

IAFP GERIATRIC MIG PICO DE POEM



FEB 2021

Effectiveness of Light Therapy in Cognitive Impaired Persons



PRESENTING QUESTION

Can light therapy improve sleep quality, behavioral disturbances, and depression in older patients who have cognitive impairment?



INTERVENTION

The authors systematically reviewed multiple databases and clinical trial registries to identify randomized trials that evaluated the effect of light therapy on sleep quality, behavioral disturbances and depression in older patients with cognitive impairment. Two authors independently assessed the risk of bias for each included study. They had high inter-rater reliability ($\kappa = 0.9$), and tried to resolve disagreements through discussion. There was a third member of the team when agreement was not possible. They included nine trials with a total of 416 patients.



COMPARATOR

Placebo



OUTCOMES

In this meta-analysis, older patients with cognitive impairment who were exposed to light therapy had moderate improvements in behavioral disturbances, small improvements in sleep quality, and moderate improvements in depression.



TIMEFRAME

Study Design: Meta analysis (randomized controlled trials)

SYNOPSIS

The degree of cognitive impairment—based on results from the Mini-Mental State Examination—ranged from 5.7 to 22.1. The intensity of light in the studies ranged from 210 to 10,000 lux, and most of the patients were treated in the morning. The duration of light therapy ranged from one to 10 weeks (average = 5.4 weeks). Most control groups were exposed to average-strength indoor light; one study used no specific light as a control. None of the studies were considered to be of high methodologic quality, with the lack of masking being the most common concern. The pooled data from the five studies that evaluated behavioral disturbances showed moderate improvement with no statistical evidence for publication bias. Six studies that evaluated sleep quality showed small improvements and no statistical evidence for publication bias. Five studies that evaluated depression showed moderate improvements and no statistical evidence for publication bias.



KEY TAKEAWAY

- Light therapy **can relieve behavioral disturbances, improve sleep quality, and alleviate symptoms of depression** for cognitively impaired persons
- Although only randomized clinical trials were included, some studies included analyses only of participants who participated in the experiment throughout the whole process, whereas others included participants who withdrew before the experiment had been completed, which may yield inconsistent results



Designed by Peter Ng, 2020-2021 IAFP Public Health Extern

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