

**K. WAC. Mobile communications and computing for quality of life living lab.** *Gerontechnology* 2016;15(suppl):168s; doi:10.4017/gt.2016.15.s.832.00 **Purpose** Specialized wellness-promoting mobile health technologies, including mobile apps and wearable activity trackers become increasingly popular, available to contributing to individual's decisions influencing health and hence their Quality of Life (QoL). The purpose of the research presented in this paper is twofold. Firstly we explore the acceptance and use of these technologies for sleep assessment in longitudinal, in-situ settings. Secondly, we aim at understanding factors influencing the sleep quality of individuals and ways of assessing these factors via mobile technologies themselves<sup>1-3</sup>. **Method** We have conducted an explorative study, with 15 participants (10 students 18-24 years old, out of which two were female, and 5 working mothers, aged 35-45 years old) wearing BASIS PEAK activity and sleep tracker for a minimum three months each. We have collected both their user experience (via interviews) and the underlying mobile app and wearable device usage logs. We have collected data in the individuals' natural environments and different daily context (in situ). **Results & Discussion** Mobile apps for health/wearables have potential to be accepted for sleep quality assessment, but must be further co-designed with individuals, to address different human aspects of their use. Specifically, the aspects of context-awareness, interaction design, battery lifetime and additional features must be addressed, as well as aspects of fitting in the individual's routine and lifestyle choices. Secondly, the results indicate that there are several known factors influencing the sleep quality, as already known from the literature (e.g., lighting)<sup>4</sup>. There are also new ones, emerging due to an influence of the use of technology itself on sleep (e.g., smartphone as an alarm clock). We conclude with a set of design implications for technologies that are more accurately assessing the sleep quality of the individuals, and better supporting the sleep quality itself.

### References

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