

Assessment Of Landscape Design In Hospital Environments In Ota, Ogun State, Nigeria.

ADEBAYO Oluwatoyin, OYENUGA Ayomide, AKANBI Marvellous, AREWA Dickson, OLAJIDE Paul.

Department of Architecture, Bells University of Technology, Ota, Ogun State, Nigeria.

Email: oaadebayo@bellsuniversity.edu.ng, meeday@gmail.com, marvelakanbi@gmail.com, tobilobaarewa17@gmail.com, chukwuebukapaulperl@gmail.com.

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Abstract: Humans are thought to be affected by the visible landscape in a variety of ways, including aesthetic appreciation, good health, and overall happiness. Hospital landscapes have been shown in studies to provide psychological, physical, and social advantages that help patients recover. The therapeutic landscape has been a frequently utilized idea in the architecture of medical institutions in many regions of the world due to its healing benefits. This is the utilization of various landscape aspects in an area to assist patients in achieving physical, mental, and spiritual rehabilitation. On this note, the study examined the extent to which the design of the therapeutic landscape was adopted to improve patient recovery at selected treatment centers in Ota, Ogun State, Nigeria, to identify potential areas for improvement. This study adopted a high-quality research approach using direct observation and review of previous study literature related to the topic of data collection, content analysis, and quantitative data collection from respondents. According to the findings, none of the medical institutions surveyed employed a therapeutic landscape to complement the standard medical care they provided. Softscape elements like grass, shrubs, flowers, and trees were included in the medical institutions' sites, although they were not offered for therapeutic purposes, but rather for aesthetic and shade purposes. Finally, the study has added to the body of knowledge by demonstrating the extent to which the therapeutic landscape was used to improve patient recovery in the selected medical institutions in Ota, Ogun State, Nigeria. The study's findings add to the body of knowledge on the subject and lay the groundwork for future research in the field.

Keywords: landscape design, medical facilities, therapeutic landscape.

1.0. BACKGROUND

The impact of the environment on human health is becoming increasingly recognized in Nigerian studies and policy. In hospitals, landscapes and gardens are critical for patients' rapid rehabilitation. Through psychological and physical changes, it increases the quality of life. Visiting and observing landscaping at hospitals has been shown in numerous studies to assist patients to recover faster from surgery and to help staff focus on their jobs. Physiological responses in people are frequently triggered by environmental factors. According to studies, natural landscapes produce more favorable physiological reactions than non-natural variables, resulting in stress reduction and faster recovery after medical procedures. [1–3]. A setting with water or green features increases psychological benefits compared to fully human-made environments (which lack any landscape aspect) [4–10]. According to historical statistics, the design of places around hospitals is a key aspect in ensuring that patients are comfortable, and landscape design has had a significant part in reducing patient stress". Sustainable landscapes are environmentally sensitive, regenerative, and resilient," according to the American Society of Landscape Architects (ASLA 2017), and can help people live better lives. Sustainable landscapes absorb carbon, enhance air and water quality, increase energy efficiency, restore ecosystems, and bring significant economic, social, and environmental benefits. The American Society of Landscape Architects (ASLA) published a report in 2017.

The visible elements of a piece of land, such as its landforms and how they interact with natural and manufactured features, are referred to as the landscape. A landscape can take on several forms based on its components, which are divided into two categories: hardscape and softscape. The hardscape refers to the non-living aspects of the landscape system, such as terraces, which are an attractive method to transform an unsightly slope into a succession of lovely gardens. Walkways, benches, and gazebos are the most widely used landscape components. There are also decks and patios, garden ponds, waterfalls, fountains, and other attractions. Landscaping also includes hardscape elements like lighting and fencing. Components such as rocks, concrete, bricks, and stone make up the hardscape in general. Softscape consists of living elements such as perennial flowers, shrubs,

succulents, and trees. (Landscape Architecture, Fifth Edition: A Manual of Environmental Planning and Design by Barry Starke and John Ormsbee Simonds)

The therapeutic landscape is a framework for analyzing the process of bringing health and wellness to places. Physical surroundings, social environments, and symbolic environments are the three components. (Gesler, 2018). Medical facilities, which are sites where medical treatments are administered, such as hospitals, outpatient care centers, and specialized care centers, can create therapeutic landscapes privately or for public benefit. The therapeutic landscape is currently commonly employed in medical institutions all over the world as a consequence of the healing benefits it brings. The goal of this study is to see how far a therapeutic landscape was used to enhance patient recovery at a few medical institutions in Ota, Ogun State, Nigeria, to identify places where things could be better. Two objectives were defined to achieve the study's goal. They involve determining the therapeutic landscape characteristics applied at selected medical institutions in the research area, as well as determining how helpful the therapeutic landscape features are for boosting patients' recovery in those medical facilities.

2.0. REVIEW OF LITERATURE

During the first decades of the twentieth century, the hospital landscape fell dramatically. However, as medical research has advanced, hospital administrators and architects have begun to focus on the design of healthcare facilities that will limit the danger of infection while also providing an effective setting for new medical technologies. The formation of hundreds of major hospitals around the world has been shaped by a strong emphasis on infection control and efficiency. In an unsatisfactory and inappropriate manner for the emotional requirements of patients, their families, and even health care personnel, this is today's perception as a strong, stressful institution. [11, 12].

2.1. Natural Environments in Hospitals Have a Number of Benefits

Physical benefit

Patients' physical endurance and well-being are improved by regenerating structures and processes, according to studies. Environmental development has a good impact on patients' feelings of well-being, which in turn has a positive impact on their physical health. There is theoretical and practical research showing the natural good effects on blood pressure, cholesterol levels, and stress reduction, as well as unorthodox data [13–17]: according to a study by Robert Ulrich (2016), patients who recover actively leave their environmentally friendly rooms faster and take fewer analgesics when they have windows, compared to patients in identical rooms with brick walls [18, 19], and home-based studies indicated that a living room with windows reduces blood pressure, cholesterol levels, and stress levels. [18, 19].

Psychological Benefit

Allowing patients to choose between privacy and communicating with the public can aid in their recovery. For most patients, strict control over time and activity during hospitalization can have serious psychological consequences, such as loss of confidence or a sense of control, as well as increased stress. According to research [21-23], high blood pressure and cardiovascular activity caused by stress can be reduced when patients are exposed to nature scenes, because such scenes take their attention away from problematic thoughts, assisting in their recovery. Patients prefer well-designed hospital landscapes because of their favorable psychological consequences and the ability to spend time there, according to a study done by the Bow Center in London, which used flower beds and cuttings for horticultural treatment. [24]

Social Benefits

Everyone, regardless of age or sickness, requires entertainment and community support. For individuals with physical limitations, participation in community events may be the only option to interact and integrate with family and community, as well as to share the same information. Patients with strong social support networks have been proven to have less stress and better health, as well as improved recovery rates and survival rates from a variety of illnesses [25]. Social support enhances immunological and emotional processes, as well as treatment adherence [26]. Natural surrounds in health care institutions assist to social integration by providing interaction and support areas; evidence suggests that they are particularly effective in increasing patient, family, and staff access to community support. [27].

2.2 Therapeutic Landscape

A therapeutic landscape is a sort of healing garden created to work in tandem with a treatment program such as occupational therapy, physical therapy, or horticultural therapy. When a garden is created to fulfill the requirements of a certain person or group, it is considered to be therapeutic. It should be adapted to the therapy goals of the client and include both horticultural and non-horticultural activities. It should also be generated collaboratively by a group of specialists as part of a multidisciplinary approach. "Healing gardens" or "medical gardens," as defined by therapeutic scientists, are settings that give areas for gardening

activities while also encouraging physical exercise, such as medical walking (Detweiler, 2012). In addition, a "healing garden" is a garden or natural setting in a health facility that helps to reduce user stress and facilitate patient rehabilitation. A landscape can take on several forms depending on its constituents, and parts might be classified as hardscape or softscape. Softscape, which is mostly made up of plants and flora, is the most soothing component because of its major component: plants are used to build various kinds of man-made gardens. The treatment area can stand alone or be included in a larger healing garden. For a home treatment program, it might be an extension of the space [American Horticultural Therapy Association, 2017]. According to the American Horticultural Therapy Association, treatment facilities must include the following characteristics:

- I. Landscape characteristics, equipment, and components are all chosen or adjusted to give the most accessible settings, activities, and experiences. With each alteration to the therapeutic garden setting, patients, visitors, and gardeners can examine and study plants, touch and smell them, and enjoy the lush garden development in their own unique way, on their own terms, and at their own pace.
- II. Garden regions and unique zones of activity within the garden should be carefully delineated to direct patients', visitors', and other users' attention and energies to the garden's components and exhibits.
- III. People are introduced to landscapes that are organized into legible and green, plant-dominated open areas with basic routes and workspaces for repair, horticulture teaching, treatment, and social interactions.
- IV. The environment has the ability to make people feel safe, secure, and at ease. The therapeutic garden provides personal comfort and refuge to the garden user by avoiding potentially hazardous chemicals such as herbicides, fertilizers, and insecticides, providing shade and other protective structures, flourishing plants, and the therapeutic garden's protected and protective nature.
- V. The landscape has been intended to be accessible and pleasurable for those with various disabilities. As cheerful alternatives to the visual experience of gardens, these gardens often involve the complete range of senses, including memory, hearing, touch, smell, and even taste, and serve as helpful and entertaining landscapes for people of all ages and abilities. Within its restrictions, the therapeutic landscape makes use of the widest range of human and plant interactions and experiences feasible.
- VI. The scenery is straightforward, homogeneous, and easy to comprehend. Increases the visitor's attention to plant-related sensuality, comfort, and independence, which is a key goal in any landscape design project.

3.0. METHODOLOGY

The study takes place in Ota, Nigeria, in the state of Ogun. The state covers an area of 16,980.55 km² in the southwestern part of the country. According to the 2006 Nigerian census, the state's population was 3,751,140 people. The study used a qualitative research approach to reveal the current situation of chosen medical facilities in the province. With the help of a research guide, field data were collected from several different health facilities. Useful data on treatment status has been gathered from relevant literature to establish a follow-up guideline to improve patient recovery. The information gathered was examined, and the results were presented in descriptive language with the inclusion of graphics to aid comprehension. As stated in the introduction, field data were obtained from medical centers in Ota, Ogun State, which were specifically chosen. In the study region, there are 51 medical facilities. The medical facilities chosen are the top five standard medical facilities in the research area, developed specifically for the treatment of patients. All of the medical facilities are private, including Central Specialist Hospital, Ota; Mother Well Hospital; Smile Pride Clinic; Faith Specialist Hospital; and ACE Medicare Clinic. A qualitative and quantitative survey design approach was used in this study. This study used a high-level research approach that included direct observation and evaluation of previous case studies on data collection, content analysis, and quantitative data acquisition from respondents. A questionnaire was created to obtain the required information using open-ended questions. The question was based on the following considerations: the patient's view of the hospital environment; the patient's perception of the rehabilitation effect of horticultural therapy; the patient's perception of the psychological and social status of the hospital in recovery; and the current view; the state of the plant; the condition of the hospital; and their proposal for its development.

4.0. RESULTS

Respondents were asked a basic question about their thoughts on the current landscape design in the hospital area. Table 1 shows that 45.5 percent of respondents thought it was fair, 54.5 percent thought it was ordinary, and 0 percent of respondents thought it was exceptional.

Table 1. Respondents' views on the current landscape design in the hospital environment.

Respondents Hospital	Yes	No
Ace Medicare Clinic	19	5
Faith Specialist Hospital	0	20
Central Specialist Hospital	13	11
Mother Well Hospital	9	8
Smile Pride Clinic	4	12
Total	45	56
Percent %	44.6	55.4

Source: researcher's fieldwork, 2022

The perspectives of the respondents on stress relief and therapeutic advantages are shown in Table 2. The findings show that 44.6 percent of respondents experienced some stress relief and therapeutic benefits as a result of the landscape surrounding the hospital, while 55.4 percent of respondents experienced no stress relief and no therapeutic benefits as a result of the landscape surrounding the hospital.

Table 2. Respondents' views on stress and therapeutic benefits from the landscape around the hospital environment.

Respondents Hospital	Yes	No
Ace Medicare Clinic	24	0
Faith Specialist Hospital	20	0
Central Specialist Hospital	24	0
Motherwell Hospital	17	0
Smile Pride Clinic	16	0
Total	101	0
Percent %	100	0

Source: researcher's fieldwork, 2022

Table 3 indicates the respondents' opinions on the addition of more landscape elements to the hospital setting. The findings demonstrate that 100% of respondents believe that more landscape components should be supplied surrounding the hospital setting, while 0% disagree.

Table 3. Respondents' views on the provision of more landscape components around the hospital environment.

Source: researcher's fieldwork, 2022

A Survey of Landscape Components in Hospitals Under Study

An observational survey was also conducted to determine the level of landscape components in the hospitals under investigation. This is to determine the level of landscaping in the hospitals that have been chosen. Pavements, pedestrian walkways, kerbs and connectors, water bodies, trees, shrubs, flowers, ground covers, or grass are all landscape components to consider.

Ace Medicare Clinic

ACE Medicare Clinics was designed from the beginning to be a medical facilities that serve the purpose for which it was developed. The external landscaping was created to accommodate both softscapes (lawns, shrubs, and a few trees) and hardscapes (stones, pavers, and a few trees) (interlocking paving stones). It also features a fountain inside the building, which is primarily for the purpose of beautification. There was no softscape on the inside of the hospital building.

Faith Specialist Hospital

Only the external half of Faith Specialist Hospital was planned to allow both softscapes (lawns, shrubs, and a few trees) and hardscapes (interlocking paving stones). There was no softcape on the inside of the hospital building.

Central Specialist Hospital

Softscapes (lawns, bushes, and a few trees) and hardscapes (interlocking paving stones) were only allowed on the exterior of

Respondents Hospital	Poor	Average	Excellent
Ace Medicare Clinic	0	24	0
Faith Specialist Hospital	20	0	0
Central Specialist Hospital	9	15	0
Motherwell Hospital	7	10	0
Smile Pride Clinic	10	6	0
Total	46	55	0
Percent %	45.5	54.5	0

Central Specialist Hospital. There was no softcape on the hospital inside. Mother Well Hospital

Only the external half of Mother Well Hospital was planned to allow both softscapes (lawns, shrubs, and a few trees) and hardscapes (interlocking paving stones). There was no softcape on the inside of the hospital building.

Smile Pride Clinic

Only the exterior of the hospital structure was planned to support both softscapes (lawns, shrubs, and a few trees) and hardscapes (interlocking paving stones). There was no softcape on the inside of the hospital building.

The therapeutic landscape was not provided in any of the hospitals in the research area, according to the findings. The buildings' interiors had no softcape at all. The areas where softcape was installed, such as within the site premises, were primarily for aesthetic reasons. In general, none of the five medical facilities examined used therapeutic landscape aspects to help patients recover faster.

5.0 DISCUSSION

The researchers looked at five medical centers in Ota to see how the therapeutic landscape was employed to help patients recover. To attain the goal, two objectives were specified. The first step was to discover whatever therapeutic elements were used in the facilities, and the second was to see how effective these features were in helping patients recover. The findings revealed that, while the five facilities did not have any plant life within their internal spaces to meet the needs of the treatment areas, they were all structured in such a way that softscape features such as grass, bushes, and trees were recognized on the outside.

The researchers examined five medical sites in Ota to investigate how the therapeutic landscape was used to assist patients in their recovery. Two objectives were set to achieve the goal. The first step was to determine which therapeutic aspects were used in the institutions, and the second was to determine how beneficial these features were in assisting patients in their recovery. While the five facilities did not have any plant life within their internal spaces to suit the needs of the treatment areas, the findings revealed that they were all built in such a way that softscape features such as grass, shrubs, and trees could be recognized from the outside.

6.0. CONCLUSION

The goal of this study was to evaluate how far a therapeutic landscape has been implemented to help patients recover at a few medical institutions in Ota, Ogun State, Nigeria, to discover prospective development areas. T medical institutions were the focus of the study. Among these are the Medicare Clinic, Faith Specialist Hospital, Central Specialist Hospital, Mother Well Hospital, and Smile Pride Clinic. Therapeutic landscape was not a design feature in any of the medical institutions, according to the research. Despite the fact that all of the medical facilities were given plants to assist improve their surroundings, a closer look reveals that the plants do not meet therapeutic landscape criteria. Rather, they were provided for the sake of aesthetics and shade.

Therapeutic landscapes have yet to be deployed in medical institutions in the study region, according to the findings. This demonstrates that in the study region, therapeutic landscape application is not a design requirement for medical facility construction. As a result, medical officials in the research region should make therapeutic landscape qualities a design criterion for new medical institutions. Medical experts on the topic should also give forums for training building industry design professionals, such as architects and town planners, on what the therapeutic landscape comprises, according to the report. Future medical facilities with therapeutic landscape qualities will be able to be imagined by architects and designers.

The study added to the research by demonstrating how the therapeutic landscape was used to aid patient recovery at some medical facilities in Ota, Ogun State, Nigeria. The study's findings add to the body of knowledge on the subject and lay the groundwork for future research in this area. The research also adds to the growing body of knowledge about how to employ the therapeutic landscape to aid patient recovery in medical settings. The small number of medical facilities evaluated and the summary area of their settings, however, is a research concern, as the results cannot be applied to the current situation in Ogun State or Nigeria. To date, more research should be undertaken to employ a wide range of other medical facilities in Ota, Ogun State, or across Nigeria to enable a more comprehensive analysis of the study's findings.

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