

Green Technologies and Biophilic Design in Therapeutic Spaces for Children

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Abstract

In the context of heightened awareness of sustainability and well-being, this research explores the integration of green technologies, artificial intelligence (AI), and biophilic design in therapeutic spaces for children, with a particular focus on middle childhood (children aged 6 to 12 years). The aim is to understand how these elements are capable of optimizing pediatric environments while promoting sustainable practices. This paper uses a qualitative approach based on an exhaustive literature review and analysis of practical cases such as the Children's Hospital of Philadelphia (specializing in pediatric care) and Maggie's Centre in London, the study focuses on the application of natural ventilation systems, indoor gardens, ecological materials, and AI to improve energy efficiency and environmental conditions. The results show that integrating these technologies creates soothing environments that foster healing. For instance, Robin, an AI-based robot used at Wigmore Clinic in Armenia, helps reduce loneliness and stress in hospitalized children. These innovations also raise awareness of the importance of sustainability and energy efficiency. This research highlights the need to rethink pediatric care spaces by integrating biophilic design elements, green technologies, and AI to offer a holistic solution that addresses children's well-being and environmental protection.

Keywords

Sustainability, Well-being, Green Technologies, Artificial Intelligence, Biophilic Design