Evaluating the acceptance and usability of an app promoting weight gain prevention and healthy behaviours amongst young women with a family history of breast cancer: Protocol for an observational study

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Background
Breast cancer is the most frequent female cancer worldwide[1].

20% of breast cancer cases in the UK are linked to:
- Weight gain during adulthood
- Excess weight
- Potentially modifiable health behaviours such as:
  - Alcohol
  - Smoking
  - Absence of breastfeeding
  - Lack of physical activity[2,3]

Targeting health behaviour interventions to women with a family history of breast cancer could lead to a reduction in breast cancer cases.

The Health Behaviour App
We have developed an app promoting weight gain prevention and healthy behaviours for use by young women at increased risk of breast cancer.

We used a co-design process involving women from the breast cancer Family History, Risk and Prevention Clinic at Wythenshawe Hospital (MFT).

The app includes:
- Behaviour change techniques
- Goal setting
- Education about health and breast cancer topics via an embedded microsite

The Health Behaviour Intervention
The app is part of a wider intervention:
- A group welcome event on Microsoft Teams to give background to the project and allow study participants to meet each other virtually
- Social/peer and health care professional support for study participants provided by a private, hidden Facebook group.

Aims of the study
To assess the acceptability and usability of the intervention to participants, and feasibility of study procedures for a larger future study.

Methods

Participants
The study will recruit 35 female participants, age 18-35 years, at moderate or high risk of breast cancer (>17% lifetime risk).

Study pathway

- Consent
  - Online consent
  - Download app and join private Facebook peer support group (optional)
  - Attend Microsoft Teams welcome event (optional)
- Intervention
  - 2-month access to app and Facebook group.
  - Weekly updates to education topics.
  - Questionnaire at 1 month
  - Provide feedback on app throughout study period
- End of study (2 months)
  - Complete online questionnaires
  - Invitation to take part in a qualitative interview

Outcome measures
Though qualitative interviews, questionnaires and app/Facebook usage data we will assess the following outcomes for acceptability and feasibility:
- Recruitment and online consent methods
- Participant views on the app
- Participant app usage
- Health care professional time required for participant support
- Engagement with the Facebook group

Future steps
The study is ongoing and results are expected in 2023.

Following this we will run a full feasibility study before running a randomised, multi-centre efficacy study.

References

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