New publication from the DIGI.PARK study

We recently published an article where we evaluated the utility of three popular wearable devices–Empatica E4, Fitbit Sense, and Oura ring–in Parkinson's disease (PD) research.

Embedded, Haakon Reithe presenting results from the DIGI.PARK study on an international conference.
Photo: SEFAS

Over a two-week period, we collected data from 13 participants with PD and 15 controls. We focused on heart rate and movement data, comparing data between devices and with self-reported diaries. Our findings revealed large variations in data and device characteristics, and weak cross-correlation between devices. We found that none of the devices were deemed optimal for PD research, and wearable devices with similar sensors are not always interchangeable. All devices provided data for tracking behavioral patterns over time. However, only the Empatica E4 provided high quality data necessary for detecting symptoms, whereas the Fitbit Sense and Oura possessed necessary user-friendly characteristics for long term use. Our study contributes to ongoing efforts to help the PD community make better decisions when planning the use of wearable technology in research and clinical settings.

See the publication on this link.

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