

## ASSESSMENT OF BEHAVIORAL SYMPTOMS IN DEMENTIA PATIENTS WITH THE HELP OF ICTS

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**Introduction:** Behavioral and psychological symptoms in dementia patients (BPSD), represent a strong predictor of dementia progression. Current interview-based assessment methods lack objectivity to ensure reliable early differential detection. Therefore, the use of Information and Communication Technologies (ICT) such as actigraphy and automatized video monitoring are of interest in addition to current assessment methods because they allow capturing the patients' performances and actions in real time and real life situations.

**Objectives:** To improve the quality of clinical assessments of BPSD by validating the use of objective measurements obtained by ICTs in dementia patients in an experimental design, undergoing an „ecological assessment“.

**Methods:** Demented and pre-demented patients (with and without apathy) and healthy controls underwent an experimental trial wearing an actigraph and being filmed over a free period of 15 minutes in a 16-zone divided room. Apathy was assessed using NPI apathy subscore. Frequency of zone displacement, and of goal-oriented zones, object manipulation, mean motor activity and speed of walking were assessed with the help of ICT.

**Results:** Significant differences were found between apathy and non-apathy AD patients for the parameter of object manipulation (OM) and OM in goal-oriented zones (GOZ) but not for frequency of zone displacement (FZD).

**Conclusions:** Moderate evidence for a reliable detection of apathy in dementia patients through data obtained by ICTs was found. Therefore, it represents a promising addition to conventional neuropsychological methods for future studies, focusing in particular on object manipulation and visuomotor deficits.