Healing Architecture in Indore Hospitals: A Comparative Study of Wellness-Centered Design

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Abstract In recent years, the healthcare industry has increasingly acknowledged the role of architectural design in supporting mental, emotional, and physical recovery. This research investigates the integration of healing architecture principles in three hospitals located in Indore: SMS Energy Hospital, Apple Hospital, and Unique Hospital. Based on field observations, literature references, and spatial evaluations, the study reflects on how these institutions incorporate light, nature, ventilation, and user-friendly layouts. The findings demonstrate varying levels of success in applying these elements and offer design recommendations suitable for future wellness-oriented healthcare environments.

1. INTRODUCTION

The role of architecture in healthcare extends far beyond functional efficiency. Today, there is a growing emphasis on creating spaces that facilitate recovery and reduce stress for patients and caregivers. This shift has become especially significant in the aftermath of the COVID-19 pandemic, which underscored the psychological dimensions of healing. The term "healing architecture" refers to a design philosophy that incorporates natural light, greenery, spatial comfort, color psychology, and acoustic balance to support overall wellness.

In a fast-growing city like Indore, healthcare institutions are beginning to embrace this shift. The present study examines how three hospitals in the city have adopted healing-centric design strategies, and what lessons can be drawn from their approaches.

Problem Statement Despite the growing awareness of healing architecture, many Indian hospitals still follow utilitarian design norms that lack psychological and sensory considerations. There is limited research assessing how mid-scale urban hospitals are adapting healing design principles within budgetary and spatial constraints.

Objectives

- To explore the impact of design on the healing process in hospital environments.
- To identify the specific architectural elements that enhance patient and staff well-being.
- To assess the application of healing principles in selected hospitals in Indore.
- To derive actionable recommendations for future healthcare projects.

2. LITERATURE REVIEW / CASE STUDY ANALYSIS

Literature Perspective Roger Ulrich's research in the 1980s provided compelling evidence that exposure to natural elements, particularly views of greenery and access to daylight, significantly improves recovery outcomes in hospitals. Similarly, Stephen Kellert's advocacy for biophilic design emphasizes the human need to connect with nature, especially in institutional settings. The World Health Organization (WHO) has also consistently emphasized the importance of environmental health in recovery processes.

These theories serve as a foundation for evaluating Indian healthcare spaces, where the built environment often contends with climatic, cultural, and spatial constraints.

Healing Design Elements

Element	Purpose
Natural Light	Enhances mood and supports circadian rhythm
Ventilation	Improves indoor air quality and reduces infection risks

Green Spaces	Offers psychological comfort and visual relief
Color Psychology	Soothes or energizes depending on tone and use
Acoustic Comfort	Enables rest and reduces sensory overload
Wayfinding	Minimizes anxiety through intuitive navigation
Spiritual Spaces	Supports emotional and cultural healing

3. CASE STUDIES: HEALING-CENTRIC PRACTICES IN INDORE HOSPITALS

A. SMS Energy Hospital

Located on Nemawar Road, this hospital benefits from a spacious site and green surroundings. The architecture emphasizes zonal clarity with distinct OPD, IPD, ICU, and administrative areas. Key healing features include:

- Generous daylight through north-facing windows
- Central landscaped courtyard visible from wards
- Earthy material palette and noise-insulated corridors
- Courtyard therapy zones and family spill-out areas
- Solar energy integration and rainwater harvesting

Feedback suggests patients experience reduced stress and disorientation, while staff appreciate the spatial organization and daylight access.

B. Apple Hospital

Situated in a compact urban setting, Apple Hospital presents a balance between clinical function and visual warmth. Notable features include:

- A double-height, daylit reception zone
- Use of warm lighting and earthy wall colors in patient wards
- Rooftop garden designed for staff relaxation

While patients report a more welcoming environment, limitations such as restricted ventilation and modest greenery reduce the effectiveness of healing principles.

C. Unique Hospital (Annapurna Road)

This hospital, located in a dense neighborhood, compensates for limited external landscape through indoor biophilic strategies:

- Vertical green walls and indoor water features in the lobby
- Skylights in internal waiting areas
- Noise-insulated ICU zones and bamboo-clad walls
- Prayer room and background instrumental music

Although spatial clarity and external greenery are lacking, patients responded positively to the sensory environment indoors.

4. SUMMARY OF ANALYSIS

Criteria	SMS Energy	Apple Hospital	Unique Hospital
Site Context	Semi-urban, green access	Urban, compact	Dense, near religious node
Zoning	Clear OPD-IPD separation	Compact but organized	Older, less intuitive layout
Daylight & Ventilation	Excellent	Moderate	Limited
Landscape	Courtyard, terrace greens	Minimal entrance greens	Indoor biophilia only
Material & Finish	Earthy tones, sound cladding	Basic tiles, warm paint	Bamboo, vertical garden walls
Public Areas	Daylit, landscaped	Small but welcoming	Crowded, skylit
Spiritual Spaces	Meditation zone, music	None	Prayer room near lobby
Wayfinding	Color-coded, bilingual signs	Basic	Poor signage
Sustainability	Solar, rainwater systems	Not visible	Not applicable

5. METHODOLOGY

The study was conducted using a qualitative case study approach. Data collection included site visits, photographic documentation, user interactions, and analysis of spatial and environmental attributes. Literature was referenced to validate observations and align the study with international standards on healing design.

6. SCOPE AND LIMITATIONS

Scope:

- Focused on three healthcare institutions within Indore
- Emphasis on design elements influencing patient and caregiver wellness

Limitations:

- Absence of quantitative health outcome data
- Feedback was anecdotal, not survey-based
- Long-term post-occupancy insights could not be gathered due to time constraints

7. CONCLUSION AND FUTURE DIRECTIONS

This comparative study reaffirms that thoughtful architectural design contributes significantly to patient recovery and staff satisfaction. SMS Energy Hospital demonstrated a more comprehensive application of healing elements, integrating light, ventilation, zoning, and biophilic strategies. Apple Hospital succeeded in creating a homely environment despite its spatial constraints, while Unique Hospital highlighted the importance of sensory design within indoor environments.

Future hospital projects in India must evolve toward:

- Incorporating patient and staff feedback in design phases
- Utilizing local materials and nature-based features
- Enhancing acoustic quality and spatial legibility
- Embedding spiritual and psychological support spaces
- Adopting lifecycle approaches for sustainable hospital design.

Healing architecture in the Indian context must balance budget, culture, and climate. This study offers a grounded perspective on what works, what falls short, and where the next generation of healthcare architecture should aim.

8. FINDINGS

- SMS Energy Hospital outperformed the other two hospitals by incorporating a wide range of healing architecture elements such as natural light, ventilation, central courtyard, and spiritual spaces.

- Apple Hospital, although spatially limited, made effective use of light and colors to create a comfortable environment but lacked adequate greenery and ventilation.

- Unique Hospital, despite its compact setting, utilized indoor biophilic strategies like vertical gardens, skylights, and instrumental music to offer sensory comfort.

- Most healing features were passive and architectural in nature—few hospitals had formal programs or policies promoting wellness.

- Wayfinding and sustainability strategies varied greatly, with SMS Energy leading in both aspects.

- There is a clear link between healing elements and user satisfaction, even though the study is qualitative and anecdotal.

9. SUGGESTIONS

- Architects and hospital planners should prioritize natural elements like daylight, greenery, and ventilation from the design stage itself.
- Biophilic design, even in compact or urban hospitals, can be achieved through vertical gardens, water elements, and natural materials.
- Wayfinding improvements such as bilingual color-coded signs can reduce patient stress and confusion.
- Hospitals must dedicate spiritual or quiet zones to address emotional and cultural needs of patients and families.
- Implement sustainable design solutions such as solar panels and rainwater harvesting, particularly in new healthcare facilities.
- Future studies should include quantitative post-occupancy evaluations and surveys to measure actual health outcomes and user satisfaction.