Comparative Analysis of Landscape Elements in a Restorative Hospice in Southwest Nigeria

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Abstract
The global recognition of the therapeutic role of nature in healthcare design has continued to grow. Yet, many hospices, particularly in Nigeria still lack restorative landscape features that can enhance the quality of end-of-life care. While restorative environments have been widely discussed in hospital and general healthcare contexts, limited attention has been given to their integration within hospice settings. This study employed a qualitative case study approach to examine two hospices in Southwest Nigeria, focusing specifically on the presence, absence, and adequacy of landscape elements within their outdoor environments. Findings show that key restorative components such as gardens, courtyards, shaded sitting areas, walkways, and water features are largely missing or insufficiently incorporated, limiting the potential for these spaces to function as supportive hospice environments. By documenting the current state of landscape integration in the selected facilities, the study highlights the need for intentional and context-responsive landscape planning as part of hospice architectural design. The research contributes empirical evidence on existing gaps and provides a basis for future efforts aimed at improving outdoor environments in Nigerian hospices through more deliberate incorporation of restorative landscape elements.

Keywords: Landscape, landscape elements, hospice, restorative hospice.

1. Introduction

Despite increasing global recognition of the role of nature in healthcare design, many hospice facilities continue to operate without incorporating restorative landscape features that actively support the emotional, psychological, and spiritual needs of terminally ill patients. While studies have shown that exposure to restorative landscape elements such as gardens, water features, and green spaces significantly improves patient well-being, most hospice environments in cities remain sterile and institution-like, lacking therapeutic outdoor spaces, shaded sit-outs, or sensory courtyards (Ulrich et al., 2008; Marcus & Sachs, 2013).

Restorative landscapes is defined as natural environments intentionally designed to promote health and well-being, grounded in environmental psychology. These spaces often incorporate gardens, green spaces, and natural features to create restorative experiences (Xue & Gu, 2019). Studies emphasize that restorative landscapes are designed to facilitate both psychological and physiological healing through immersive, multi-sensory interaction with nature (Yating et al., 2023).

In order to create effective restorative landscapes in an environment, it is essential to incorporate key elements that engage the senses and foster well-being. Elements such as water features (e.g., ponds or fountains), vegetation and built landscape structure (artworks, sculpture, furniture etc.) have been shown to promote a sense of escape and relaxation (Chandrashekar, 2015).

Landscape elements serve as critical components of the built environment, offering more than visual appeal by actively supporting physical, emotional, and psychological well-being. While the aesthetic value of landscape contributes to the pleasure and satisfaction experienced when viewing the beauty and characteristics of the natural environment, it also plays an important role in enhancing the overall quality of outdoor spaces (Tribot et al., 2018). These elements, including plants, water features, and built structures such as paths and walls, contribute to visual appeal, ecological functions, and spatial organization. Plants offer shade and habitats, while water features promote serenity and support environmental functions like storm water management. Paths and walls help organize space and guide movement, integrating seamlessly with the natural environment (Archiroots, 2025). Landscape designers recognize that elements such as vegetation, water, and built landscape not only beautify spaces but also promote emotional and cognitive well-being (Zhang et al., 2024). In architecture, the integration of these elements ensures harmony between buildings and their surroundings. The evolving nature of landscapes gives each space a distinct character, influencing the atmosphere and fostering a connection between individuals and their environment (Akhimien et al., 2017).

Landscape elements, such as trees, hedges, and walls, arise from interactions of relief, microclimate, land use, and land cover. They are categorized into vegetation, water, and built elements and, combined with land cover, shape landscape character and functionality. These elements provide aesthetic, recreational, and cultural benefits, making them vital for restorative environments (Kostanjšek & Golobič, 2023). Vegetation elements, such as trees, shrubs, lawns, hedges, and flower beds, play an essential role in enhancing the aesthetic, ecological, and functional value of urban green spaces (Poje et al., 2024).

Water, as a landscape element, is valued for its movement, sound, reflection, and symbolic significance, which collectively evoke powerful sensory and emotional responses. Visually, its deep tones and vivid blues add depth and serenity to landscapes, while its reflective surface enhances spatial perception and tranquility. The sound and motion of water, whether flowing, falling, or rippling, mimic natural environments, fostering relaxation and reducing stress (Narendra & Daketi, 2016), (Atabeyoğlu, 2009). When thoughtfully integrated, water features such as fountains, ponds, or streams help create peaceful, immersive environments that support mental well-being and strengthen emotional bonds with nature.

The integration of water features in urban and therapeutic design has become essential for promoting environmental sustainability and user wellness. Properly designed waterscapes contribute to microclimate regulation through evaporative cooling and thermoregulation, improving comfort, especially in hot climates (Asim & Shree, 2019). They also support water retention and reuse when combined with sustainable systems, reducing overall consumption.

Built landscape elements, such as paving, fencing, and structural components, are essential for the design and functionality of outdoor spaces. While they enhance aesthetic appeal and support environmental sustainability, their effectiveness depends heavily on how they respond to local

climate, culture, and user needs. For instance, in southwest Nigeria, where security concerns often lead to high boundary walls, there is a need to integrate softer visual cues like creepers or screen planting to offset the harshness of such elements and support emotional well-being (Şentürk & Altınçekiç, 2018).

Built landscape elements, when appropriately designed, support recreational use, privacy, and social interaction. However, in a hospice context, they must also facilitate emotional rest, quietude, and a sense of dignity. A stone bench under a pergola may serve as a gathering spot for family visits, while a textured wall could provide tactile engagement for sensory stimulation. The use of such materials evokes instinctive positive responses that help reduce stress and foster a healing atmosphere, particularly when they follow biophilic principles expressed through natural finishes, soft textures, and earth-toned palettes (Sofiana et al., 2021).

The variety of components in a restorative landscape comprises elements that individuals can access to collectively foster healing and relaxation. These elements, which include nature, semi-private spaces, sports areas, landscape gardens are designed for meditation, water features, color, soft vegetation, and urban furniture, collectively promote physical and mental healing. The strategic design of these components fosters interaction, relaxation, and emotional expression, while ensuring equitable access and providing restorative benefits for all individuals (Yating et al., 2023).

Despite growing global recognition of the therapeutic value of restorative landscapes in healthcare design, limited attention has been given to their application within Nigerian hospice environments. Existing literature largely focuses on hospitals and general healthcare facilities, with emphasis on healing gardens and therapeutic outdoor spaces in mainstream healthcare settings (Ulrich et al., 2008; Marcus & Sachs, 2013). Very few studies examine landscape integration specifically within hospices, and those that exist are largely interior-focused rather than landscape-based (Verderber, 2014). Consequently, a gap remains in research documenting the presence and integration of restorative landscape elements in end-of-life care environments in Nigeria. This study therefore addresses this gap by examining selected hospice facilities to evaluate the extent and adequacy of landscape elements incorporated within their environments.

2. Study Location

The South-West is one of the six geopolitical zones in Nigeria, comprising Lagos, Oyo, Ogun, Ondo, Osun, and Ekiti States. The region is marked by two distinct climatic periods: the rainy season, which spans from March to November, and the dry harmattan season, occurring between November and February (Aseyan et al., 2025). For the purpose of this study, emphasis is placed on Lagos and Oyo States in the South-West. Lagos State, created on May 27, 1967, is the nation's commercial hub and the most populous state in Nigeria. Lagos State is geographically dominated by lagoons, creeks, and rivers which support transportation, trade, and rich biodiversity both on land and offshore (Wikipedia, 2025). Conversely, Ibadan, the capital of Oyo State, functions as the political and administrative center of the state and is historically recognized as one of the largest cities in West Africa.

3. Methodology

This study adopts a qualitative case study approach that utilized the architectural case study technique to evaluate the integration of landscape elements within hospice facilities. Two hospices

in Southwest Nigeria were purposively selected: the Hospice and Palliative Care Unit at the University College Hospital (UCH), Ibadan; and Hearts of Gold Children's Hospice, Surulere, Lagos. The assessment focused on identifying and analyzing restorative landscape features such as gardens, courtyards, natural lighting, and therapeutic outdoor spaces. Data were gathered through on-site observation, photographic documentation, and analysis of architectural layout drawings. The findings were subjected to descriptive analysis and presented using narrative comparisons, supported by tables and figures.

4. Results and Discussion

Case Study 1: UCH Day-Care Hospice, Ibadan

The landscape design of the facility features green areas and plants along the approach façade, with interlocking paving, but it lacks key elements like water features, dedicated walkways, courtyards, or private spaces for reflection. These missing elements limit the potential for therapeutic vegetation.

The absence of these features reduces the ability of the space to support emotional and psychological well-being, hindering the creation of a restorative atmosphere.

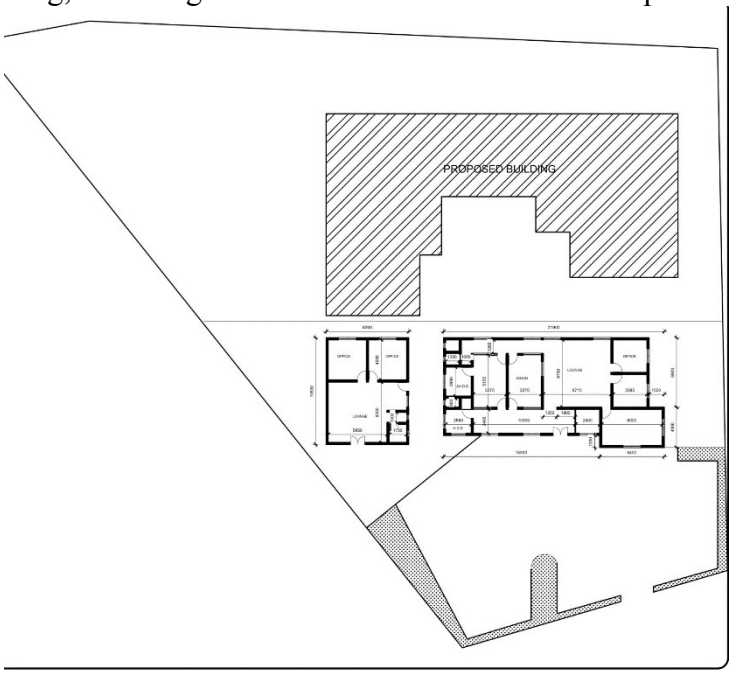

Figure 1: Showing a schematic drawing indicating the Site Plan of UCH Day-Care Hospice

Case Study 2: Hearts of Gold Children's Hospice, Surulere, Lagos, Nigeria

The environmental design of the facility shows little provision for landscaping, with no organized garden areas or personal outdoor spaces for the children. Important features such as fountains or ponds, shaded resting points, pedestrian walkways, and a central courtyard are missing, limiting opportunities for interaction with therapeutic vegetation.

The absence of these elements limits the potential of the hospice environment to function as a restorative space, as earlier studies have shown that features such as gardens, shaded sitting areas, and water elements contribute to comfort and calmness in healthcare settings [Ulrich et al., 2008; Marcus & Sachs, 2013].

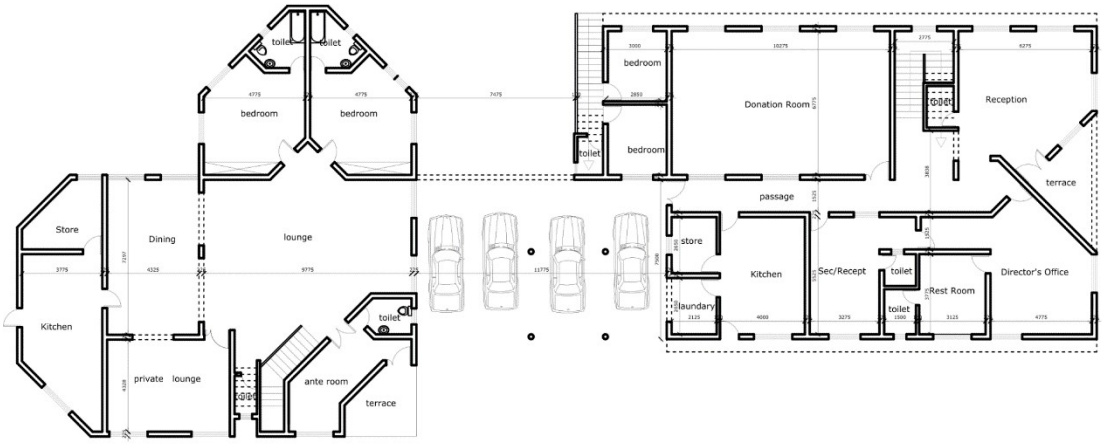

Figure 2: Image Showing the Hearts of Gold Ground Floor Plan

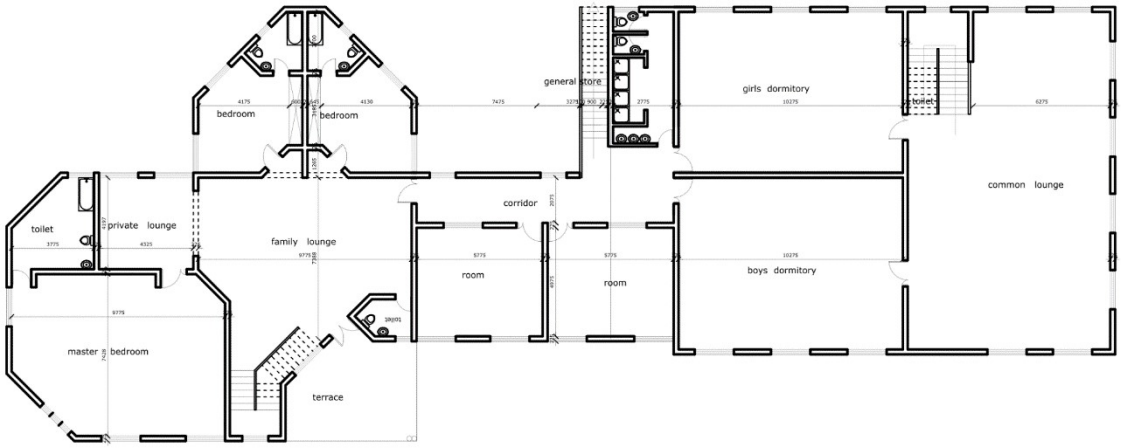

Figure 3: Image Showing the Hearts of Gold First Floor Plan

Table 1: Assessment of Landscape elements incorporated in the Hospice Environment.

S/N	Landscape Elements	UCH Day-Care Hospice	Hearts of Gold Children's Hospice
1	Green Area/Plants	Partially	Partially
2	Outdoor Area	No	No
3	Shade & Sitting Area	No	No
4	Walkways	Partially	Partially
5	Water Features (e.g. fountain)	No	No

6	Use of Local Natural Materials	No	No
8	Courtyard	No	No
9	Therapeutic Landscape Use	No	No

5. Conclusion

This study examined the presence, extent, and adequacy of restorative landscape elements within selected hospice facilities in Southwest Nigeria. The findings show that both hospices assessed provide only minimal incorporation of landscape features, with key restorative components such as healing gardens, courtyards, shaded outdoor sitting areas, water features, and therapeutic vegetation largely absent. The landscape elements identified were limited to small green patches and partial walkways, which restrict the potential of the hospice environments to function as supportive outdoor spaces.

By documenting these gaps, the study highlights a significant shortfall in the integration of landscape elements within Nigerian hospice environments. The findings underscore the need for improved landscape planning and intentional design strategies that prioritize outdoor spaces as functional components of hospice architecture. While this study did not evaluate therapeutic outcomes, the documented absence of restorative features provides a foundation for future research and design interventions to enhance the quality of hospice environments. Overall, the study contributes empirical evidence on the current state of landscape integration in hospices and emphasizes the importance of incorporating well-designed outdoor environments to strengthen the spatial and environmental quality of end-of-life care settings in Southwest Nigeria.

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