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## The effects of a tailored eight-week therapeutic exercise programme on fatigue, physical and mental parameters in breast cancer survivors: Case series

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**Introduction:** Cancer-related fatigue (CRF) is common amongst breast cancer survivors, severely affecting quality of life (QoL) after treatment. Although targeted exercise, such as aerobic or strength training, appear to be helpful, the optimal type and exercise parameters require further investigation. These case series explored the effects of a fast-track individually tailored combined aerobic and strength training exercise program on fatigue, physical and mental parameters on breast cancer survivors with CRF.

**Methods:** Breast cancer survivors with self-reported CRF as scored in the Fatigue Severity Scale (FSS) were recruited from the non-profitable breast cancer organization “Alma Zois” of Achaia County, Greece. The program included individualized medium intensity home-based exercises 4 times/week (monitored via telerehabilitation and adherence diaries) and a weekly group-based, supervised session by two physiotherapists for 8 weeks. Progressive programme entailed 50% aerobic and 50% strengthening exercises, while intensity progress was monitored through Borg scale and Karvonen formula. Reported outcomes measured at baseline and post-intervention, included FSS, 6-Minute Walk Test (6MWT), EORTC Basic Quality of Life Questionnaire (QLQ-C30), Hospital Anxiety and Depression Scale (HADS) and International Physical Activity Questionnaire-7 (IPAQ-7) and patient satisfaction questionnaires post intervention. Data was descriptively analyzed.

**Results:** Three women aged  $50.67 \pm 4.04$  years-old ( $IPAQ-7 = 3.576.67 \pm 5.129.1$  MET-min/week) completed the intervention. The exercise programme reduced fatigue in FSS score by 24.31% and improved all outcome parameters; QoL in QLQ-C30 subscales (20.8%, 15% and 19.9% mean score improvements in patients' functionality, symptoms and general health, respectively), mental health (33.3% and 30.5% improvements in HADS Anxiety and Depression, respectively), mean walking distance increased by 15.3% (77m) post-intervention (6MWT) while satisfaction was highly rated.

**Conclusion:** This case-series study showed that a supervised, individualized combined aerobic and strength 8-week training programme improved fatigue, QoL, gait speed and overall physical and mental well-being amongst breast CRF women, though, larger scale studies are needed.

### Keywords

breast cancer, fatigue, exercise

### Conflict of Interest & Ethical Approval

yes

### Abstract submitters declaration

yes

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