

Changes of Symptoms of Anxiety, Depression, and Fatigue in Cancer Patients after the End of Yoga Therapy

Anna Hardoerfer*

Department of oncology, University of Würzburg, Germany

Abstract

Background: Symptoms of anxiety, depression, and cancer-related fatigue are generally associated with cancer. Cancer patients increasingly use complementary and indispensable treatments, similar as yoga, to manage with psychological and physical impairments. In the present composition, long-term changes of anxiety, depression, and fatigue in cancer are examined 6 months after a yoga intervention.

Method: We used an experimental design based on a randomized controlled study in cancer patients with mixed diagnoses to estimate long-term changes of symptoms of anxiety, depression, and fatigue 6 months after the end of yoga remedy. We measured anxiety symptoms with the Generalized Anxiety complaint scale (GAD-7), depressive symptoms with the Patient Health Questionnaire – 2 (PHQ-2), and fatigue with the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire – Fatigue Scale (EORTC QLQ-FA13). Yoga remedy was handed in yoga classes of 60 minutes each once a week for 8 weeks in aggregate. The exercises provided contained both body and breathing conditioning as well as contemplation. Results of an aggregate of 58 patients shared in the study. Six months after the end of yoga remedy, symptoms of anxiety, depression, and fatigue were significantly reduced compared with baseline. Still, symptoms of anxiety and fatigue slightly increased during the follow-up period, whereas symptoms of depression remained stable.

Conclusion: Our results are promising and support the integration of yoga interventions in probative cancer treatment concepts but should be verified by randomized controlled trials. Long-term effects of yoga remedy on cancer patients should be the subject of further research.

Keywords: Cancer; Anxiety; Depression; Fatigue; Yoga; Probative care

Introduction

In Germany, around 50 of the population face a cancer diagnosis in the course of their continuance. According to recent data, half a million people develop cancer every time. Demographic change and extensively used screening methods will lead to an increase of 20 of cancer incidences until 2030.1 for this reason, medical care of cancer cases is a veritably important task of our health care system [1].

Coping with a life-limiting complaint is veritably grueling and frequently occurs together with anxiety and depressive symptoms. The frequency of anxiety diseases and depression is much advanced in cancer patients than in healthy individualities [2-5]. Besides anxiety and depression, cancer-related fatigue is one of the most frequent symptoms in cancer cases. Further than 50 of the cases are affected by fatigue during or after their treatment. These cancer-related symptoms could lead to a reduction of quality of life, reduction of treatment adherence, and indeed worse survival than in not-affected patients. Accordingly, cancer-related cerebral and physical impairments have to be considered in cancer treatment generalities [6].

In order to manage with these symptoms, 35 to 50 of all cancer cases use reciprocal and indispensable drug (CAM). In recent times, a steady rise of CAM use has been observed. Yoga, as a high illustration of CAM, is a promising mind-body intervention, which is performed, with adding demand, as a probative remedy in oncological care. Coincidentally, yoga has come an intriguing content of exploration. To date, most experimenters have concentrated on short-term effects of yoga therapies on psychological and physical symptoms in cancer cases. Former meta-analyses and reviews suggest that yoga might lead to a reduction of anxiety and depressive symptoms incontinently after the intervention. Short-term effects on fatigue have also been

found in several reviews and meta-analyses [7-8]. Still, there's a lack of understanding of how long the benefits of a yoga intervention might last. With regard to anxiety, 4 small studies couldn't find any group differences between intervention and control groups at follow-up examinations. Depressive symptoms were measured in 7 randomized controlled trials (RCTs) including long-term follow-ups, but again, no significant group differences were found 3 to 6 months after yoga remedy. It's worth noting that anxiety and depressive symptoms were simply studied in secondary analyses. Trials that anatomized changes of fatigue showed inconsistent results concerning long-term effects of yoga interventions. Thus, the end of this study was to estimate the long-term changes of anxiety, depression, and fatigue in patients with mixed Tumor conditions after yoga remedy, using a prospective, experimental design [9].

Methods

Design

This observational study is based on a randomized, controlled intervention study, which was performed at the University Hospital of Würzburg, Germany, Comprehensive Cancer Center Mainfranken.

*Corresponding author: Anna Hardoerfer, Department of oncology, University of Würzburg, Germany, E-mail: robertwallace@gmail.com

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The Ethical Commission of Würzburg approved the study on July 26, 2014. Cancer cases with different excrescence realities were included successively. The addition criteria were presence of a excrescence complaint, age of 18 or aged, and working knowledge of German language. The recruitment was carried out on the base of educative presentations handed by the Comprehensive Cancer Center Mainfranken, which were held every 3 months. Furthermore, the Psycho-oncological Service of the University Hospital of Würzburg addressed cancer patients in person. Eligible patients were briefed both personally and by an information distance before they gave written consent to share in the study and external randomization took place. Yoga remedy comported of daily classes of 60 minutes each over a period of 8 weeks [10]. During these 8 weeks, participants of the control group didn't admit any yoga remedy but were offered yoga remedy later. Every participant completed questionnaires at baseline, before and after yoga remedy, and 6 months after the end of yoga therap. By furnishing yoga remedy to the control group after their waiting time ended, comparing the intervention group with the waiting-list control group was limited to the period before the waiting-list control group started yoga therapy.

Intervention

Yoga treatment was conducted in groups of 10 to 12 cases. Yoga classes started with a relaxation and a short discussion about the participants' mental and physical condition. Subsequently, several exercises of gentle Hatha Yoga, inspired by John Kabat-Zinn, were carried out. This was always done in the same sequence, under supervision, and with correction, if necessary. The exercises were also followed by a meditation at the end of the session. Each party also received a CD and a printed primer to motivate training at home.

Statistical Analysis

Data analysis was carried out using IBM SPSS Statistics Version 22. We used paired t tests to assay changes between birth and follow-up. We present standardized effect sizes (SES) and 95 confidence intervals (CIs) to demonstrate changes of symptoms of anxiety, depression, and fatigue in the course of the 6-month follow-up period. Likewise, to assay a potential link between maintained yoga practice and symptoms of anxiety, depression, and fatigue, the Mann-Whitney U test for independent samples was performed. $P < .05$ was considered significant.

Discussion

A small one-armed pilot study reported a significant reduction of depression and fatigue from baseline to 3-month follow-up. Two RCTs with bone cancer patients verified the long-term reduction of fatigue as an effect of a yoga intervention by demonstrating significant group differences. Another RCT with 181 breast cancer cases found that depression and fatigue increased during 3 months of follow-up but didn't reach baseline situations. Furthermore, significant long-term group differences were reported for fatigue but not for depression. In only one study, with 163 breast cancer patients, a 6-month follow-up was conducted. Significant group differences for fatigue incontinently post treatment weren't set up 6 months later, though depressive symptoms weren't significantly different between groups at any time.

To conclude, our results of a significant reduction of fatigue and depressive symptoms between baseline and follow-up are in line with former exploration. Still, a unproductive connection to yoga remedy couldn't be demonstrated in former RCTs. Moreover, regarding fatigue, results about long-term group differences were inconsistent.

Most trials included only one excrescence entity (especially breast cancer), offered different yoga styles and different length as well as frequency of yoga classes, and were designed as a RCT. Furthermore, different assessment instruments were used in the individual studies. Accordingly, making comparisons with our results is delicate, and farther exploration is demanded to clarify the inconsistent state of exploration. Possible long-term effects on anxiety, depression, and fatigue should be delved in larger studies with active control groups and characteristic cases with a cancer diagnosis other than breast cancer.

Conclusion

To conclude, our results suggest positive changes of anxiety, depression, and fatigue in the long term after a yoga therapy. In addition, 69 of cases reported private benefits, which led to conservation of yoga practice. Our results are promising and support the integration of yoga interventions in probative cancer treatment concepts but should be confirmed by RCTs. Long-term effects of yoga remedy on cancer patients should be the subject of farther exploration.

Conflict of Interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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