

N. ZIGAN, R. NAEF, P. BAUMANN, A. HEINZELMANN, L. IMHOF, D. HÄNDLER-SCHUSTER. **App-based activity diary for elderly: Benefits through interprofessional development?!** *Gerontechnology* 2016;15(suppl):102s; doi:10.4017/gt.2016.15.s.853.00 **Purpose** The Institute for Nursing and the School of Engineering at the Zurich University of Applied Sciences conduct a pilot study in Switzerland to recognize activities of daily living through energy data¹. In order to correlation human activity with energy consumption, data on human activity is needed². Thus, elderly living alone log their activities in an electronic activity diary, which was specifically developed and tested for this purpose. First, the aim was to define which behaviors and activities of daily living need to be measured to develop an application (app) for data collection (activity diary). **Method** First, a review of the literature was undertaken related to studies that focus on pattern recognition of activities of daily living by means of smart home technologies and their perceived predictive values³. Then, the app was developed, tested and adapted in a multi-professional team⁴. **Results & Discussion** Based on the results of the literature review we used twelve icons, eight icons related to instrumental or basic activities of daily living, as well as four icons in relation to: having guests, recreation activities, housework and sleeping / resting. The first experiences of the five elderly users (3 women, 2 men, mean age 82±4 years) showed a simple layout and easy use of the app. The interprofessional development of an app-based activity diary for elderly is possible and should be further used in gerontechnology.

References

1. Händler-Schuster D, Naef R, Zigan N, Täschler A, Heinzelmann A, Baumann P, Imhof L. Den pflegerischen Unterstützungsbedarf durch Daten über den Energieverbrauch erkennen - ein Pilotstudie. [Recognizing the need for nursing support through Energy Data - A pilot project]. *Pflegezeitschrift* 2016; 69(4):1-5
2. Bedaf S, Gelderblom G, Syrdal DS, Lehmann H, Michel H, Hewson D, Amirabdollahian F, Dautenhahn K, Witte L de. Which activities threaten independent living of elderly when becoming problematic: inspiration for meaningful service robot functionality. *Disability and Rehabilitation Assistive Technology* 2014;9(6):445-452; doi:10.3109/17483107.2013.840861
3. Naef R. A review of relevant health sciences research for the development of an Emergency Recognition through Energy Data (ERED) home monitoring system. Personal communication, April 16, 2015
4. Demiris G, Finkelstein SM, Speedie SM. Considerations for the Design of a Web-based Clinical Monitoring and Educational System for Elderly Patients. *Journal of the American Medical Informatics Association* 2001;8(5):468-472

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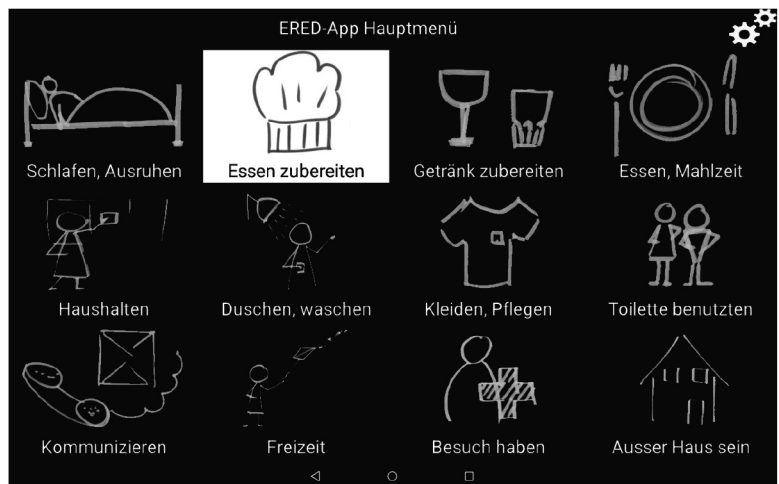


Figure 1. App-based activity diary for elderly in German language