

Effect of Dance on Cancer-Related Fatigue and Quality of Life

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ABSTRACT

Purpose: Cancer-related fatigue is a multidimensional symptom with an underestimated prevalence and severity in cancer patients. The aim of the study was to evaluate the effect of dance as a holistic sportive activity in cancer patients under active anticancer treatment with fatigue as endpoint.

Patients and Methods: Forty patients under active anticancer treatment (adjuvant (25), palliative (11) or neoadjuvant (4)) with moderate or severe fatigue (≥ 4 on the visual analogue scale) were investigated in two groups for severity of fatigue (visual analogue scale, Functional Assessment of Chronic Illness Therapy: Fatigue questionnaire), quality of life (European Organization for Research and Treatment of Cancer, Quality of Life Questionnaire) and physical performance (6-minute walk test) before and after the study period--group A (n = 20): intervention (10 dance classes in 5 weeks in addition to counselling) and group B (n = 20): control (no dance, standard of care, counselling).

Results: We found significant improvements for cancer-related fatigue in the intervention group (baseline mean \pm SD 5.95 ± 1.701 , end-of-study mean 3.8 ± 1.542 , $p = 0.001$, reduction of 36 %) compared to the control group (baseline mean 4.95 ± 0.999 , end-of-study mean unchanged at 5.0 ± 1.556 , $p = 0.887$); as well as for emotional and social functioning scales and physical performance ($p < 0.05$).

Conclusion: Dance might be an appropriate, effective approach for treatment of cancer-related fatigue.

Strengths

- Clear inclusion and exclusion criteria
- Use of validated standardized assessment scales and tools
- Patients in both groups were similar at baseline (Median age 50 [26-74], mean BMI 22 [17-28], type of cancer [in order of decreasing frequency]: breast, other, ovarian/GI; treatment [in order of decreasing frequency]: chemotherapy, radiotherapy, hormone blockade therapy)
- Results analyzed per intention to treat

Weaknesses

- Small sample size (n = 40), predominantly females
- Quasi randomization method, lack of equal treatment outside of intervention/control
- Findings are not necessarily generalizable beyond the study population due to: 1) study being conducted in Germany, 2) patients recruited from oncology outpatient departments, and 3) stringent exclusion criteria
- Authors identified that recruited patients may have a baseline positive attitude towards dance and thus the study may overestimate the positive effect of dance

Relevance to Palliative Care: Dance is a form of low-impact physical activity that may benefit patients with life-limiting diseases by reducing subjective perceptions of fatigue and positively affecting other psychosocial domains of health. Level of activity can be individualized to the patient and additional studies on patient populations with lower performance scores may be of benefit to further investigate the benefits of dance therapy in the realm of palliative medicine.