



KEY POINT SUMMARY

OBJECTIVES

This paper provides a systematic literature review to determine the effects of physical environmental stimuli in healthcare settings on the health and well-being of patients.

DESIGN IMPLICATIONS

Consider utilizing design features that were positively associated with healing outcomes. See above table for more information about these features and their effects.

Physical Environmental Stimuli that Turn Healthcare Facilities into Healing Environments Through Psychologically Mediated Effects: Systematic Review

Dijkstra, K., Pieterse, M., & Pruyn, A. 2006 | *Journal of Advanced Nursing Volume 56, Issue 2, Pages 166-181*

Key Concepts/Context

Design features of healthcare spaces can be said to impact the health and well-being of patients either directly or indirectly. A direct influence of a design feature means that the impact is not mediated in any way and therefore has a direct effect on patients (e.g., germs sitting in a carpet surface). An indirect influence is one in which the environmental stimuli act through a psychological process of sensory perceptions (e.g., carpet may be perceived as a home environment and may decrease the patient's stress). This paper is focused on finding research data that had an indirect influence.

Methods

A systematic literature review was conducted. Of the 500 potential studies found, only 30 met all the criteria. Only controlled clinical trials were included.

Findings

The physical environment was described using three categories: ambient, architectural, and interior design features. Findings are described further:

Ambient	Sunlight	Four studies found mainly positive effects on length of stay, mortality rate, perceived stress, and pain.
	Sound	Four studies found mainly positive effects if the intervention aimed to prevent negative effects of noise. Adding sound to the environment as a



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		positive distractor showed ambiguous results.
	Odor	One study found that only women had positive effects on pretreatment-state anxiety, improved mood, and increased calmness.
Architectural features	Windows	Three studies found that both the presence of windows and a natural view have positive effects on clinical outcomes such as delirium, sleep, and length of stay.
	Spatial layout	Three studies found that most effects of spatial layout appear to be inconsistent, but some positive effects were found concerning perceptions of privacy.
Interior design features	Nature introduced through images or video	Two studies found that some positive effects were found on both pain control and pulse rate. However, most effects were either non-significant or only small.
	Television	Two studies found that the presence or absence of television had mixed results.
	Seating arrangements	One study found that different seating arrangements effected social and personal interactions.

Limitations

Search criteria may have created a smaller number of articles to review, decreasing the ability of the findings to have widespread application.