A NOVEL WEBSITE PROVIDING PERSONALISED PHYSICAL ACTIVITY FOR LUNG CANCER PATIENTS: A FEASIBILITY STUDY

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Feasibility

Lung cancer has a high incidence and mortality rate, particularly in older adults (65y+). Physical activity can improve the physical and psychological health of these patients. A virtual exercise and education program could address barriers to engaging with technology and improve health outcomes.

Aim

The aim of the research within the doctoral degree was to determine the feasibility, usability, and potential effectiveness of a website providing personal physical activity programs and education (grounded in behaviour change theories) for those diagnosed with lung cancer.

Methods

Recruitment:

- Patients meeting the eligibility criteria were approached at a local hospital after consultation with their clinician.
- Recruited participants were provided with access to the ExerciseGuideUK website for eight weeks.

Study:

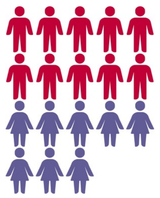
- Participants were guided through the platform's exercise modules throughout the eight weeks, with a minimum of two virtual consultations.

Post Study:

- Post-study, participants completed the Systems Usability Scale (SUS) and post-study questionnaire.
- The study's sample size was intended to enable a signal of effect to be detected rather than definitive evidence of change.
- Patient-reported outcome data was bootstrapped (~10,000 resamples) before post minus pre-analysis

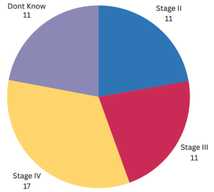
Results

Participant Characteristics

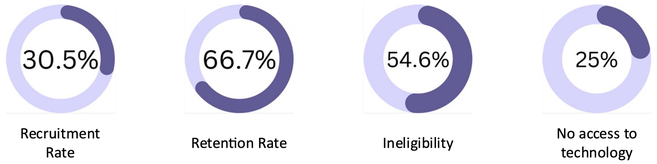


Mean Age:

65y
(±14.42)



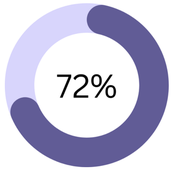
Feasibility



Low to Moderate Feasibility

Acceptability

- Once started using, it was straightforward
- Tunnelled Architecture was preferred
- Was not a burden to engage with
- Desire to continue with ExerciseGuideUK

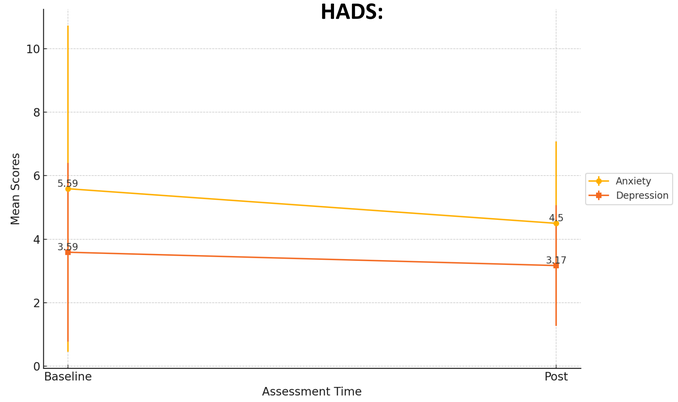


Systems Usability Score
(pre-defined usability 68%)

0 Adverse Events

Patient Reported Outcomes (PRO)

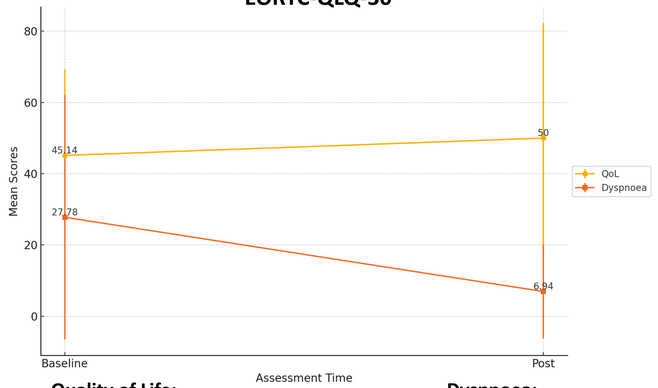
HADS:



Anxiety:
-1.08 (± 3.55); CI: -3.08 – 0.75

Depression:
-0.42; (± 0.45); CI: -1.33 – 0.42

EORTC-QLQ-30



Quality of Life:
4.86 (± 27.86); CI: -10.42 - 20.14)

Dyspnoea:
20.38 (± 13.22); CI: -41.67 - 5.56)

Bootstrapped (~10,000 resamples)

Discussion

This study indicates potential benefits from a virtual exercise and education programme for older adults with lung cancer. Despite some recruitment challenges linked to digital access, participating patients experienced improvements in psychological well-being and respiratory function. The platform's usability and the constructive feedback suggest that such digital interventions are promising. However, to enhance inclusivity, addressing technological barriers is crucial. These initial results support the need for broader trials to confirm these effects and extend reach.

Summary and Conclusion

A personalised physical activity program and educational resources delivered via a website appears feasible and usable for a sub-group of lung cancer patients. Attention should be given to those without access to digital technology. Signal of effect was observed for several important patient-reported outcomes, which were bootstrapped by ~10,000 resamples.

Read the protocol paper for more information here!

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