



KEY POINT SUMMARY

OBJECTIVES

This article addresses the relevance of theories of environmental psychology to neonatal intensive care unit design as it relates to infants and staff.

Evidence-Based Design for Infants and Staff in the Neonatal Intensive Care Unit

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Key Concepts/Context

There has been a marked increase in evidence-based studies relating to neonatal intensive care units in pediatric healthcare literature. While it is acknowledged that clinical, operational, and social dimensions play the most significant role in healing, the physical environment has also been universally identified as a critical factor. Conscientious architects are becoming increasingly aware of the impact of design decisions on the sensory environment of the neonatal intensive care unit.

Methods

Review of descriptive articles, guidelines, literature reviews, and scientific papers relating to design research on infants and staff in neonatal intensive care units is reviewed and summarized for identification of future research directions.

Findings

The review of the literature reveals the need to find the correct balance of stimulation within neonatal intensive care units for infants and for staff. The environmental dimensions that have received the most attention regarding infants are light, noise, and music.

Limitations

Generalizability is limited given that the literature reviewed was not based on empirically derived evidence-based design.



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Design Implications

Based on the literature, the author recommends that: 1) light levels should be modulated to reinforce the natural diurnal variation; 2) light levels should be no brighter than is necessary to complete a task; 3) individualized lighting should be available at each baby station; 4) lighting should be controlled rheostatically to allow for gradual changes in level to accommodate procedures. Windows should be included, but placed judiciously due to temperature control. Noise should be mitigated through acoustic and configuration modifications to the physical environment and modifications of staff behavior. The introduction of music is positive, and it should be maintained until the child is stabilized.