AuSCR Research Task Group approved projects

Title	The feasibility and therapeutic utility of a 12-week telehealth delivered environmental enrichment program for young stroke survivors experiencing cognitive impairment
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AuSCR role	Recruitment
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Status	In progress
Summary	Cognitive impairment is common in young stroke survivors. Studies indicate that up to 60% of young stroke survivors experience an impairment in one or more cognitive domains. Deficiencies in the cognitive domains of language, executive function, complex attention, perceptual-motor function, learning and memory and social cognition have been previously noted and persist into survivorship. These impairments severely impact activities of daily living (ADL) and quality of life (QoL) and therefore warrant effective treatment. A promising, yet experimental, treatment strategy is environmental enrichment (EE), which involves careful modulation of the environmental setting to enhance physical, cognitive, sensory and social stimulation, as well as healthy eating and sleep routines. This approach has positive effects in preclinical models of stroke, with enhanced neurogenesis, vasculature remodelling, neurotrophic factor release (e.g., brain derived neurotrophic factor) and cognition reported previously. The utility of EE on cognitive function in stroke survivors is yet to be evaluated, however, given the encouraging findings in preclinical models of stroke and other neurodegenerative diseases it is likely that such an approach will prove to be beneficial and warrants investigation. The purpose of this study is to evaluate, for the first time, the feasibility and therapeutic utility of a 12-week telehealth-delivered EE program, compared to lifestyle guidance, on cognitive function in young stroke survivors. We hypothesise that 1) a 12-week telehealth-delivered EE program will be feasible and improve cognitive function young stroke survivors and 2) improvements in cognition will be related to enhanced ADL and QoL outcomes in young stroke survivors. These hypotheses will be tested using the following specific aims: 1. To evaluate the feasibility of a 12-week, telehealth-delivered EE program for young stroke survivors. 2. To evaluate the effectiveness of a 12-week, telehealth-delivered EE program, compared to a lifestyle guidance program, on cognition, ADL and QoL outcomes in young stroke survivors. The proposed research is a single-blind randomised controlled trial (RCT) on the feasibility and utility of a 12-week environmental enrichment (EE) program, compared to a 12-week lifestyle guidance (LG) program, on cognition in young stroke survivors. Participants will be randomised to receive 12 weeks of either environmental enrichment or lifestyle guidance. Following the intervention period, a 12-week washout period will be observed. At the end of the washout period, participants randomised to the lifestyle guidance group will be given resources on the environmental enrichment program (if effective).