

34th Euro-Global Summit on **Cancer Therapy & Radiation Oncology**
 &
 6th International Conference on **Big Data Analysis and Data Mining**
 &
 13th International Conference on **Orthopedics, Arthroplasty and Rheumatology**
 July 25-27, 2019 London, UK

Ameliorate effects of bright light therapy on cancer-related fatigue: A systematic review and meta-analysis

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State of the Problem: Among cancer patients, 52.7% endure clinically significant cancer-related fatigue (CRF), the most distressing symptom correlated with the disease process and anti-cancer treatments. CRF significantly deteriorates the quality of life (QOL) of both cancer patients and their families, including their confidence in conquering cancer. Therefore, management of CRF is an urgent need. However, exact and effective pharmacological and non-pharmacological strategies for the management of CRF are lacking. The purpose of this meta-analysis was performed to critically evaluate the effectiveness of bright light therapy (BLT) in CRF management and thereby reach a more convincing conclusion with respect to light therapy for CRF.

Methodology & Theoretical Orientation: Eight databases (Cochrane Library, Ovid, Web of Science, Medline, Embase, CBM, CNKI, and Wanfang) were systematically searched to identify randomized controlled trials (RCTs) that investigated the effects of BLT on CRF from inception to December 2018. Two reviewers independently assessed the risk of bias using Cochrane Collaboration criteria and extracted correlated data using the designed form. All analyses were performed with Review Manager 5.2.3.

Findings: Two RCTs, including patients 120 (white bright light group, 65; dim red light group, 55), meeting the inclusion criteria for the meta-analysis were identified. And they were assessed as being of low risk for bias. BLT had a marked effect on fatigue in cancer patients, particularly among breast cancer patients. We also evaluated the effect of BLT on cancer patients by the reduction of fatigue symptom (SMD=-1.5; 95% CI= [-2.02, -0.16]). Adverse events didn't been reported in two trials.

Conclusion & Significance: BLT is effective for CRF management and should be recommended as a beneficial alternative therapy for CRF patients, particularly for breast cancer patients. Studies with larger sample sizes are needed to confirm the curative effect of BLT in the future.

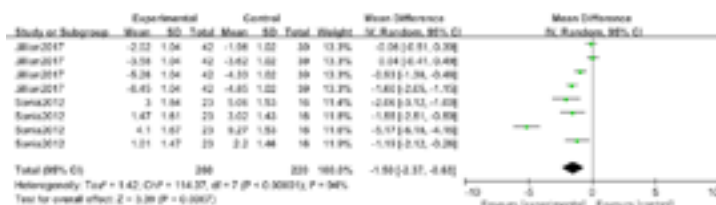


Figure 1: Overall effect of bright light therapy on cancer-related fatigue



Figure 2: Risk of bias assessment by individual trials



Figure 3: Risk of bias assessment by individual trials

JOINT EVENT

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Recent Publications

1. Scott J A (2011) Patients' experiences with cancer-related fatigue: a review and synthesis of qualitative research. *Oncol Nurs Forum* 38(3):E191-E203.
2. Lieve R (2011) Bright light treatment in elderly patients with nonseasonal major depressive disorder: a randomized placebo-controlled trial. *Archives of general psychiatry* 68(1):61-70.
3. Berger A M (2015) Cancer-related fatigue, version 2.2015. *J Natl Compr Cancer Netw* 13(8):1012-1039.
4. Moher D (2009) Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Ann Intern Med* 151(6):e1000097.
5. Ancoli-Israel S (2012) Light treatment prevents fatigue in women undergoing chemotherapy for breast cancer. *Support Care Cancer* 20(6):1211-9.

Biography

Junting Huang is a Postgraduate at Xi'an Jiaotong University, majoring in Cancer and Rehabilitation Nursing. She as the second author has published eleven articles, and they have been included in China National Knowledge Interest (CNKI), such as "the Study of Health Behavior and Self-efficacy in Patients with Breast Cancer" and "Influence of Humanistic Nursing Intervention on Quality of Life of Patients with Breast Cancer Radiotherapy" etc. In addition, she has taken part in many academic conferences about cancer research with her tutor. She is very interested in cancer treatment and research, especially breast cancer patients.

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