SYNOPSIS

KEY POINT SUMMARY

OBJECTIVES

The study examined the restorative effects of nature views on pain and antianxiety medication use and recovery of gall bladder surgical patients who had undergone cholecystectomy.

DESIGN IMPLICATIONS

Hospital design and siting decisions should take into account the quality of the patient window views. Window views with more natural elements should be highly desirable by most patients.

View Through a Window May Influence Recovery From Surgery

Ulrich, R.S.
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Key Concepts/Context

Research shows that American and European people tend to have favorable aesthetic and affective responses to nature and prefer natural more than urban scenes. Views of vegetation and especially water may elicit positive feelings, reduce fear in stressed subjects, hold attention, and block stressful thoughts.

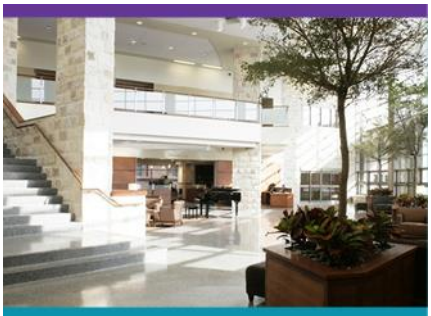
The results of this seminal evidence-based design study suggested that natural views had therapeutic influences on hospital patients.

Methods

The existing records of cholecystectomy patients (between 1 May and 20 October, 1972-1981) assigned to the rooms (double-occupancy) on the second and third floors of a 200-bed suburban hospital in Pennsylvania were examined. Patients younger than 20 or older than 69 who developed serious complications and those patients with a history of psychological disturbances were excluded. In these rooms, patients either had an unobstructed view of small stand of trees or a brown brick wall when lying in bed. Other than window views, the rooms were nearly identical in size, arrangement of beds, furniture and other major physical characteristics.

Patients were matched on multiple factors (including sex, age, smoking status, obese or normal weight, general nature of previous hospitalization, year of surgery and floor level and on the second floor, the color of their room) to form 23 pairs (i.e. 46 patients in total). One member of each pair had a view of the trees and the other, the brick wall.

The following patient recovery data were extracted from medical records by a nurse with extensive surgical floor experience:



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- Number and strength of analgesics each day (divided into three phases: day of surgery and the first day of recovery, 2-5 days after the surgery; 6-7 days after the surgery).
- Number and strength of doses for anxiety each day, including tranquilizers and barbiturates
- Minor complications, such as persistent headache and nausea that required medication (symptoms associated with conversion reactions)
- All nurses' notes relating to a patient's condition or course of recovery
- Length of stay effect of natural views on medication use and recovery of gall bladder surgical patients who had undergone cholecystectomy.

Findings

Statistically significant differences were found between the tree-view patients and brick wall-view patients on patient length of stay, pain medication use, and nurse notes. Patients with a view of trees were hospitalized shorter (7.96 days) than patients who had a view of the brick wall (8.7 days). Brick wall-view patients had more negative nurses notes (3.96 per patient, examples of negative notes--"upset and crying" or "needs much encouragement"; examples of good notes-- "in good spirits" and "moving well") than tree-view patients (1.13 per patient). Patients with nature window views received fewer analgesic doses 2-5 days after surgery. The tree-view patients more frequently received weaker pain medications like aspirin or acetaminophen while brick wall-view patients who needed stronger pain medications such as narcotics. No significant difference was found between the groups on doses of antianxiety medications. Tree-view patients tended to have lower scores for minor postsurgical complications. However, the difference was not statistically significant.

Limitations

- Brick wall view-patients took more narcotic analgesics which can produce a drowsiness or sedation as a side effect, which might have lowered their use of antianxiety drugs.
- Since the "built" view in this study (a largely featureless brick wall) was a comparatively monotonous one, the conclusions cannot be extended to other types of built views.