Using Physical Activity Wearables in Self-Management from the Perspectives of Persons Living with Arthritis: A Qualitative Evidence Synthesis

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Background

- Physical activity is widely recommended as a key component of optimal arthritis self-management, but physical activity participation among people living with arthritis typically does not meet expert recommendations.1,2
- Evidence is emerging to indicate self-monitoring wearable technologies could support physical activity among people living with chronic illnesses, including arthritis.3
- If wearables are to fulfil their potential to improve arthritis self-management, it is important that the perspectives of people living with arthritis are prioritized in future research, and intervention design and implementation strategies.4

Methods

- Systematic search of 5 databases (including Medline, CINAHL, EMBASE) using the SPIDER tool.
- Hand-search of reference lists of included articles
- 2 reviewers screened title/abstract and full-text articles for eligibility. If agreement was not reached in pairs, it was reached through discussion with a third reviewer.
- 2 reviewers appraised included articles using McMaster Critical Review Form.
- Inductive meta-data analysis guided by thematic analysis and synthesis.

Findings

People expressed that learning more about their own physical activity levels had motivated them to keep working at increasing them. [Tierney et al.]
It was further suggested that having more information and being encouraged to use a monitoring device shifted patients’ attitude from a rather reactive approach to their health condition to becoming more proactive. [Belsi et al.]

1: Becoming a more proactive self-manager

Authors observed that participants became more aware of their activity levels by using a wearable, and some felt more empowered in their ability to self-manage proactively.

2: Making wearables accessible

Authors reported that participants were seeking appropriate supports that could facilitate their use of wearables, and commonly felt “limited” when these supports were not readily available.

3: Improving patient-doctor communication

Authors described how participants anticipated wearable data would better equip them to improve communication with their health professionals.

...across patients, there was the feeling that the use of wearable technology for the management of OA had the potential to impact on their communication with their healthcare providers... from having more accurate consultations and tailored treatment to better communicating the progress of their health, having greater clarity about their management plan and opening more communication channels with their healthcare provider leading to shared decision making. [Belsi et al]

We focus on 3 themes:

- Participant Characteristics
- No. of Participants (n=114)
- Women: 93 (82%)
- Age range: 23 – 85 years
- Self-reported diagnosis of osteoarthritis (OA); inflammatory arthritis (IA); OA or IA: 75 (66%); 32 (28%); 7 (6%)
- Any level of experience with using wearables: 84 (74%)

References:
4. Belsi DS et al. $114 in 2019

Conclusions

Across themes, issues of patient autonomy in daily life are important to achieving the patient-reported benefits identified. Access to a wearable alone is not sufficient to achieving these benefits without meaningful supports to facilitate patient autonomy in daily life. More in-depth research is needed to examine how patient autonomy can be impacted by the use of wearables to support arthritis self-management.