

# DAYLIGHT SATISFACTION

## Research Brief

PARTNERSHIP INITIATIVE  
INTEGRATED DESIGN LAB  
at the Center for Integrated Design

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### Engaged employees...



50%

post messages, pictures  
and videos about  
employers on social



33%

have shared unsolicited  
praise or positive  
comments



24%

more likely to help boost  
sales than uninvolved  
employees

Source: Weber Shandwick

**Figure 1:**

Daylight has been shown to increase employee satisfaction and engagement which have financial benefits for their employers.

<https://getbambu.com/blog/culture-in-the-workplace/>

**Keywords:**

daylight, customer satisfaction, employee satisfaction, burnout, job turnover

### CONTENT OVERVIEW

- I. Improved Customer Satisfaction
- II. Improved Job/Employee Satisfaction
- III. Key References

### DAYLIGHT + SATISFACTION SUMMARY

Daylight is one of many factors that impact environmental satisfaction for building occupants, but it is an important one. Daylight has been shown to increase the mood and perception of customers, particularly in healthcare and retail environments. Daylight is important for employees too, helping increase job satisfaction and preventing burnout and turnover due to stress.

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## **I. Improved Customer Satisfaction**

Daylight has been shown to increase the satisfaction of customers by increasing mood and perception of spaces. Van Bommel notes “the dynamic changes in daylight have a positive influence on mood and stimulation,” when properly controlled for glare (van Bommel 2006 259). This has also contributed to lower stress level complaints (van Bommel 2006 262). For hospital patients, “adequate lighting has been identified as one component affecting patients’ overall satisfaction with their hospital stays” (Ulrich 2008 109).

## **II. Improved Job/Employee Satisfaction**

Increases in access to daylight has been linked to higher job satisfaction (Joseph 2006 7). A study of nurses in Turkey found that increases in natural light had a 47% “very positive” impact and 27% “positive” impact on their work life. (Joseph 2006 8) while another study showed “exposure to at least 3 hours of daylight per day resulted in less stress and higher satisfaction at work” (Boubekri 2014 610, Ulrich 2008 104). Based on additional survey data, improving natural light access has the most positive environmental impact on staff satisfaction (Ulrich 2008 107). Interestingly, “employees sitting near windows were more content, whereas those sitting further away from the windows complained more” (Edwards 2002 14) and “employees in windowless buildings had much less job satisfaction and were substantially less positive” (Edwards 2002 12). Though a myriad of factors influence the job satisfaction of employees, it is clear that the availability of daylight has a positive influence on overall job satisfaction.

*Job  
Satisfaction*

Daylight’s support of employee satisfaction has the added impact of decreasing employee turnover (Edwards 2002 11). In a study of the Story County Human Services, located in Iowa, moving to a new daylight office space caused a decrease of 200% in staff turnover and increased their number of job applicants to a record high. Additionally, they had high numbers of existing employees in other counties wanting to transfer to the new daylight offices (Edwards 2002 12). Aries noted the indirect impact daylight has on job burnout through “work-related stress and job satisfaction; more daylight exposure leads to less stress and higher satisfaction” (Aries 2015 10). Due to the high stress and potential turnover rates for nurse, “investments in the environment to increase staff satisfaction could potentially reduce the cost of staff turnover, which can cost more than \$62,100 per nurse replaced” (Ulrich 2008 107, Daylight+Stress).

*Employee  
Turnover*

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## III. KEY REFERENCES

### Review Articles

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- Aries, Mbc, Mpij Aarts, and J. Van Hoof. "Daylight and Health: A Review of the Evidence and Consequences for the Built Environment." *Lighting Research & Technology* 47, no. 1 (2015): 6-27.
- 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 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.
- Van Bommel, Wout J.M. "Non-visual Biological Effect of Lighting and the Practical Meaning for Lighting for Work." *Applied Ergonomics* 37, no. 4 (2006): 461-66.

### Primary Research

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- Bedrosian, T.A., Fonken, L.K. & Nelson, R.J. Endocrine effects of circadian disruption. *Annu. Rev. Physiol.* 78, 109–131 (2016).
- Boubekri, M, Cheung, I, Reid, K, Wang, C, Zee, P. Impact of windows and daylight exposure on overall health and sleep quality of office workers: A case-control pilot study. *Journal of Clinical Sleep Medicine* 2013; 10: 603–61
- Lucas RJ, Peirson SN, Berson DM, Brown TM, Cooper HM, Czeisler CA, Figueiro MG, Gamlin PD, Lockley SW, O'Hagan JB, Price LL, Provencio I, Skene DJ, Brainard GC. (2014). Measuring and using light in the melanopsin age. *Trends Neurosci.* 2014;37:1–9

### Popular Press

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- ["Why Sunlight is So Good for You"](#) - TIME
- ["Harnessing the Power of Natural Light"](#) - Work Design Magazine