OBJECTIVES
To study environmental design strategies in healthcare facilities and to evaluate their ability to influence event-related anxiety in pediatric patients.

The ability of environmental healthcare design strategies to impact event related anxiety in pediatric patients: A comprehensive systematic review

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Key Concepts/Context
Healthcare settings such as hospitals or dentists’ offices have been known to contribute to the anxiety often experienced by patients receiving treatment. Anxiety has been linked to various health concerns, manifesting both physiologically and psychologically, that can result in prolonged hospital stays and other complications. This is particularly true in children, who may go on remembering their anxious experiences for many years following treatment. While there have been many studies documenting the purpose and effect of evidence-based design in contributing to the overall “healing environment” of healthcare facilities, none have adequately addressed the experiences of anxiety in the pediatric patient population.

Methods
To be included in the review, patients had to be anywhere from 1 to 18 years old and admitted to or entering any pediatric healthcare facility. No defined time limit was necessary. Patients receiving psychotropic medications for psychiatric conditions were excluded from the study.

Design interventions included in the study were intended to eliminate environmental stressors, provide positive distractions, grant access to social support and a sense of control, and provide a connection to nature.

Types of studies included in the review include those with both qualitative and quantitative data, along with a variety of study designs, including randomized control trials and quasi-experimental studies. All included studies were published in English between 1980 and July 2010.
Findings
The results of the systematic review were not outlined in this paper.

Design Implications
Although the output of the systematic review was not assessed in this paper, design implications can still be drawn from the premise of this study. Every physical aspect that comprises the space of a healthcare facility holds the potential to directly affect patients, staff, and other visitors. When attempting to create environments that foster the most efficient and satisfactory possible healing experience, everything from indoor colors and textures to furnishings and floor coverings should be considered. Lighting levels, sound levels, scents, and directional markers are all sensory details that can affect anxiety and should be considered during the designing stage. Access to natural settings, whether real or virtual, and meditative or private areas could also be beneficial to facility users. Age-appropriate designs should be explored for pediatric care areas.

Limitations
All studies included in the review were published in English, so no other relevant studies published in other languages could be included. Studies completed before 1980 were not included in the systematic review.