

The effects of bright light therapy on sleep among young adults with non-clinical sleep problems: A pilot-study

Introduction: Sleep deficiency is a major public health issue affecting daily life and health. Sleep problems and poor sleep quality are usually due to a disruption in the body's circadian rhythms (CR). Bright light therapy (BLT) is effective in realigning the CR in patients but the effectiveness of BLT among healthy individuals has not been evaluated. Therefore, the aim was to examine the effects of BLT intervention on sleep problems and sleep quality in a sample of young adults.

Materials and methods: A 3-weeks BLT intervention, using circadian stimulating glasses for 30 minutes each morning, was conducted among 40 undergraduate students at Reykjavik University. The participating students, formerly assessed with sleep problems, were randomly assigned to either a control group with non-circadian stimulating light glasses or an intervention group with circadian stimulating light glasses. At baseline and follow-up, sleep problems were measured with the Bergen Insomnia Scale (BSI) and sleep quality was measured with the Pittsburgh Sleep Quality Index. A 2-x-3 factorial design was applied to test the effectiveness of the BLT.

Results: The results suggested that the BLT influenced sleep problems over time ($p < 0.001$) and showed significant interaction between group and time in both sleep problems ($p = 0.005$) and sleep quality ($p = 0.045$).

Conclusions: The results indicate that the circadian stimulating light glasses were effective in decreasing sleep problems and increasing subjective sleep quality. This has important public health relevance as this low-burden BLT intervention can easily be disseminated among young adults with non-clinical sleep problems.

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