

DAYLIGHT MENTAL HEALTH Talking Points

PARTNERSHIP INITIATIVE
INTEGRATED DESIGN LAB
at the Center for Integrated Design

W

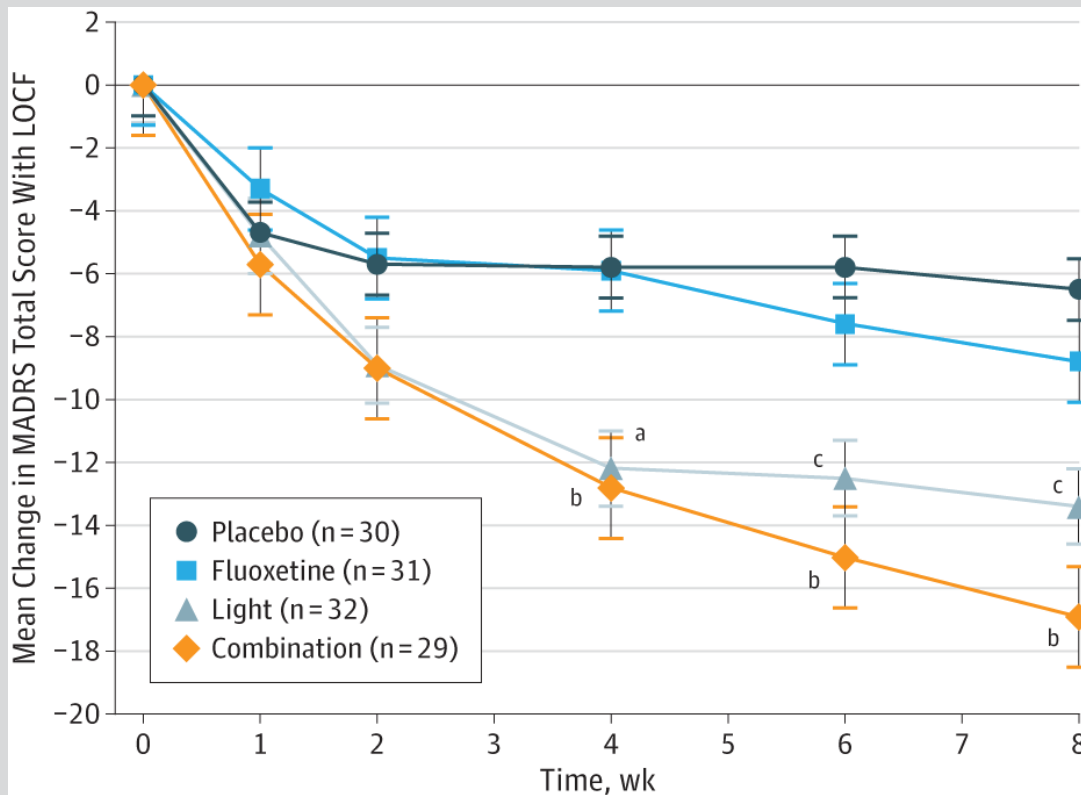


Figure 1:

Bright light, like that delivered by daylight, was found to be an effective treatment of non-seasonal depression, performing better than a typical depression treatment, fluoxetine.

Source: <https://jamanetwork.com/journals/jamapsychiatry/fullarticle/2470681>

Keywords:

daylight, mental health, depression, mood, mental illness, seasonal affective disorder

CONTENT OVERVIEW

- I. Improved Mood
- II. Impacts on Mental Illness
- III. References

DAYLIGHT + MENTAL HEALTH SUMMARY

Access to daylight has positive impacts on the mental health of building occupants. Depression and seasonal affective disorder (SAD), in particular, are positively impacted by daylight. In general, daylight seems to improve mood, but conclusive studies remain elusive due to the myriad of factors involved in influencing mood.

I. Improved Mood

- i. High illuminance levels associated with daylight on vertical surfaces are generally preferred by occupants and are connected to a reduced sense of gloom.
- ii. For healthcare facilities, daylit post-surgical facilities have been shown to improve the mental well-being of patients, thereby improving their recovery rates.
- iii. Bright light in the morning has been shown to decrease agitation among elderly dementia patients.
- iv. However, the effects on mood improvement seem to depend highly on individual preferences and expectations.
 - a. Because mood is influenced by so many causes, unless the daylighting is extremely uncomfortable, it is likely to be overshadowed by other factors.

II. Impacts on Mental Illness

- i. Daylight has been shown to positively impact those with various types of mental illness
- ii. Direct sunlight in the morning was found to decrease the length of stay in the hospital for patients suffering from bipolar disorder.
 - a. Those in eastern rooms exposed to direct sunlight in the morning had a mean 3.67-day shorter stay than patients in western-facing rooms.
- iii. Alzheimer's patients also benefited from exposure to bright daylight throughout the day, having improved circadian rhythms and sleep cycles as well as being less prone to depression.
- iv. Depression
 - a. Daylight has the most impact on those suffering from depression.
 - b. Studies have shown that "daylight is effective in reducing depression and improving mood, even for people hospitalized with severe depression" (Ulrich 2008).
 - c. As with bipolar patients, daylight seems to help reduce the length of stay in the hospitals.
 - 1. Adult patients hospitalized with severe depression assigned to sunnier rooms stayed an average of 2.6 days less than patients assigned to rooms always in shade.
 - d. Daylight is helpful in preventing post-operative delirium and depression
 - 1. a study found that windowless ICUs had twice the number of patients develop post-operative delirium and depression as ICUs with access to daylight.

DAYLIGHT

MENTAL HEALTH

Talking Points



//. Impacts on Mental Illness cont.

- e. Light, including daylight, is a useful treatment for seasonal affective disorder (SAD), a seasonal form of depression.
 - 1. Daylight offers a convenient way to provide the high level of light exposure needed.
 - 2. The light levels typically considered “bright” for SAD treatment are between 2,500 lux and 10,000 lux at the eye, with durations ranging from 30 minutes to 2 hours.
 - 3. Bright morning light appears most effective at treating SAD; it was found to be twice as effective as bright evening light, although evening light also helps alleviate the condition.

DAYLIGHT MENTAL HEALTH Talking Points



III. KEY REFERENCES

Review Articles

- Boyce, P., Hunter, C. and Howlett, O. (2003) The Benefits of Daylight through Windows. Rensselaer Polytechnic Institute, Troy.
- Edwards, L., & Torcellini, P. (2002). Literature Review of the Effects of Natural Light on Building Occupants
- Joseph, A. (2006). The impact of light on outcomes in healthcare settings (No. Issue Paper #2). Concord, CA: The Center for Health Design.
- Ulrich, Roger, Craig Zimring, Xiaobo Quan, Anjali Joseph, Ruchi Choudhary. "The Role of the Physical Environment in the Hospital of the 21st Century: A Once-In-A-Lifetime Opportunity." The Center for Health Design. (2004).
- Ulrich, Roger S, Craig Zimring, Xuemei Zhu, Jennifer DuBose, Hyun-Bo Seo, Young-Seon Choi, Xiaobo Quan, and Anjali Joseph. "A Review of the Research Literature on Evidence-Based Healthcare Design." HERD: Health Environments Research & Design Journal 1, no. 3 (2008): 61-125.

Further Research

- Benedetti, F., Colombo, C., Barbini, B., Campori, E., & Smeraldi, E. (2001). Morning sunlight reduces length of hospitalization in bipolar depression. *Journal of Affective Disorders*, 62(3), 221–223.
- Golden, R. N., Gaynes, B. N., Ekstrom, R. D., Hamer, R. M., Jacobsen, F. M., Suppes, T., et al. (2005). The efficacy of light therapy in the treatment of mood disorders: A review and meta-analysis of the evidence. *American Journal of Psychiatry*, 162(4), 656–662
- Lewy, A. J., Bauer, V. K., Cutler, N. L., Sack, R. L., Ahmed, S., Thomas, K. H., et al. (1998). Morning vs evening light treatment of patients with winter depression. *Archives of General Psychiatry*, 55(10), 890-896.

Popular Press

- ["Why Sunlight is So Good For You"](#) - TIME
- ["Disruption of daily rhythms linked to mental health problems"](#) - The Guardian
- ["Yes, your sleep schedule is making you sick"](#) - New York Times
- ["The Season of the Witch? The ADA and Seasonal Affective Disorder"](#) - Workforce