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Effects of a 12-Week Live-Remote Exercise Intervention for Cancer Survivors: Findings from a Randomised Controlled Trial

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Purpose

Exercise provides important benefits for cancer survivors, yet participation remains low due to barriers such as time demands, travel distance, and limited access to appropriate services. Supervised live-remote delivery may help address these barriers while retaining professional support. This trial evaluated the effects of a 12-week live-remote supervised exercise intervention on health-related quality of life (HRQoL) and other patient-reported and physiological outcomes in survivors of breast, prostate, and colorectal cancer.

Methods

Between January 2022 and December 2023, 200 participants (mean age 58.5 ± 10.4 years; 62% women) were randomised to a live-remote exercise intervention or usual care. Half had been treated for breast cancer, 23% for prostate cancer, and 26% for colorectal cancer. The intervention comprised twice-weekly, 60-minute virtual group sessions (≤ 8 participants) delivered for 12 weeks by upskilled personal trainers. Assessments occurred at baseline, post-intervention (3 months), and 6 months. The primary outcome was overall HRQoL (EORTC QLQ-C30). Secondary outcomes included self-reported physical functioning, cardiorespiratory fitness (VO_{2max}), strength, and physical activity. Exploratory analyses examined potential moderating factors and descriptive patterns of absolute change by baseline health status.

Results

Median attendance was 75%, with no serious adverse events. No between-group difference was observed for overall HRQoL. At 3 months, compared with usual care, the intervention group showed greater improvements in self-reported physical functioning (ES 0.31, $p \leq 0.001$), sit-to-stand performance (ES=0.22, $p=0.003$), VO_{2max} (ES=0.12, $p=0.045$), upper-body strength (ES=0.17, $p=0.010$), and physical activity (aerobic ES=0.57; resistance ES=1.03; both $p < 0.001$). Most effects were not sustained at 6 months. Exploratory findings suggest that women, participants receiving endocrine therapy, and those with lower baseline HRQoL or fitness appeared to show greater improvements.

Conclusions

Supervised live-remote exercise improved physical function, fitness, strength, and physical activity, with no significant change in overall HRQoL. Exploratory findings indicate that some subgroups may derive greater benefit.

Keywords

Live-remote exercise, virtual exercise, health-related quality of life, physical functioning

Conflict of Interest & Ethical Approval

yes

Abstract submitters declaration

yes

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