



KEY POINT SUMMARY

OBJECTIVES

This study re-evaluates the effectiveness of a natural restorative environmental (NRE) intervention to counteract attentional fatigue during the beginning stages of breast cancer treatment.

DESIGN IMPLICATIONS

Given the increasing body of research that supports the cognitive benefits of exposure to NRE, therapeutic application of this modest, low-cost, nonpharmacologic intervention in the clinical setting as early after breast cancer diagnosis as possible would be well worth the effort. Designers should consider how to address naturally restorative environments in facilities for women with breast cancer.

An Environmental Intervention to Restore Attention in Women With Newly Diagnosed Breast Cancer

Cimprich, B., & Ronis, D. L.
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Key Concepts/Context

Women who are undergoing breast cancer treatments are at risk for fatigue-related cognitive and attention deficits. These impairments can make it difficult for them to retain information about their disease, make treatment decisions, follow their treatment regime, and cope with painful losses and disruptions in their daily life. Some research indicates that a theoretically based intervention involving regular exposure to the natural environment may help.

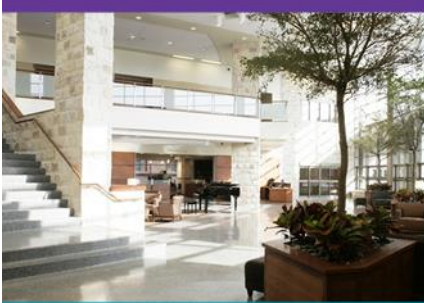
Methods

The research team recruited 185 women who were being treated for breast cancer at a Midwestern university medical center.

The investigators assessed the women's cognitive capacity to direct attention CDA twice: approximately 17 days before surgery (Time 1) and 19 days after surgery (Time 2). They initiated a randomly assigned intervention protocol after the first assessment and before any treatment. The intervention was a home-based program involving 120 minutes of exposure to the natural environment per week. The researchers instructed the participants on how to use a daily log to record the type of nature activity and time spent (minutes) in each activity. A nonintervention control group used a daily log to record time spent (minutes) in relaxation and free-time activities.

Findings

The researchers found that participants who were randomly assigned to the intervention group showed significantly greater CDA recovery or improvement from the presurgical to the preadjuvant therapy period, an interval of



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approximately 36 days, than the nonintervention group. They observed this significant effect even after controlling for age, education, attention scores at Time 1, other health problems, symptom distress, and extent of surgery. The authors note that the NRE intervention started prior to treatment and at a time when losses in attention already were present.

According to the article, these findings confirm those of an earlier study that demonstrated benefits from a similar intervention to improve attention during the 3 months after surgery for breast cancer.

The women in the intervention group who underwent mastectomy reported that within days after surgery, even as they were still recovering physically, they were able to take in natural scenes from their windows or gardens or to be taken on a scenic drive.

Limitations

The authors note that at the second time point after surgery, 26 women had been lost to follow-up evaluation. These women tended to be older and less educated than the women who completed the study, although the authors report that there was not a significant proportional difference between the intervention and nonintervention groups.

Further, they note that overall the participants were mostly white and well-educated, and they appeared to be motivated to take part in self-care. It is not clear if a more diverse population would respond similarly to the NRE intervention. Finally, the authors note that it is possible that for the women in the intervention group, just feeling like they were doing something to take care of themselves may have contributed in some way to the observed beneficial effect on attention.