

Evaluation of the use of Therapeutic Landscape in Selected Medical Facilities In Ota, Ogun State, Nigeria

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Abstract— The growth in population of cities has brought about pressure on urban land, increase in population and some illnesses as a result of the stress people undergo to satisfy their basic human needs. To help enhance patients' recovery when ill, medical experts are exploring the use of various natural means, one of which is the use of therapeutic landscape. This involves the use of distinctive landscape features in an environment to help achieve physical, mental and spiritual healing for patients. Due to its healing benefit, therapeutic landscape has become a popularly used concept in the design of medical facilities in different parts of the globe. It is on this note that this study evaluated to what extent was therapeutic landscape implemented to enhance patients' recovery in selected medical facilities in Ota, Ogun State, Nigeria, with a view to discover likely areas for further improvements. The study adopted qualitative research methodology using direct observation and document review of previous studies related to the subject to gather data, which were content analysed. The result indicated that none of the medical facilities investigated use therapeutic landscape to complement the orthodox medical treatment offered in them. Though the medical facilities had softscape components such as lawns, shrubs, flowers and trees within their site, they were not provided for therapeutic purpose, but rather for aesthetical and shading purposes. There is therefore a need to sensitise stakeholders on the importance of integrating therapeutic landscape in medical environments in order for patients to reap its benefits in the study area. The study recommends that educative and enlightenment platforms be provided by medical experts from time to time, for built environment design professionals such as, Architects and Town Planners, to gain insight on the concept, components and benefits of therapeutic landscape. This will enable such professionals to be able to consciously develop appropriate ways of implementing its features in the development of future medical facilities.

Keywords- *Therapeutic Landscape, Medical Facilities, Ota and Nigeria.*

I. INTRODUCTION

Man has become mindful of the need for vegetation in the urban environment after years of using plant life for different purposes, that include the creation of atmosphere for enhancing his wellbeing. Medical facilities (clinics, health centres or hospitals) are places where people visit for treatment when they fall ill. Medical facilities are usually provided with healthy living environment conditions to help enhance patients' recovery. In recent times, new concepts have emerged in the design of healthcare facilities. Such concepts are usually targeted at creating a better and conducive environment, that sometimes make patients feel as if they are in

their homes and close to recover from their illnesses. One of such concept is therapeutic landscape. This new concept involves the conscious incorporation of therapeutic landscape features into healthcare environment to create a conducive atmosphere that helps to enhance patients' recovery.

The concept of therapeutic landscape refers to landscapes that help achieve physical, mental and spiritual healing. It involves incorporating distinctive landscape features in the physical environment of medical facilities to promote healing and facilitate rehabilitation. Therapeutic landscape can be defined as specific spaces of healing, particularly where the natural environment intersects with the social environment (Gesler 2003), but in practice, it usually refers to spatially delineated areas with health-enhancing properties (Williams 2007).

Landscape is referred to the visible features of an area of land which include its landforms and how they integrate with natural or manmade features. Landscape can appear in different ways depending on its components that can be classified into hardscape and softscape. The hardscape is the hard elements of the landscaping system, those non-living elements such as terraces is an elegant way to turn an unwanted slope into a series of beautiful garden. Example include walkways, benches and gazebos, which are the most used features of landscape. Others are decks and patio, garden ponds, waterfall, fountain and so on. Lighting and fence are also elements of hardscape used in landscaping. So generally the hardscape is basically the combination of elements like rocks, concrete, bricks and stone. Softscape comprises living elements like perennial flowers, shrubs, succulents and trees. This study focused on this side of landscape, that is, the softscape, because of their special characteristics.

Therapeutic landscape is an analytical framework for examining the process of creating health and wellbeing in places. It consists of three components: physical environments, social environments and symbolic environments. (Gesler, 2018). Therapeutic landscape can be established privately in homes or for public benefit, in places such as medical facilities, which are places where medical treatments are delivered, or places that provide health care such as hospitals, outpatient care centres and specialised care centres. As a result of the healing benefit it provides, therapeutic landscape is now widely used in medical facilities in different parts of the world. It is on this note that this study was conceived to evaluate to what extent was therapeutic landscape implemented to enhance patients' recovery in selected medical facilities in Ota, Ogun State, Nigeria, with a view to discover likely areas for further improvements. To achieve the aim of the study, two objectives were set. They include to: identify the therapeutic landscape features implemented in selected medical facilities in the study area; and to establish to what extent are the therapeutic landscape features useful for enhancing patients' recovery in the selected medical facilities.

It was desirable to extend the study investigation to cover different parts of the country in order to be able to generalise the result. But due to the coronavirus pandemic lockdown situation Nigeria, this could not be achieved. Thus, the scope of the study was limited to Ota in Nigeria. Ota is a town in Ogun State, in the

South-western part of the country. The town was selected for the study as a result of its high traditional value. Ota is the capital of Ado-Ota Local Government Area, but historically, the town is the capital of the Awori Yoruba ethnic group. The people of Ota usually make use of medical clinics and hospital available within the town for treatment when they are ill. However, the use of alternative native means of treatment such as herbs, is also popular in Ota, being a highly traditional town. The medical facilities investigated are the three foremost standard medical facilities in Ota. They include: General

Hospital, Ota, a public medical facility; Covenant University Medical Centre; and ACE Medicare Clinic, both of which are private medical facilities. The study investigation was restricted to the three medical facilities for three reasons: first, they are among the leading medical facilities in Ota; second, they were designed from the onset as medical facilities; and third, they are the only ones among the top medical facilities in the town that gave permission for the study to be conducted in their facilities. The field data for the study was collected between August and September 2020. The manuscript is divided into nine sections namely: abstract; introduction; literature review; methodology; results; discussion; conclusion; acknowledgements; and references.

II. LITERATURE REVIEW

2.1 Overview of Therapeutic Landscape

A therapeutic landscape is designed for use as a component of a treatment programme such as occupational therapy, physical therapy or horticultural therapy programmes and can be considered as a subcategory of a healing garden. A garden can be described as being therapeutic in nature when it has been designed to meet the needs of a specific user or population. It should be designed to accommodate client treatment goals and may provide for both horticultural and non-horticultural activities. It should also be designed as part of a multi-disciplinary collaborative process by a team of professionals. A therapeutic landscape may exist on its own as an extension of an indoor therapeutic programme area or it may be part of a larger healing garden (American Horticultural Therapy Association, 1995). According to the American Horticultural Therapy Association, therapeutic landscape must have some special characteristics which include the following:

- i. The landscape components, features and equipment are all selected or modified to provide accessible places, activities and experiences to the greatest extent possible. Each modification to the therapeutic garden environment eases the task of gardening and/or enhances the horticultural experience for the patients, visitors or gardeners, enabling them to see and to study plants, to touch or smell them, to encounter the luxuriant garden growth in their own way, on their own terms and at their own pace.

- ii. The perimeters of the landscape area should be well defined, the edges of garden spaces and special zones of activities within the garden are often intensified to redirect the attention and the energies of the patients, the visitors and other user's visitor to the components and displays within the garden.
- iii. The landscape introduces individuals to planned, intensive outdoor environments in which the conscious provisions of spaces and places for restoration, horticulture education, therapy and social exchanges are organised into legible and verdant, plant-dominated open spaces with simple patterns of paths and workplaces.
- iv. The landscape provides safe, secure and comfortable settings for people. The avoidance of potentially hazardous chemicals such as herbicides, fertilizers and insecticides, the provision of shade and other protective structures, the flourishing plants, and the protected and protective nature of the therapeutic garden offer personal comfort and refuge to the garden user.
- v. The landscape is designed for the convenience and enjoyment for people with the widest possible range of conditions. As practical and pleasurable landscapes for people of all ages and all abilities, these gardens commonly stimulate the full range of senses including memory, hearing, touch, smell and sometimes taste as pleasurable alternatives to the visual experience of gardens. Therapeutic landscape exploits the most complete range of people and plant interactions, and experiences possible within its enclosures.
- vi. The landscape is simple, unified and easily comprehended. An important strategy in all landscape design efforts, heightens the visitor's focus on plant-related sensuality, comfort and independence.
- vii. It should satisfy the principles of universal design. Sholanke, Adelowo & Gbotosho (2020) and Sholanke, Adeboye & Alagbe (2019) itemised the principles of universal design as: (1) Equitable Use – Useful to diverse abilities; (2) Flexibility in Use – Accommodates a wide range of users; (3) Simple and Intuitive Use – Easy to use and learn; (4) Perceptible Information – Communicates effectively; (5) Tolerance for Error – Minimises likeliness of errors; (6) Low Physical Effort – Minimum fatigue; and (7) Size and Space for Approach and Use – Adequate size and space should be made for approach and use.

2.2 History of Therapeutic Landscape

Since 1970s in European countries, several researches have been conducted on the therapeutic effect of nature. From such studies, it was evident how and why natural views and landscape sceneries ease human's pressure and stress, as well as change their mood from different angles like medical geography (Gesler, 2003). When we talk of nature, the first elements that come to mind are plants and vegetation. Nature has always been viewed in all cultures as a healer. Garden for the ill appears for the first time in Europe during the Middle ages with monastic hospitals providing enclosed vegetation garden with an earnest wish for spiritual transformation of patients (Spriggs, 1998).

The therapeutic impact of nature to improve patient's recovery was documented for the first time and published by Florence Nightingale in *Notes on Nursing* in 1860. The author believed that visual connections to nature such as, natural landscape through windows and bedside flowers, aid the recovery of patients (Nightingale, 1863). Starting from the 70s, several empirical studies have been continuously carried out in the western countries emphasising the therapeutic effect of the natural environment. For example, Olds (1985) explored the therapeutic effects of nature by interviewing some focus groups in a workshop for several years and came to the conclusion that places with natural features (that is landscape) can help heal people's emotional depression.

Depression is one of the consequences of unbearable stress that can lead to a cardiovascular problem. A similar study was conducted by Francis & Cooper-Marcus (1991). The authors found that people go to natural environment for "self-help" under stress or depression. The consequence of this is the emergence of several schools with different bodies of knowledge to establish a relationship between landscape and health to explore the healing mechanisms of landscape. Four major schools were identified based on studies in western societies. The schools of thought are as follows:

- i. Medical Geography:** In order to explain the healing effects of landscape, several studies came from cultural geography that led to the development of the medical geographers to identify and define places with natural or historic features for the maintenance of health and wellbeing (Velarde, 2007). Initially or traditionally, the term "therapeutic landscape" was used to qualify the landscape with enduring reputation for achieving physical, mental and spiritual healing. This same term has also been linked to the sense of place which has led to four categories of therapeutic landscape, which are: natural environment, built environment, symbolic environment and social environment (Gesler, 2003).
- ii. Environmental Psychology:** For this school of thought, the key characteristic of therapeutic landscape is attention-recreation. Theory and restorative environment, according to Kaplan (1992) research on restorative environment, describes the types of environment that helps people recover from mental fatigue. People process surrounding information through two kinds of attention: directed attention is employed in tasks such as, problem solving; and directed attention fatigue is a type of temporary symptom of the brain that makes people feel distractible, impatient, forgetful or cranky, which leads to the decline of working efficiency. The recovery of a directed attention is best enhanced in restorative environment where fascination system is used. The authors came to the conclusion that nature encompasses four features as a restorative environment: being away, extent fascination, action and compatibility. Nature therefore performs well in mental fatigue recovery.
- iii. Psycho-evolution Theories and Healing Garden:** This theory revealed that environmental stressors like crowding and noise can induce substantial stress in people, whereas, visual access to nature

shows impact on stress recovery (Ulrich, 1991; Ulrich and Parsons, 1992). The theory considered that nature's therapeutic effect is a matter of unconscious processes and affects emotion-driven parts of the brain that inform people when it is time to relax (Grahn, 2010; Velarde, 2007). An experimental study conducted by Ulrich (1991) concluded that patients get recovered more quickly when looking out of a window with natural scenes. Ulrich (1999), Cooper-Marcus and Barnes (1999) and Cooper-Marcus and Barnes (1995) explained the term "Healing garden" as gardens or landscape settings as "variety of garden features that have in common a consistent tendency to foster restoration from stress and have other positive influences on patients, visitors and staff or caregivers."

According to the aforementioned author, a healing garden has one or a combination of the followings three processes: relief from physical symptoms, illness or trauma; stress reduction and increased levels of comfort for individuals dealing with emotionally and/or physically tiring experiences; and an improvement in the overall sense of well-being (Cooper-Marcus and Barnes, 1999). It is further noted that, the term therapeutic landscape could mean healing garden. According to Lau & Yang (2009), Gharipour & Zimring (2005), Hewitt (2000) and Erckerling (1996), a healing garden is widely referred to as green outdoor spaces in healthcare facilities that

provides a chance of stress relief for patients, staff and families, in conformity with the idea of therapeutic landscape.

University of Minnesota (2016) described healing gardens as plant dominated environments, including green plants, flowers, water and other aspects of nature. They are generally associated with hospitals and other healthcare settings, designated as healing gardens by the facility, accessible to all and designed to have beneficial effects on most users. A healing garden is designed as a retreat and a place of respite for clients, visitors and staff and to be used at their desire. Healing gardens may be further divided into specific types of gardens including therapeutic gardens, horticultural therapy gardens and restorative gardens. These garden types are likely to have overlap and their definitions should be regarded as guidelines since no two gardens are the same.

iv. Salutogenic Environments and the Ecological Approach: Professionals like Landscape Architects and Psychologists also believe that green urban open spaces improve quality of everyday life by providing salubrious conducive environments and perceived visual aesthetics to the people (Olmsted, 1865). Olmsted's ideas about the healthful, therapeutic nature in cities is still a major influence today on urban park system and community green open spaces (Ulrich & Parson, 1992). Since the 1970s, J. J. Gibson representing perceptual psychologists, suggested an environment-behaviour model identifying that the environment affords certain behaviours (Kleiber, 2011; Greeno, 1994). The model no longer considers viewers as receptors of meaningless environmental stimulations. Conversely, they emphasise on the dynamic and reciprocal relationship between perceiver and what the environment

affords, that is, environmental affordances (Heft, 2010). This approach of perceptual research is known as ecological approach. Researchers believe that environmental affordance in landscape plays a major role in alleviating the so-called lifestyle-related symptoms, e.g., burnt out disease, stress-related pain, stimulating physical activity, facilitating social contacts and social cohesion among residents (Vries, 2010). Theories and applications related to Salutogenic environment in a manner of ecological psychology have been elaborated in *Innovative Approaches to Researching Landscape and Health: Open Space, People Space 2*, edited by Thompson, Aspinall & Bell (2010).

2.3 Horticultural Therapy School

Here the belief is that, working in a garden is particularly obvious, meaningful and enjoyable, hence therapeutic (Stigsdotter & Grahn, 2002). Horticultural therapy scientists usually refer to “healing gardens” or “therapeutic gardens” as settings that provide places for gardening activities and encourage physical movements, such as, therapeutic walking (Detweiler, 2012). So, for the Horticultural Therapy School, therapeutic landscapes are general public open spaces that improve people’s physical, mental, spiritual, emotional and social well-being. In Addition, the term “healing garden” refers to gardens and natural settings in healthcare facilities that support users’ stress reduction and enhance patients’ recovery.

As mentioned earlier, landscape can appear in different ways, depending on its components; and the components can be classified into hardscape and softscape. The softscape, which is mainly composed of plants and vegetation is the part that actually has the most therapeutic character because of its main components: plants are part of the composition of all sorts of gardens which are man-made landscape. There are two important translated studies which have great impact to Chinese studies. One is *Healing Garden in Hospitals*, originally written by Cooper-Marcus and translated by Cooper-Marcus & Barnes (1999). In the article, a survey of 143 users of four hospitals in San Francisco bay area was used. It was noted that gardens in hospitals can reduce users’ stress, enhance patients’ sense of control and facilitate patients’ recovery. Detailed recommendations of healing garden design are also suggested in the translated article.

2.4 Restorative Effects of Viewing Nature in Healthcare Settings

Viewing nature is of a great restorative benefit when persons experience high level of stress, such as those who are obliged to spend times in hospitals or other types of healthcare facilities (Ulrich, 1999). In order to evaluate the effects of viewing ceiling mounted nature posters on acutely ill patient lying on gurneys waiting to undergo a surgery, Coss (1990) used an experimental design to evaluate the effects of viewing ceiling mounted nature posters on acutely ill patients lying on gurneys waiting to undergo surgery. His findings suggested that the patients assigned to serene arousal-reducing nature scenes had lower blood pressure than patients assigned to stimulating, arousal-increasing outdoor scenes or to control condition of no picture. A pilot study by Heerwagen and Orians obtained heart rate data and effective self-ratings to access the restorative effects of a nature scene on anxious patients in a dental clinic (Heerwagen, 1990). Both the heart

rate and self-report data suggested that patients felt less stressed on days when a large natural picture was hung on the wall of the clinic waiting room, in contrast to days the wall was blank.

According to Cohen (1988), advantages of gardens or landscape in a health care facility include:

- (i) Reduction of anxiety and stress experienced by patients, visitors and staff;
- (ii) Reduction of depression for patients with life threatening ailments;
- (iii) Higher reported quality of life for chronic and terminal patients;
- (iv) Increased patient mobility and independence (if for instance gardens serve as destination for walks and wheel chair travel); and
- (v) Increased staff job satisfaction.

Based on the literature reviewed, it is safe to say that a few minutes of visual exposure to nature can significantly reduce patient stress. It is reasonable to expect that longer duration exposures to nature in healthcare facilities could have comparatively persistent and perhaps larger restorative effects on emotional, psychological and behavioural components of illness and stress. This explains why therapeutic landscape is now widely used as a natural means for enhancing patients' recovery in environments for treating patients such as hospitals.

III. METHODOLOGY

The research setting for this study is Ota, Ogun State, Nigeria. The state is situated in the South western region of the country with an estimated area of 16,980.55 km². Based on the 2006 census in Nigeria, the population of the state is 3,751,140. As the study was out to unfolded the existing situation of selected medical facilities in the state, the study adopted a qualitative research methodology. Field data were collected from the selected health facilities with the aid of observation guide developed for the study. To develop the observation guide, useful data were extracted from relevant literature on therapeutic landscape for enhancing patients' recovery. The data gathered were content analysed and the results presented descriptively with texts and the use of pictures for better understanding. As earlier mentioned in the introduction, the field data were gathered from three medical facilities, purposively selected in Ota, Ogun State. The medical facilities are the three foremost standard medical facilities built originally for the treatment of patients in the study area. The medical facilities are: General Hospital, Ota which is a public medical facility; Covenant University Medical Centre; and ACE Medicare Clinic, which are both private medical facilities.

IV. RESULTS

4.0 General Hospital, Ota

The General Hospital, Ota is a public hospital located at KM 4, Idiroko Road in Ota. The mission of the hospital is to ensure the provision of safe, quality, affordable, adequate, equitable and accessible health services to the general public in Nigeria. The hospital comprises of several buildings with different functions. The multiplicity of the building blocks places it in the category of a poly-bloc hospital. Generally, the setting of the hospital site was found to have some trees and hedges randomly situated in the compound as landscape elements, with a significant portion of the ground as softscape, which are mainly sandy soil and dried up lawn as shown in Plates 1, 2, 3 and 4.



Plate 1: A Walkway on Site



Plate 2: Hedges along a Walkway on Site



Plate 3: A Section of the Site – View 1



Plate 4: A Section of the Site – View 2

Inside the buildings on site, no provision was made for any form of landscape. The reception, waiting areas, corridors, offices, treatment sections and patients' recovery rooms are all devoid of plant life. Plates 5 and 6 show typical sections of the interior of a building on site devoid of landscape elements.



Plate 5: Reception/Waiting Area

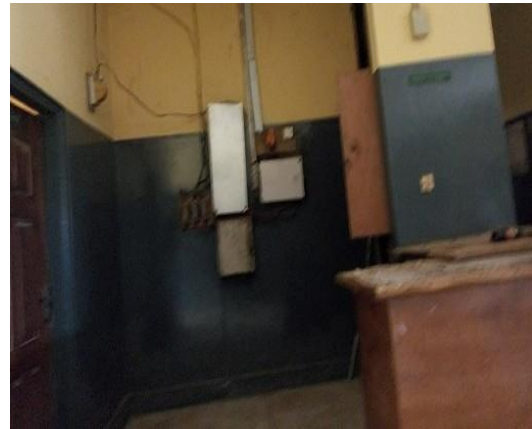


Plate 6: An Office Space

The setting of the site of the General Hospital, Ota shows some form of conscious effort to provide softscape which is a key element of therapeutic landscape. But the way and manner they were provided do not resonate with the principles of therapeutic landscape found in literature. As for the interior of the buildings, none was found to have any form of plant life which is a major component of therapeutic landscape.

4.1 Covenant University Medical Centre

Covenant University is a private institution birthed in 2002. The university is located at KM 10, Idi- Iroko Expressway in Ota, with its Medical Centre situated within the university premises in Canaan- land. The health facility was built to provide basic medical services for students, staff, faculty and the general public. The building is a one storey mono-block type hospital structure, with a simple rectangular form with linear elevations as shown in Plates 7, 8, 9 and 10.



Plate 7: Approach View



Plate 8: Approach View with Carpark



Plate 9: Rear View Plate 10: Side View

The planning of the external landscape of the building as shown in Plates 7, 8, 9 and 10, indicates defined landscaped areas for lawns, flowers and trees in front, beside, at the rear and around the car parks. The trees were few and randomly situated. The interior of the building is devoid of any form of landscape or natural plant life as shown in Plates 11 and 12.



Plate 11: Internal Corridor View – 1

Plate 12: Internal Corridor View – 2

The result of the analysis of the field data indicated that provisions were not made for therapeutic landscape, either at the exterior or the interior of the Covenant University Medical Centre. Though the exterior of the building was provided with some form of softscape landscape, they are not for therapeutic purpose, as they do not satisfy the criteria of therapeutic landscape stipulated in existing literature.

4.2 ACE Medicare Clinic

Ace Medicare Clinic is also situated at KM 10, Idiroko Road in Ota, opposite Canaan land where the Covenant University Health Centre is located. The medical facility is among the most popular healthcare facilities in Ota. It was officially registered by the Ogun State Ministry of Health as a private hospital on the

21st of February, 1989 at its facilities situated at 105 Idiroko Road, Ota. The hospital building is a single structure. It falls in the category of a mono-bloc hospital with an irregular shape. All its medical facilities are housed in the main building.

Just like the first two medical facilities investigated, the ACE Medicare Clinics was built from the onset as a medical facility is used for the purpose for which it was constructed. The exterior landscape was designed to accommodate both softcape (lawns, shrubs and few trees) and hardscape (interlocking paving stones) as shown in Plates 13 and 14. It also has a fountain situated in front of the building mainly for beatification purpose.

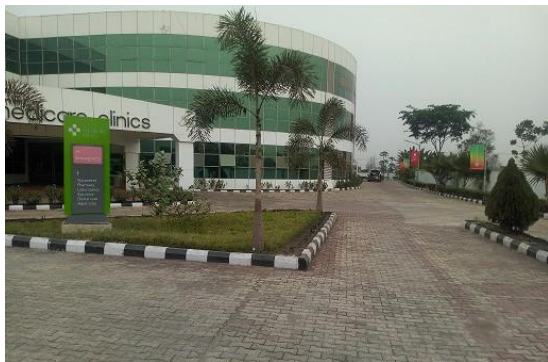


Plate 13: Approach View



Plate 14: Carpark View

Again, the interior of the hospital building was not provided with any form of softcape, but were generally well tiled and furnished with necessary facilities that were fit for purpose. Plates 15 and 16 are images of the main entrance porch area and a section of the interior of the building.



Plate 15: Main Entrance Porch View

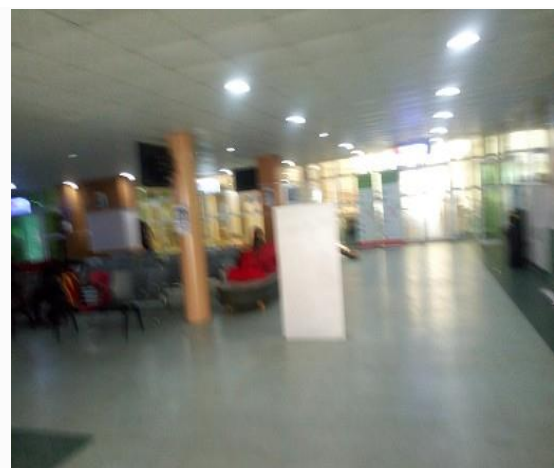


Plate 16: Interior View

Once again, the study investigation revealed that therapeutic landscape was not provided for in the ACE Medicare Clinic. The interior of the building had no softcape at all. The area where some form of softcape was provided such as, within the site premises, they were mainly for aesthetics purposes. In general, none of the three medical facilities investigated adopted therapeutic landscape features towards enhancing patients' recovery in them.

V. DISCUSSION

The study investigated three medical facilities in Ota to evaluate the extent to which therapeutic landscape was used towards enhancing patients' recovery in them. Two objectives were set towards achieving the aim. The first was to identify the therapeutic landscape features implemented in the facilities, whereas the second was to establish to what extent are the therapeutic landscape features useful for enhancing patients' recovery. The results showed that though the three facilities were not provided with any plant life within their interior spaces in line with therapeutic landscape requirements, they were all somehow consciously landscaped with softcape elements such as lawns, shrubs and trees,

externally. A close comparison of the softcape elements with therapeutic landscape requirements indicated that they do not conform with therapeutic landscape requirements. According to Gesler (2003), therapeutic landscape is specifically provided for healing purposes, particularly where the natural environment intersects with the social environment. Williams (2007) explained further that in practice, therapeutic landscape is a spatially delineated area with health-enhancing properties. A close scrutiny of the landscape elements implemented in the three medical facilities investigated, shows that none of them met the healing requirement of therapeutic landscape as indicated by both authors.

Also, according to American Horticultural Therapy Association (1995), therapeutic landscapes are general public open spaces that improve people's physical, mental, spiritual, emotional or social well-being. The term "healing garden" or "therapeutic landscape" is said to refer to gardens and natural settings in healthcare facilities that support users' stress reduction and enhance patients' recovery. However, none of the three healthcare facilities examined show such characters in the landscape system they offered. At best, the landscape system used in term were mainly for beautification and shading purposes. For plants to have therapeutic effect on patients, it implies that the patients should constantly be encountering plant life in different ways within a healing environment: in this case, medical facilities. But in the three medical facilities evaluated, plant life was conspicuously missing in the interior of the buildings. And where they were used in the exterior, they were not used for therapeutic purpose.

In addition, some studies have extensively demonstrated that for patients with plants and flowers in their rooms, a number of positive benefits were recorded for them, which include: shorter hospitalisations, fewer

intakes of analgesics, lower systolic blood pressure, lower ratings of pain, anxiety and fatigue. Such patients also exhibited more positive feelings and higher satisfaction about their rooms compared to others without plants. However, none of the healthcare facilities examined had patients' rooms provided with plants, which is a further indication that they were not designed towards enhancing patients' recovery with the use of therapeutic landscape. The implication of this result is that the key benefit of implementing therapeutic landscape in a medical facility, which is to enhance the recovery of patients, cannot be realised in the three medical facilities examined, with the way they are currently landscaped.

VI. CONCLUSION

This study was conducted to evaluate to what extent was therapeutic landscape implemented to enhance patients' recovery in selected medical facilities in Ota, Ogun State, Nigeria, with a view to discover likely areas for further improvements. Three medical facilities were investigated. They include: General Hospital, Ota; Covenant University Health Centre; and ACE Medicare Clinic. The result indicated that none of the medical facilities were designed with therapeutic landscape as a design consideration. Though the medical facilities were all provided with some form of plant life to beautify their environment, a close examination shows that the plantings do not satisfy therapeutic landscape requirements. Rather, they were at best provided for aesthetics and shading purposes.

The outcome of the study indicates that the use of therapeutic landscape in medical facilities is yet to be employed in the study area. This suggests that the implementation of therapeutic landscape is not a design requirement for the development of medical facilities in the study area. There is therefore a need for medical policy makers to include the implementation of therapeutic landscape features as a design requirement for the development of future medical facilities in the study area. The study also recommends that medical experts on the subject should provide platforms for educating building industry design professionals, such as Architects and Town Planners, on what therapeutic landscape entails. This will enable the design professionals to be able to conceptualise the design of future medical facilities with therapeutic landscape features.

The study has contributed to knowledge by providing empirical evidence that points out to what extent was therapeutic landscape implemented to enhance patients' recovery in the selected medical facilities in Ota, Ogun State Nigeria. The study findings constitute an addition to the repository of knowledge on the subject and establishes a basis for further research in the field. The study also constitutes a new knowledge base for improving understanding on the use of therapeutic landscape towards enhancing patients' recovery in medical facilities. Nevertheless, the study recognises that the number of medical facilities examined and the streamlined location of their setting constitute a limitation for the research, because the result cannot be generalised as the prevailing condition in Ogun State or Nigeria. To this end, more studies should be

conducted using a wider scope that covers more medical facilities in Ota, Ogun State or Nigeria as a whole in order to allow for generalisation of the research outcome.

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