

A mobile Occupational Performance assistive tool (m-Assist app) for people with executive dysfunction after an acquired brain injury: a usability study

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Introduction: People with executive dysfunction (ED) have problems in independent performance of instrumental activities of daily living (iADL). They often need individual assistance towards independency, autonomy and participation. The mobile Occupational Performance Assistive Tool (m-assist) is developed to support clients with ED after an acquired brain injury (ABI) through a digital roadmap installed by health professionals or care givers.

Objective: To evaluate the usability and expectancy of the m-Assist in persons with executive dysfunction after an ABI.

Method: Case series of 17 participants in 7 different settings in which the participants used the m-Assist during 4 weeks. The usability is assessed with the System Usability Scale (SUS), the USE (Usefulness, satisfaction and Ease of use), the QUIS (Questionnaire for User Interaction Satisfaction). The expectancy was measured by the CEQ (Credibility and expectancy questionnaire). All outcome measures were taken after one (T1) and 4 weeks (T2) of use.

Results: In general the usability and expectancy scored high after 1 week of use and remained high after 4 weeks of use. The scores on credibility were somewhat higher (CEQ credibility 20.0/27(T1) and 22/27(T2)) than on expectancy (19.57/27(T1) and 20.95/27.0(T2)). The subjective usability scored high with SUS scores of 77.72/100(T1) and 79.85/100(T2). The scores on the USE were 81/100(T1) and 87/100(T2). The subjective rating of the computer-human-interface as measured by the QUIS was 74.81/100(T1) and 78.93/100(T2).

Conclusion: The m-Assist demonstrates to be a user-friendly application to support persons with executive dysfunction after acquired brain injury in their instrumental activities of daily living.