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Human-technology relations in the context of a smartphone application for digital self-monitoring of Multiple Sclerosis

Digital self-monitoring refers to the collection of personal health data through digital devices such as smartphones and wearable technologies. While there is critical discussion on how digital self-monitoring technologies shape, and at the same time are shaped by, existing norms, values and responsibilities in healthcare, thus far limited empirical research has been performed on how these technologies are actually enacted in real life medical practices and patients' daily lives. We address this knowledge gap in the context of the chronic neurological disease Multiple Sclerosis (MS).

A smartphone application has been developed for the self-monitoring of health by people with MS. The effectiveness and efficiency of this smartphone app is currently being assessed through a multi-center study in which patients and their healthcare providers use the app for a year. This study enables us to investigate how users, i.e. MS patients and healthcare providers, interact with the smartphone app and how they experience the use of this app in their daily practices.

Our interviews with patients and healthcare providers point out that users value the data from the self-monitoring app, but also experience tensions and dilemmas, such as undesired confrontation with the MS and information overload. Moreover, we have identified discrepancies between how the developers envision the use of their app and how the app is actually used in practice, for instance regarding the frequency of measurements. These findings illustrate the ambivalence and complexities in human-technology relations.