

## Cancer survivors' experiences of using publicly available physical activity mobile apps: a qualitative analysis

**Rationale:** Regular physical activity (PA) improves cancer survival and reduces risk of breast, prostate and colorectal cancer recurrence. PA can also reduce fatigue, pain and sleep problems. Effective interventions to promote PA in cancer survivors are needed and mobile interventions have shown potential. There are many PA mobile apps available for public use but none specifically developed for cancer survivors have been identified.

**Aims:** We aimed to assess breast, prostate and colorectal cancer survivors' opinions and experiences of using PA apps designed for public use.

**Methodology:** We identified four PA apps (Human, The Walk, Johnson & Johnson's 7 Minute Workout, Gorilla Workout) publicly available to download on iOS and Android devices. Each participant was randomly assigned to two of the apps during an initial telephone interview where details of diagnosis and treatment, current PA and use of PA digital technologies were collected. Participants used both apps during a 2 week period, focusing on one app during each week. A recorded semi-structured telephone interview was conducted to understand participants' experiences of downloading and using each app, the content, features and relevance to them as a cancer survivor and how PA apps should be developed or adapted in the context of cancer.

**Analysis:** Qualitative thematic analysis was used to identify themes related to the participants' feedback and experiences of using each app and PA following cancer diagnosis and treatment.

**Results:** Analysis is ongoing: preliminary results suggest that the use of apps to deliver a PA intervention was supported and that these generic PA apps are satisfactory for people who have completed cancer treatment. Recommendations were made to suggest that information about the importance of PA after cancer (i.e. improved survival, reduced recurrence) should be incorporated into a cancer-specific PA app. This should also address common concerns regarding PA participation after cancer (e.g. fatigue, reliable guidance and support for safe and appropriate PA after treatment and surgery). Those participants who had recently finished treatment tended to report the highest need for a cancer-specific PA intervention that should be delivered soon after treatment, when side effects are most apparent and support is most required. For those who were several years post-treatment, many felt that these generic PA apps were largely suitable as most of the side effects had subsided and they wanted to move away from 'cancer-specific' support. Apps which suggested specific strength/resistance-based exercise programmes were preferred by those with higher levels of motivation to improve PA and fitness, whereas those with low levels of motivation generally found that the four apps offered little in terms of increasing motivation or PA participation. Full results will be available by the time of the CBC Digital Health Conference in February.

**Conclusions:** Preliminary conclusions point towards the need for cancer-specific, tailored physical activity apps, targeted towards survivors who have recently finished treatment, with a greater focus on increasing motivation among those where this is low.