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Acceptability of a tablet application to assess neurocognitive functioning in a resource limited setting

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Tablet-based technologies are revolutionizing neuropsychological testing and have the potential to make testing more accessible in resource-limited settings (RLS). However, tablet technology is still new in many RLS and its acceptability for use with patients is less known. The aim of this study was to evaluate the acceptability of a battery of tablet-based neuropsychological tests (NeuroScreen) among adolescents and their caregivers from a RLS in South Africa. NeuroScreen is an easy-to-use and highly automated tablet-based application of 12 brief neuropsychological tests assessing learning, memory, working memory, processing speed, executive functions, and motor speed. Seventy-one adolescents (mean age=49; 98.6% female) and their caregivers (N=72; mean age=15; 56.3% male), recruited from health clinics in Cape Town completed NeuroScreen and a questionnaire assessing comfort and experience with tablet technology, and acceptability of NeuroScreen. Descriptive statistics examined experience with and comfort using tablets and NeuroScreen. Over half of caregivers (56.9%) and 39% of adolescents reported not ever having used a tablet with a touchscreen before. Nonetheless, 65.2% of caregivers and 94.3% of adolescents indicated NeuroScreen was “somewhat” to “very easy” to use. Eighty-two percent of caregivers and 94.3% of adolescents indicated being agreeable to completing NeuroScreen at routine doctors’ visits. NeuroScreen acceptability was high among adolescents with moderate experience using tablets and caregivers with limited experience using tablets. Tablet-based neuropsychological tests in South Africa appear acceptable, creating potential to scale up testing there and in other similar RLS. Future research should examine whether experience using tablets affects performance on and interpretation of tablet-based tests.