Impact of Lifestyle Coaching on Physical Activity ,Mental Well-Being and Cancer Well-Being Scores

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Abstract

Abstract:
Background:
Lifestyle interventions have a well-documented role in improving physical activity, psychological health, and chronic disease outcomes. For breast cancer survivors, lifestyle medicine is increasingly recognised as an essential part of survivorship care, yet structured interventions remain underutilised in clinical pathways.
Lifestyle interventions are known to impact physical activity, mental wellbeing, and cancer recovery outcomes. This project evaluated the effectiveness of a lifestyle medicine coaching program over 12 weeks for overweight and obese breast cancer survivors on follow up across three domains: physical activity (Exercise Vital Sign - EVS), mental wellbeing (Warwick-Edinburgh Mental Wellbeing Scale - WEMWBS), and cancer wellbeing (FACT-G7 scores).

Introduction

Introduction:

Breast cancer survival rates are steadily improving, with over 80% of women in high-income countries now surviving five years beyond diagnosis. However, survivorship is often accompanied by persistent challenges including fatigue, reduced physical fitness, mental health difficulties, and increased risk of comorbidities such as cardiovascular disease and diabetes (Runowicz et al., 2016).

Lifestyle medicine, which applies evidence-based interventions in nutrition, physical activity, sleep, stress management, substance avoidance, and social connectedness, offers a promising pathway for addressing these unmet survivorship needs. Research consistently shows that lifestyle interventions can not only improve wellbeing but also reduce recurrence risk and enhance overall survival (Rock et al., 2012; Ligibel et al., 2019).

Despite this, integration of structured lifestyle medicine coaching into oncology follow-up care remains limited. This project aimed to evaluate the impact of a **12-week multidisciplinary lifestyle medicine coaching program** on physical activity, mental wellbeing, and cancer-related quality of life in overweight and obese breast cancer survivors.

Methods and Materials

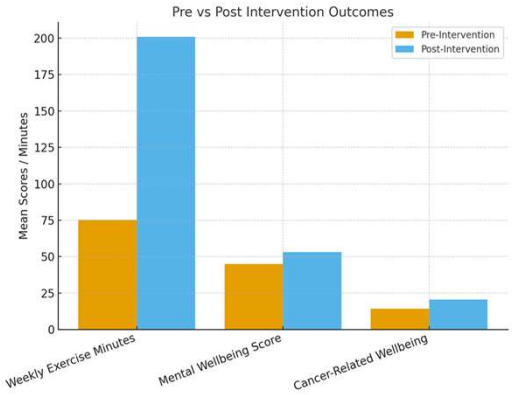
Methods:
Fifteen participants were assessed pre- and post lifestyle medicine program of education and patient led goal-based coaching for healthy behaviour change led by a lifestyle medicine physician, nutritionist, cancer exercise specialist and yoga teacher. Exercise minutes per week, mental wellbeing scores, and cancer wellbeing scores were collected and analysed using paired t-tests and Wilcoxon Signed-Rank Tests.

Results

Results:
Significant improvements were observed across all three outcome areas. Weekly exercise minutes increased from a mean of 75.2 to 201.0 ($t(14) = -5.81$, $p < .001$, Cohen's $d = 1.5$). Mental wellbeing scores improved from a mean of 45.0 to 53.0 ($p < .05$), with 86% of participants showing a meaningful positive change. Cancer-related wellbeing scores improved from 14.3 to 20.5 ($t(14) = -3.266$, $p = .006$). The proportion of participants with low mental wellbeing reduced from 43% to 11% post-intervention, while those reporting high wellbeing increased from 7% to 16%.

Wellbeing Intervention Results Summary

Outcome Area	Pre-Intervention Mean	Post-Intervention Mean	Statistical Test	Effect Size / % Change	Key Notes
Weekly Exercise Minutes	75.2	201.0	$t(14) = -5.81$, $p < .001$	Cohen's $d = 1.5$	Very large effect size
Mental Wellbeing Score	45.0	53.0	Wilcoxon, $p < .05$	86% improved	Low wellbeing: 43% → 11%; High: 7% → 16%
Cancer-Related Wellbeing	14.3	20.5	$t(14) = -3.266$, $p = .006$		Significant positive change



Conclusions

Conclusion:
The lifestyle coaching program produced statistically significant and clinically meaningful improvements in physical activity, mental wellbeing, and cancer-related health outcomes. These findings support the integration of holistic, behaviour-based coaching interventions into health promotion and cancer survivorship care pathways

Discussion

Discussion
This pilot project demonstrated **significant and meaningful improvements** across physical activity, mental wellbeing, and cancer-related quality of life in a group of breast cancer survivors.
Physical Activity:
Participants achieved a near tripling of weekly exercise minutes, moving beyond the commonly recommended **150 minutes/week threshold** associated with improved survival outcomes in cancer populations (Pierce et al., 2007; Schmitz et al., 2019). Previous trials have shown that structured exercise interventions reduce fatigue, improve cardiovascular health, and enhance treatment tolerance, all of which align with our findings.
Mental Wellbeing:
The improvement in WEMWBS scores is consistent with evidence that lifestyle interventions incorporating physical activity, stress management, and social support lead to substantial psychological benefits. Given that depression and anxiety remain prevalent among breast cancer survivors, embedding psychosocial support alongside behavioural interventions is vital (Cramer et al., 2017).
Cancer-Related Wellbeing:
The rise in FACT-G7 scores highlights the broader impact of lifestyle medicine on domains of **energy, symptom management, and overall functioning**. Notably, improvements were achieved within just 12 weeks, underscoring the responsiveness of survivorship populations to holistic interventions.
Clinical and Policy Implications:
The cost of cancer survivorship care continues to grow, with multimorbidity contributing to high healthcare utilisation. Lifestyle medicine offers a **cost-effective, scalable, and sustainable intervention** that not only improves quality of life but also reduces reliance on pharmacotherapy and downstream healthcare costs (Ornish et al., 1998; Esselstyn, 2014). Programs such as ours could be adapted into survivorship pathways across oncology services, supported by multidisciplinary teams.
Limitations:
This was a small pilot with 15 participants, limiting generalisability. The lack of a control group prevents causality attribution. Longer-term follow-up is also needed to assess sustainability of behaviour change.
Future Directions:
Further studies with larger, randomised designs are warranted. Additionally, digital delivery models may enhance accessibility and scalability, particularly for rural or resource-limited settings.

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References

1. Runowicz, C. D., et al. (2016). *American Cancer Society/American Society of Clinical Oncology Breast Cancer Survivorship Care Guideline.* CA: A Cancer Journal for Clinicians.
2. Rock, C. L., et al. (2012). *Nutrition and physical activity guidelines for cancer survivors.* CA:Cancer J Clin.
3. Ligibel, J. A., et al. (2019). *Lifestyle interventions in cancer survivorship: where do we go from here?* J Clin Oncol.
4. Pierce, J. P., et al. (2007). *Greater survival after breast cancer in physically active women with high vegetable-fruit intake.* J Clin Oncol.
5. Schmitz, K. H., et al. (2019). *Exercise is medicine in oncology: Engaging clinicians to help patients move through cancer.* CA Cancer J Clin.
6. Cramer, H., et al. (2017). *Yoga for improving health-related quality of life, mental health and cancer-related symptoms in women with breast cancer.* Cochrane Review.
7. Ornish, D., et al. (1998). *Intensive lifestyle changes for reversal of coronary heart disease.* JAMA.
8. Esselstyn, C. B. (2014). *A plant-based diet and coronary artery disease: a mandate for effective therapy.* J Fam Pract.

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