The Efficacy of Light Therapy in the Treatment of Seasonal Affective Disorder: A Meta-Analysis of Randomized Controlled Trials

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Abstract

**Background:** Bright light therapy (BLT) has been used as a treatment for seasonal affective disorder (SAD) for over 30 years. This meta-analysis was aimed to assess the efficacy of BLT in the treatment of SAD in adults. **Method:** We performed a systematic literature search including randomized, single- or double-blind clinical trials investigating BLT (≥1,000 lx, light box or light visor) against dim light (≤400 lx) or sham/low-density negative ion generators as placebo. Only first-period data were used from crossover trials. The primary outcome was the post-treatment depression score measured by validated scales, and the secondary outcome was the rate of response to treatment. **Results:** A total of 19 studies finally met our predefined inclusion criteria. BLT was superior over placebo with a standardized mean difference of −0.37 (95% CI: −0.63 to −0.12) for depression ratings (18 studies, 610 patients) and a risk ratio of 1.42 (95% CI: 1.08–1.85) for response to active treatment (16 studies, 559 patients). We found no evidence for a publication bias, but moderate heterogeneity of the studies and a moderate-to-high risk of bias. **Conclusions:** BLT can be regarded as an effective treatment for SAD, but the available evidence
stems from methodologically heterogeneous studies with small-to-medium sample sizes, necessitating larger high-quality clinical trials.

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