Research Poster Award

What factors predict Fitbit adherence in Stroke and Parkinson disease?

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Abstract

Objective: To investigate predictors of adherence to wearing the Fitbit activity monitor in patients with Parkinson disease (PD) and stroke. **Background**: Exercise and activity improve symptoms of PD and stroke and aid in primary and secondary stroke prevention. However, adherence to physical activity programs is low and little is known about adherence to daily activity monitoring. **Methods**: Patients (n=19, age=58.8+/-11, range 37-83Y) with PD (n=12) and stroke (n=8) participated in a pilot study to investigate feasibility of and adherence to Fitbit monitoring to track activity between clinical office visits. **Results**: Comparing PD and stroke, PD patients were more disabled (Rankin; p= .004) but more likely to be employed (p= .03). Stroke patients were more depressed (PROMIS; p=.045), more cognitively impaired (MoCA; p=.02) and had lower numeracy (Subjective Numeracy Scale; p=.03). Fitbit data were collected for 28-53 days (mean=32.9). Patients used the Fitbit for 86% of days and 13.5 hours/day on average. Average steps/day were 6041+/-2797. The only significant predictor of adherence to the Fitbit (% of days used) was medical co-morbidity (r=-.46, p=.047) such that those with greater comorbidity (Cumulative Illness Rating Scale) wore the Fitbit less. Other high correlations with adherence (but nonsignificant) were: PROMIS Self-Efficacy for Managing Medications (r=.57), Self-Efficacy for Managing Social Interactions (r=.46), greater e-Health Literacy (eHEALs; r=.39), and less pain (r=-.37). Adherence showed low correlation (r<.2) with disease severity, disability, cognition, depression, age, and socioeconomic status. **Conclusions**: The strongest predictor of adherence to daily activity monitoring was level of medical co-morbidity. Other determinants of adherence were self-efficacy for managing conditions, e-Health literacy and pain. Age and level of disability did not affect daily use of small wireless monitors to track activity in stroke and PD.