Exercising Together© for Couples during Radiation Therapy for Prostate Cancer: A Pilot Feasibility Study

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Abstract

We developed Exercising Together©, a partnered strength training program, as an exercise-based approach to improve patient, spouse and relationship health for couples coping with cancer. Exercising Together© may be most effective during cancer treatment, when couples experience the most stress. However, the program has only been tested in couples post-treatment.

Purpose: To determine the feasibility and acceptability of Exercising Together© during a course of radiation therapy for prostate cancer and the preliminary efficacy of the program on physical function, symptoms and dyadic coping in both the patient and spouse.

Methods: Couples were recruited from a radiation oncology clinic to participate in group classes of Exercising Together© 3x/week throughout their treatment. Classes consisted of moderate-intensity strength training performed by the couple who worked as training partners. The Physical Performance Battery (timed walk, stance and chair stand) and 400m walk time, and anxiety (SCL-90 ANX), depressive symptoms (CES-D), intimacy (Physical Intimacy Scale) and dyadic coping (active engagement and protective buffering) were assessed at baseline and at the end of radiation, with self-report measures assessed again 8 weeks after training stopped. Independent Wilcoxon signed-rank tests were used to assess changes in patients and spouses on the following outcomes:

- Physical performance battery (PPB; standing balance, chair stand time, 4 meter walk time)
- 400 meter walk time
- Anxiety (SCL-90 ANX)
- Depressive symptoms (CES-D)
- Intimacy (Physical Intimacy Scale)
- Dyadic Coping (active engagement & protective buffering)

Results:

- Enrollment: n=10 (within 6 months).
- Retention: 100% over 8 weeks (1 couple did not complete any post-testing due to illness).
- Class attendance: 81% patient, 79% spouse.
- Class rating (1-10 scale; 10 best): patient=9.5, spouse=9.8.
- 83% of patients and spouses would prefer group couple exercise class over general community class.

Changes in Outcomes from Pre to Post Radiation:

- Significant improvement in PPB in spouses (△=12%, p=0.02) but not in patients (△=8%, p=0.08).
- Significantly faster 400 meter walk times in patients (△=11%, p=0.02) but not in spouses (△=2%, p=0.16).
- Significantly lower anxiety in patients (△=50%, p=0.03) but not in spouses (△=45%, p=0.11).
- Significant increase in active engagement in patients (△=9%, p=0.04) but not in spouses (△=1.5, p=0.63).
- No significant changes in depressive symptoms or physical intimacy among spouses nor patients.

Conclusions

- Enrolling couples into an exercise program during treatment is feasible, acceptable and desired
- Physical function and mood improved among patients who typically experience declines in physical function and worsening mood across treatment.
- A partnered exercise program could be implemented into radiation oncology practice & tested in other cancer types.

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