"Addicted to the tracker"?

Experiences of people with Chronic Obstructive Pulmonary Disease (COPD) using activity trackers

Laura J Wilde^a, Cain Clark^a, Carol Percy^b, Gillian Ward^c, and Louise Sewell^{d,e}

. Background

- Chronic Obstructive Pulmonary Disease (COPD) is the third leading cause of death worldwide.¹
- Symptoms of COPD make exercising difficult, including breathlessness, coughing, and excess phlegm or sputum.
- COPD is a progressive disease with no cure, but early diagnosis and treatment can slow its progression and help with the management of the disease.²
- Smartphone applications and wearable devices have been used in interventions with people with COPD to monitor their activity.³
- Regardless of their monitoring accuracy and effectiveness at increasing physical activity levels, apps and wearables are increasingly being used in everyday life.^{4,5}





- In depth semi-structured interviews were conducted with 7 people with COPD.
- All participants currently used an app and/or wearable to monitor their activity.
- Interviews were transcribed and analysed using Interpretative Phenomenological Analysis (IPA).



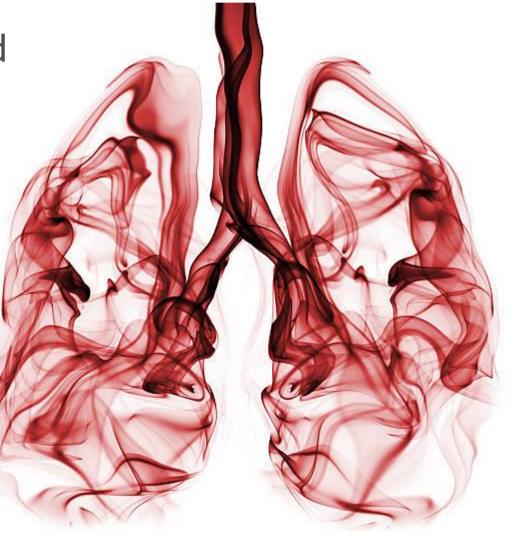


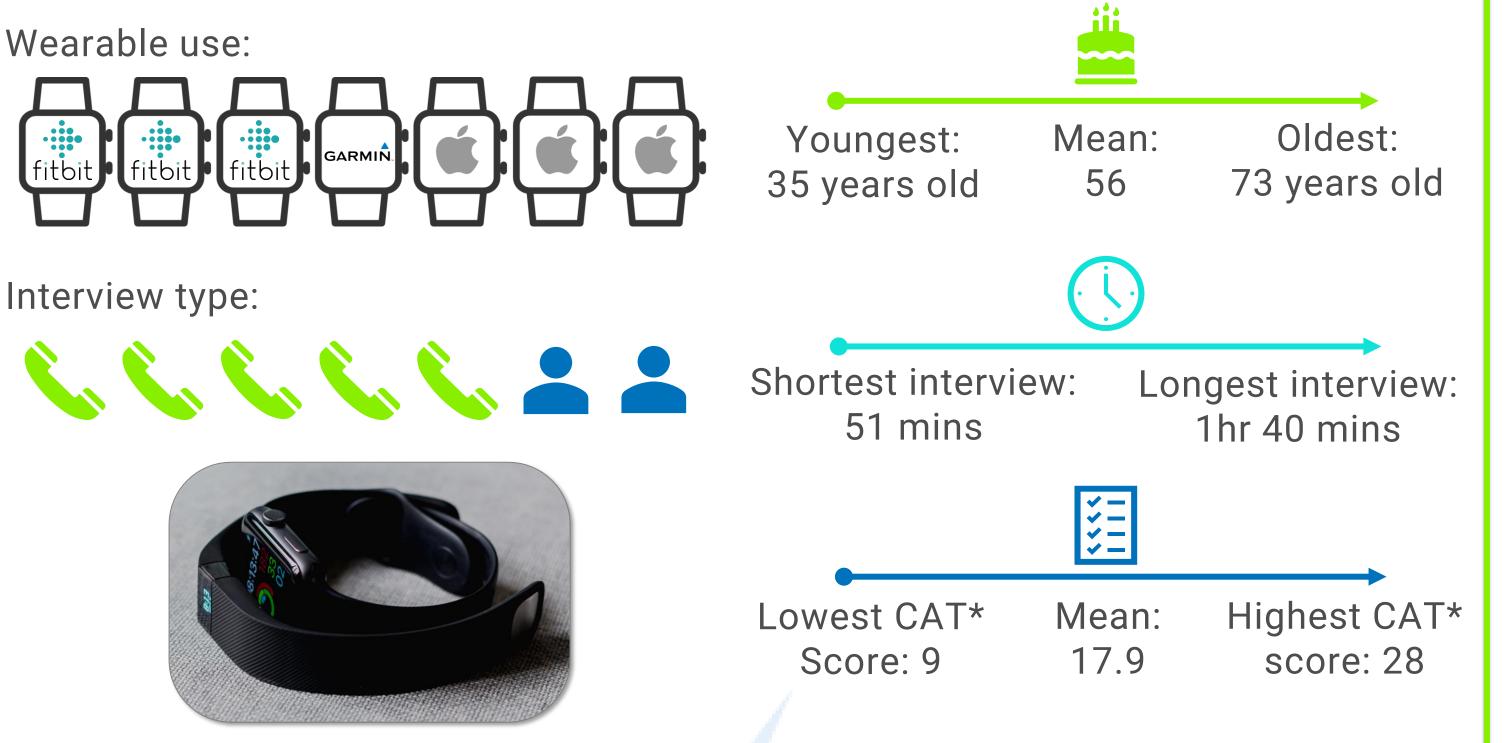
wildel5@uni.coventry.ac.uk

@laurawilde24 🔰

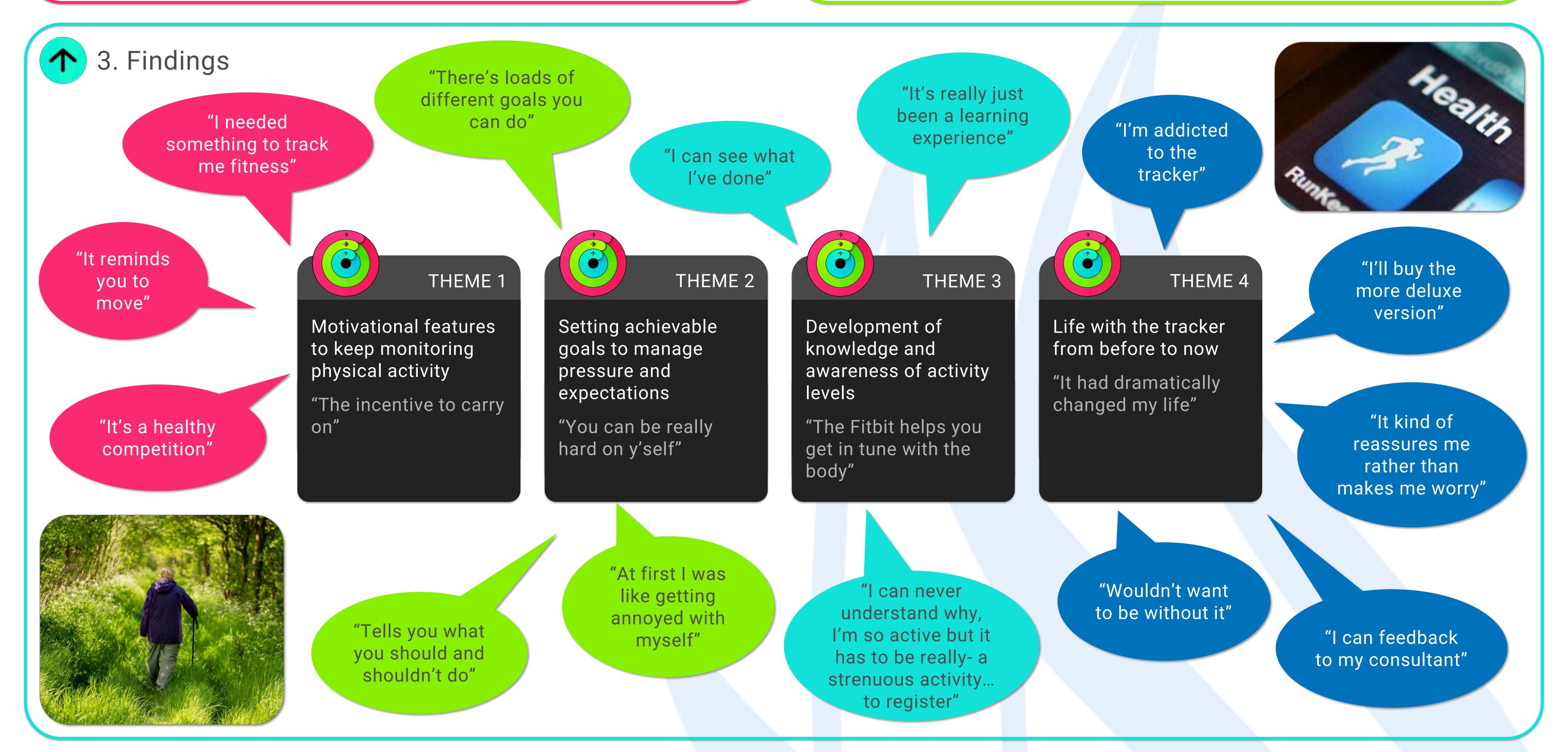
www.laurawilde.co.uk

- Despite difficulties and frustrations with the technology, some studies found people with COPD embraced activity monitors and experienced important benefits to their physical and mental health and wellbeing.⁶
- However, high-quality, in-depth research is needed to understand the experiences of people with COPD using technology to monitor physical activity in everyday life and better self-manage their health condition.⁶
- Therefore, this study aimed to explore the experiences of people with COPD using apps and/or wearables for monitoring their physical activity using an in-depth qualitative approach called interpretative phenomenological analysis (IPA).





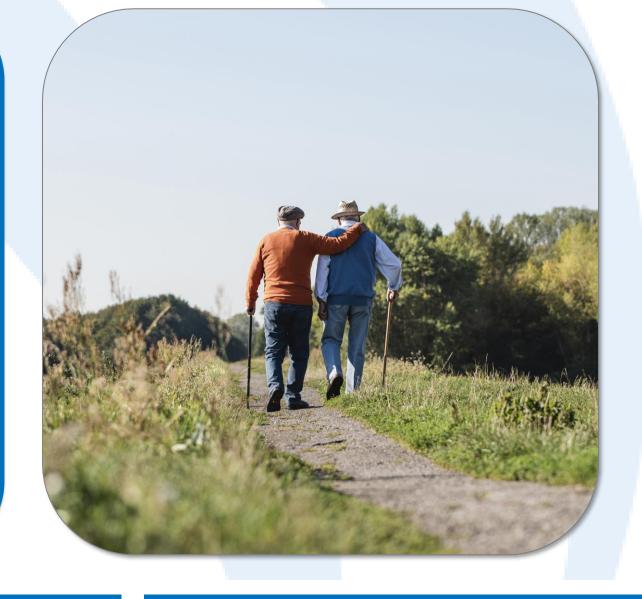
*CAT Score: COPD Assessment Test measures the impact of COPD on a person's life, ranging from 0 (no impact) to 40 (highest impact) Ethical approval was obtained from the Coventry University Ethics Committee (P69266).





4. Conclusion

- Understanding the experiences of people with COPD using apps and wearables for monitoring their activity is invaluable to the development of a) interventions utilising monitoring technology and b) robust co-created guidelines to supporting patients to increase physical activity levels.
- Monitoring technology has the potential to widely benefit people with COPD with their physical activity and self-management of their health condition.
- However, further research is needed into the role of healthcare practitioners and how they can support and encourage people with COPD to engage with technology. More understanding is required into how to utilise and incorporate technology and health data collected at home into health care and treatment.



REFERENCES

- World Health Organization (2020). The top 10 causes of death. https://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death
- Welte T, Vogelmeier C, Papi A. (2015). COPD: early diagnosis and treatment to slow disease progression. Int J Clin Pract. 69(3):336–349. DOI: https://doi.org/10.1111/ijcp.12522
- Kohlbrenner D, Sievi NA, Senn O, et al. (2020). Long-term effects of Pedometer-based physical activity coaching in severe COPD: a randomized controlled trial. Int J Chron Obstruct Pulmon Dis. 15: 2837–2846. DOI: https://doi.org/10.2147/COPD.S279293
- Shin G, Feng Y, Jarrahi MH, et al. (2019). Beyond novelty effect: a mixed-methods exploration into the motivation for long-term activity tracker use. JAMIA Open. 2(1): 62-72. DOI: https://doi.org/10.1093/jamiaopen/ooy048
 - Peng W, Li L, Kononova A, et al. (2021). Habit formation in wearable activity tracker use among older adults: qualitative study. JMIR Mhealth Uhealth. 9(1) :e22488. DOI: https://doi.org/10.2196/22488
- 6. L. J. Wilde, L. Sewell, C. Percy, G. Ward & C. Clark (2022). What Are the Experiences of People with COPD Using Activity Monitors?: A Qualitative Scoping Review, COPD: Journal of Chronic Obstructive Pulmonary Disease, DOI: 10.1080/15412555.2022.2033192

AFFILIATIONS

- a. Centre for Intelligent Healthcare, Research institute for Health and Wellbeing, Coventry University, Coventry, UK
- b. School of Psychological, Social & Behavioural Sciences, Faculty of Health and Life Sciences, Coventry University, Coventry, UK
- c. Royal College of Occupational Therapists, London, UK
- d. School of Health, Faculty of Health and Life Sciences, Coventry University, Coventry, UK
- e. Centre for Healthcare Research, Coventry University, Coventry, UK

CONTACT INFORMATION

Centre for Intelligent Healthcare, Research institute for Health and Wellbeing, Coventry University, Priory Street, Coventry, CV1 5FB Email: wildel5@uni.coventry.ac.uk