, Cambridgeshire, UK

Background and Aim: Impulsivity is often associated with bipolar affective disorder, with serious behavioral consequences for these individuals and families. However, there is no consensus in the literature regarding the concept of "impulsiveness". This study aimed to investigate the association between components of impulsivity scales underlying the BIS-11 and UPPS-Impulsive Behavior Scale, in order to obtain evidence of both criterion and convergent validity.

Method: N=46 control group, mean age=48.42 (SD=14.33) years, 63%female and 82% with high school. N=41, clinical group (depressed bipolar patients), mean age=40.75 (SD=12.97) years, 78%female and 30% with high school or complete ongoing. The instruments used were BIS-11, UPPS Impulsive Behavior Scale and Beck Depression Inventory (BDI).

Results: Mean score on BDI in the clinical group was 21.9 points (SD=12.3) indicating moderate symptoms, and in the control group the average was 6.9 points (SD=5.4), absence of depressive symptoms. Cronbach's alpha ranged between 0.80–0.85, except at BIS-11 Lack of Planning component ($\alpha = 0.52$).