Conference Abstract

# Self-management in long term conditions using smartphones: A pilot study in Parkinson's disease

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## Abstract

**Background:** Long-term conditions (LTC) or chronic diseases are the leading causes of mortality and morbidity worldwide. Self-management is now an accepted method to manage LTC. Parkinson's disease (PD) is a long-term neurological condition with self-management being a core component of managing the condition optimally.

**Aims:** The primary aim was to evaluate use of 2 versions of a PD tracker app and assess the impact of use on a range of outcomes including: self-reported measures of adherence to treatment, quality of life, happiness and non-motor symptoms. Qualitative interviews were carried out with a sub-group of participants to assess usability.The study was funded by the Department of Health's Small Business Research Initiative (SBRI).

**Methods:** 36 patients with PD took part in a 55 day pilot study and were randomised into 2 groups – the limited app group (n=19) received an app which had tools for daily self-tracking on 10 measures of symptom severity, general well-being and health behaviours along with a daily diary; and the full app group (n=17) received an app which had the same tools as the limited app group with the addition of medication reminders and 2 games to assess cognition.

**Results:** Participants used the app for 55 days, and entered data on at least 70% of those days. There were no statistically significant differences between the two versions of the app on self-reported measures of adherence to treatment, quality of life, happiness and non-motor symptoms. However, there were increases in absolute scores in self-reported measures of adherence to treatment and quality of life. Participants provided positive feedback on the ease of use of the app and value of symptom tracking.

**Conclusion:** The PD tracker app was used regularly as a self-management tool by patients and could help in improving self-reported measures of adherence and well-being. A larger sample size and stronger study design are needed to confirm these findings conclusively.

## Keywords

**long-term conditions; self-management; mobile health; parkinson's disease; mobile application**

## PowerPoint presentation:

https://www.conftool.pro/digital-health-care-2014/index.php?page=adminPapersDetails&path=adminPapers&form_id=80