Review Article

Humanistic Design and Culture in Healthcare Environments of Nigeria

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ABSTRACT

Background: Current discourses on healthcare environments' design suggest that qualitative healthcare is directly linked with the state and quality of the environment, making reference not only to the physical but also to the ambient and social environments. These conclude that in giving qualitative care to patients, who are the primary targets of these facilities, it is advocated that the healthcare environments are consciously humanised.
Methods: The study is a literature review citing the Nigerian scenario as a case study among developing countries.
Results: This review reveals that even though humanisation is crucial, as a driver for change in healthcare environments, its definition varies contextually. The paper further maintains that culture is central to whatever the definitions given to the concept of humanisation and attempts to initiate a discussion on the definition for 'Humanisation' in healthcare environments in Nigeria. It also emphasises the need for and the benefits of evidence-based designs in ensuring the design of well-humanised healthcare environments. In addition, the study finds that there is a dearth of the literature on healthcare environments' design in Nigeria.
Conclusion: Currently, there are no commonly identifiable definitions for humanistic designs in healthcare environments in Nigeria. Recommendations are that more healthcare design research should be conducted to support these observations with empirical evidence and uncover how humanisation is defined in the country.

Key words: Culture, evidence-based design, healthcare environments, humanisation, Nigeria, values

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INTRODUCTION

'Humanisation' has been a concept informing the design of functional space in contemporary times. It has lingered in nearly all human domains, of work, education and healthcare environments for some time now. Humanisation, as a global concept, has come to stay in the health sector, where it has been a subject of discourse for decades now in most developed worlds, and is still on-going. The concept most probably evolved from the health sector in the first place. The earliest formal records of humanistic designs and approaches to design have stemmed from healthcare environments. To buttress this, hospital and healthcare environment designs are hinged on humanistic approaches, with efforts on different levels and aspects of healthcare. In fact, it is believed that 'humanistic design sells your hospital'.[1] This means a healthcare facility would be adjudged good and patronised, by how aesthetically appealing, functional and humane it is perceived to be.

The main target of humanistic design is, therefore, in the design for the practice of healthcare focussed mainly on user needs. Users in healthcare environments include healthcare providers, patients and caregivers in the healthcare facility and the community. This perspective suggests that humanistic designs focus on the complete well-being of users, rather than on the technology and facilities it is equipped with alone. It also prescribes that the facilities must look and feel warm, assuring and homely for all users, rather than formal, too mechanical and stressful for them. The intention

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of humanistic design is to promote the dignity of users by subjective means, rather than through objective reality.[2] This definition represents the world view for humanistic designs and is globally acceptable.

'Humanistic' design is adapted from the concept of 'humanisation', which varies in operational definition. The concept is synonymous with other terminologies such as 'humanism', 'humanitarian' and 'humane'. These all share the root word 'human', which border on issues placing significance on the human being within each context of discussion. Humanisation as a concept used in healthcare environments, or humanistic medicine, borders on the issues about good medical care, as well as the synergy between the healthcare providers, the patients, as well as the community within designed space.[3] Humanistic designs of healthcare buildings, spaces and environment, generally, are designed to be sensitive to more or less the holistic needs of the humans who use these environments.

It has been observed that both medical and architectural commentators, who have tried to define and operationalise the term humanisation, refer to it as a 'trend' or 'principle'.[3] However, further scrutiny of the diverse forms and functions of the concept show that it embodies 'long-held ideas about holism and healthy design'.[3] Hence, the more appropriate way to conceive of humanisation would be to see it as a driver for change in lieu of a 'trend' or 'principle'.

Although there is a consensus on this need to humanise healthcare environments globally, owing to the gains attached to it, the meaning of the concept varies across the globe. The concept has different operational definitions. For some, it means scaling down the size of the healthcare facility so that it looks more homely and welcoming rather than gigantic, intimidating and stressful; for others, it is about incorporating nature into the environments in every possible way. Whatever definitions are given, one thing is established, which explains the differences in more realistic terms, this was always about seeking the good of the 'human' users or can be referred to as person-centred design.[2,3]

A cross-section of definitions for the concept of humanisation across the United States (US) and the United Kingdom (UK) immediately reveals that these are culturally defined in specific ways. For example, while hospital designs in the US appeared to maintain their gigantic sizes, the UK, moderated by the National Health Service, saw the design of low-level cottage-like buildings as the shift towards re-humanisation or humanisation. It, therefore, appeared that definitions for humanisation were more contextual. Some authors suggest that the concept of humanisation and dehumanisation in hospital design was more inclined, almost always implicitly, towards culturally specific assumptions about what human was and was not.[4] In addition, the concept of humanisation, when applied to hospital design, is a confluence of ideas moderated by culture shifts, which borrows from international cultures as well as the culture within, including national and local contexts, and in addition to this, patients' opinions.[3,4]

Essentially, humanisation in healthcare environment designs is in a sense dictated by trends in other countries and also filtered by the ideals, norms and values of the contexts to which they were domiciled. In this way, these designs are observed to be culturally determined, hence, this necessitates the need to understand what aspects of culture are specifically involved.

Culture is said to be essential for human existence, and humans are cultural beings. Their behavioural dispositions are informed by and have meanings rooted in culture. What humans believe humanistic design to be, certainly has some bearing on their belief system and values. These belief systems, values and lifestyles are directly linked to culture and are in fact the components of culture. [5-8]

Although this much is known about culture, the concept is usually left out of such discussions, especially in health researches. [8-10] The explanation for this is most probably the unavailability of a consensus definition and operationalisation for the concept. Culture is not yet widely understood for what it encapsulates. Most believe that it only refers to the way of life of people, differences in language, family and social relationships among others; however, in actual fact, it means much more. [8] Multidisciplinary approaches to research often offer the more comprehensive explanations for this because these give room for examining the concept from various disciplinary perspectives. [6-8,10]

METHODS

This is a review article that examines humanisation of healthcare environments, humanistic designs, evidence-based design (EBD) and its importance, as well as the significance of culture at explaining how healthcare facilities' users will define the concept of humanisation, especially in the context of users in a developing country, Nigeria. This is to inform the design of humanistic healthcare facilities, which is informed by careful EBDs. A search on Google Scholar and PubMed using the themes 'Healthcare Environments and Humanization', 'Humanization and Healthcare Environments', 'Humanistic Hospital Designs', 'Healthcare Environments in Nigeria and Humanization', Healthcare Environments in Nigeria', 'Evidence-Based Design', 'Humanistic Healthcare Design' and 'Culture' yielded 18,600 articles. We excluded publications which had no links with healthcare environments, as well as those that were not available in English language. A total of 86 publications were further reviewed. Papers published in the last decade were further evaluated, while references were made to previously published foundational articles on the subjects, due to their uniqueness and worth. The remaining 38 articles were then reviewed in relation to the trend over time in humanisation and healthcare environments, humanistic and EBD in healthcare environments, culture and humanistic design in

healthcare environments and the current state of humanisation of healthcare environments in Nigeria.

RESULTS AND DISCUSSION

Humanisation and healthcare environments Historical evolution

Studies have shown that there are links between healthcare environments and the quality of care perceived to be given or received. [3,9-14] Most of these are perceived by the patients, who are the primary recipients, the care givers, as well as other users of healthcare environment. Healthcare environments, which include facilities such as hospitals, nursing homes and hospices, are expected to exemplify the healthy lifestyles of society as well as have positive influence on the all-round well-being and healing process of patients. [12,14,15] This includes mental, emotional and social aspects of their well-being. Over time measures put in place to improve the quality of healthcare administered include updating technologies and humanising the environment. Technology has been the greatest influence on healthcare environments' design. Studies show that while technology is necessary, the environment must be right for a holistic healing and work environment, for all categories of users. [3,9,10]

Humanisation is not novel, has trended for a while now and is still trending, especially in healthcare facilities. A good number of discourses on healthcare environments for about the past three decades have focussed research efforts on the concept of humanisation. Even though a number of studies show research efforts on these were more concentrated towards the end of the 20th century, the concept of humanisation can be traced to centuries before. One of such is recorded in the Lancet in 1866, which discussed the humanising influence of neatness and beauty of wards in a typhus hospital. [3] Another early mention and record of the practice of humanisation that may have brought revolutions to the healthcare environment is in the over-familiar example of the Anglo-Italian nurse, Florence Nightingale. She emphasised on the inclusion of nature, visual stimulation, colour and certain spatial patterns, into the design of hospital wards. [9]

An attempt with a historical recount on how healthcare environment design developed in relation to humanisation is captured by Shepley. [9] This recount laid emphasis on nature and design as the indices for change, in four eras; the Progressive Era (1890–1929), the Modernist Era (1930–1959), the Era of Scientific Humanism (1960–1989) and the era of EBD (1990-date). The author noted that these times were marked by distinct characteristic features, which occasioned changes in the designs of healthcare environments deviating in and out of the consciousness of humanistic design demands. The contention with humanistic design was always the need for technological advancements with equipment and methods. Although these were welcome developments, they marked the dehumanisation of healthcare environments. In addition, each of these eras had a different culture of its own meeting certain context-specific needs.

The Progressive Era (1890–1929) was defined by the Nightingale model, the pavilion plan, which was based on the belief that the environment played a role in the healing process. This was achieved through the inclusion of nature, natural lighting, colour and proper ventilation into the wards and around it. The schematic of the design which evolved is shown in Figure 1 as plan and elevation.

Both the Modernist Era (1930–1959) and the Era of Scientific Humanism (1960–1989) were marked by a wealth of scientific accomplishments. In the Modernist Era, this was driven by new technologies such as the Cathode-ray tube for visuals with monitors, as well as imaging equipment and germ-control technologies. This played down on the earlier role of nature in the environment and so made them become less prominent but extant in the environment as shown in Figure 2. Hospitals began to look more like monuments, which housed state-of-the-art technologies.

The Era of Scientific Humanism, on the other hand, saw even greater achievements in science and technology, like that which supported the first successful visit to the moon and the moon walk, the birth of the first test tube baby in 1978. However, this period seemed to ignore humans and celebrated landslide scientific achievements in healthcare facilities. Some tragic consequences of these technological advancements, later on, brought a check to this move. One of such was in reaction to the disaster of the Chernobyl and Exon Valdez oil spillage in the late 1980s; eco-effective designs became the mandate by the Brundtland Commission of 1987.[9] It was obvious that advancement in technology also ushered in the environmental problems. The illustration in Figure 3 shows what healthcare environments looked like. They became more complex, ignored nature and celebrated technology the more.

Finally, the Era of EBD (1990-date) illustrated in Figure 4 is significant for the re-humanisation of healthcare environments, which saw to the putting-off of their institutional looks for more non-institutional expressions. The designs of healthcare environments began to be defined by the presence of nature in and around the environments. The environments became friendlier as a humanistic design at this time began to be influenced by EBD. That era is still purportedly existing.

As hospital technologies got more sophisticated, the concept of humanisation gained ascendancy at this time with the

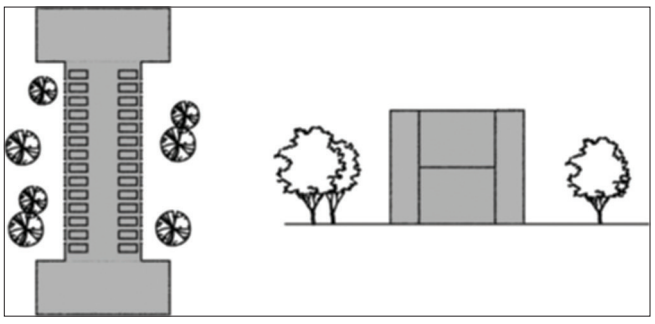

Figure 1: The Nightingale pavilion plan[9]

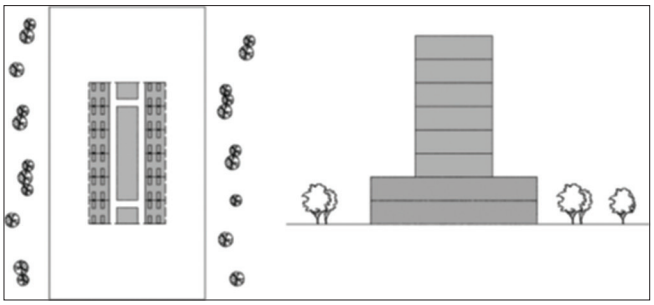

Figure 2: The modernist Era[9]

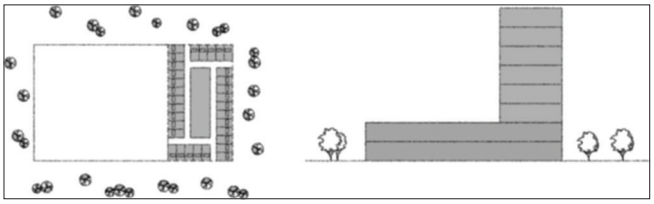

Figure 3: The Era of scientific humanism[9]

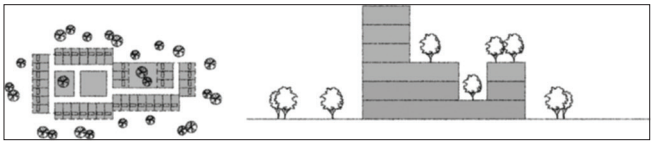

Figure 4: Evidence-based design Era[9]

introduction of the concepts of *biophilic* and *salutogenic* designs.[9,14] The root word *biophilia* means the love of nature so that *biophilic* designs were designs incorporating nature into them. *Salutogenic* design was introduced in the late 20th century; it was about incorporating factors that contribute to wellness into hospital designs. *Salutogenic* designs originated from the theory of *salutogenesis*, a concept developed by a medical sociologist in 1979.

These two concepts, *biophilic* and *salutogenic* designs, focus on making the healthcare environment either to be in empathy with the natural environment, as the case is with biophilic designs, or to consciously include (or exclude) features which are beneficial (or not) for the healing process. Some of these elements in *salutogenic* designs may be nature, art, music and certain other design features.

In another example, some authors discussed the resolve to move the design of healthcare environments from being more of pathogenic–conscious designs, to becoming more *salutogenic.*[13] This means moving away from being too conscious of the hospital design as one which is more about disease control, focused more on infection control, hygiene, infection safety and control, safety and functionality, while targeting a move towards the consciousness of optimum wellness of users through the building design. Particularly, the authors advocated *synaesthetic* design approaches which are based on the principle of focusing on the sixth sense of a human, his/her psychological and social needs, in addition to appealing to the other five senses. *Synaesthetic* designs look beyond designing to meet all the physical needs of people in that environment; however, in addition, consciously, it makes designs conform to perceptual and cognitive expectations for that particular environment. The intent of *synaesthetic* design is to achieve optimal settings in the environment, which connects everything in it perfectly by appealing to all the senses and the mind. To achieve this, users' input becomes important, which is the essence of EBD.[16]

Humanistic and evidence-based design in healthcare environments

Typically, the physical environment of healthcare facilities is adjudged to be a complex and stressful one.[12,14,16,17] Users are faced with evaluating the appropriateness of the architectural design, its potentials and affordances, that is, what it could probably offer, as a healing environment, its aesthetics, how affordable its services will be and its economic worth generally. The main target of humanisation in this environment, therefore, is to address most or all of these user requirements with a balance, by responding to their needs. As a healing environment, the concerns of humanisation are not only with the physical environment or the inclusion of nature but also rooted in the correctness of the ambient, social and other aspects of environment. These include the aural, visual, thermal, social, cultural and emotional aspects. Some humanisation strategies focus on one or more, while some focus on all of these, in which case is called a holistic approach, since it touches on every possible aspect. However, the intervention in humanistic design is a reflection of the definition given humanisation in that context. This is often linked with the culture of that age and the peculiarities of that context, hence culturally defined.[9]

Some humanistic design interventions in healthcare facilities over time have focussed on: use of colour, arts and lighting for therapeutic effects;[18] music, acoustic cladding and introducing noise repellent design features for an appropriate acoustic environment and comfort;[19] qualitative spatial designs[20] and the inclusion of nature, within and outside of healthcare facilities.[9,20] Other research efforts have centred on certain specialised healthcare settings such as paediatric hospitals,[20,21] maternity centres and wards.[22] Most of these interventions have been informed by user inputs in healthcare environment research, which are referred to as EBD.

EBD is the corollary to the concept of 'Evidence-Based Medicine (EBM).[11,17] EBD actually derives from EBM. EBM refers to the 'use of clinical protocols which result from a systematic review of research literature, evaluating both the quality and quantity of research which are in support of the efficacy of specific clinical decisions, project evaluations and evidence collected by operations of the client'.[17] Mills *et al.* define EBD as *'the systematic study of the effects the built environment has on the healing process, and the application of these research findings into practice'*. Both concepts are informed through the experience of stakeholders in the healthcare environment. EBD is conceived as an effective practice which has the potential to inform decisions involving

healthcare design and ultimately positive health outcomes. EBD of healthcare environments builds on information gathered on the different aspects of design, physical, ambient, social and psychological, as well as the design and organisation of furniture within space, which are previously generated. [23] The concept is receiving a growing interest as a topical issue in the health sector. [11] The demand for EBD is currently increasing to buttress the growing assumption that the quality of the physical and social environment of healthcare environments impacts the healing process of patients.

All of these contributions to EBD are also to a large extent, informed by culture. Users tend to make contributions from their expectations, cognitions based on exposure to other systems and cultures and other cultural influences. However, this aspect of culture, which is also essential to life, is often ignored in healthcare environments research. Although this is not peculiar to only healthcare research; it is generally not applied to research in other domains of built form as well. This is in spite of the fact that culture is known to inform the design of buildings across cultures, especially in residential settings. [6,7] Kagawa-Singer *et al*. also add that the literature is impoverished in respect of the contribution of culture to healthcare environments. [8] The consensus however is that culture needs to be broken down into useable bits to study it. [5-7,24]

Culture and humanistic design in healthcare environments

One reason why culture is left out of many researches can be explained by the lack of a singular definition for it. [7,8] Culture is an ambiguous concept. It is often conceived and operationalised holistically, in its generic state. Rapoport expressed how 'useless' it is, to use culture that way. [7] He believes breaking the concept down into more identifiable and useable parts makes it more useful.

Culture has been variously defined in the literature. It is simply conceived and operationalised like Kagawa-Singer *et al*. described, by simplistic, superficial and crude measures, for example, as dichotomous nominal variables based on the race (as Africans, Americans or Italians). The authors explain that looking at culture this way gives an incomplete understanding of the concept, which blurs the effective understanding of it. However, the first definition which suggests that culture encompasses more is that of Tylor, the first Anthropologist, in 1871, which reveals that it is 'That complex whole which includes knowledge, belief, art, morals, law, custom and any other capabilities and habits acquired by man as a member of society'.[6,18] This is by far the reference for all definitions. Rapoport conceives culture in two ways: one as more concrete and potentially observable social expressions which are culture groups such as kinship, family, status, identity, institutions. The second are more specific expressions such as worldviews, values, attitudes, lifestyle, meanings, rules and schemata.

Culture has also been operationalised in other spheres of life, for example, in organisations (as organisational culture). Organisational culture defines and captures all regarding the life and ethos of work in an organisational setting. In this case, behaviour in work places is ordered by sets of rules, attitudes and lifestyles. Behavioural responses are also weighed in contrast to these set rules and meanings. The quality of healthcare environments, whether positive or negative, stirs up behavioural responses in its users and enhances their productivity. Culture influences the design and organisation of built environments. Rapoport reveals how this is so in the residential built environment across cultures in his cross-cultural studies. [6,7,25] His studies show that residential and built environments' design generally are influenced by culture in outlook, in the use of materials, in design and organisation of space within it. He also shows that designed space orders different kinds of behaviours. Some other studies corroborate this. [9,10,26] These observations are not limited to the residential environments but to all built space generally; educational facilities, work environments, recreational, religious and healthcare environments inclusive.

However, in buttressing the argument that culture is central to the use, understanding and the effectiveness of healthcare environments' design, Shepley and Song have posited that 'the corollary in the context of healthcare design is that when the healthcare environment does not reflect cultural requirements, healing can be undermined by stress, anxiety and diminished satisfaction'.[10] Hence, designing and organising hospitals without the input of culture will result in failure, even with the most pleasing architecture, with pleasant façades and state-of-the-art technology.

The question then is: What exactly about culture influences healthcare environments? Generally, these environments have a culture of their own; manifested in the rules, beliefs, values, attitudes and norms that guide their smooth running as healing environments. The context in which they are set also dictates rules that order lives and a few imported cultural memes such as values, ideas and attitudes. Finally, the people who use healthcare facilities are motivated by their own cultural persuasions as well: 'what to', 'what not to', 'how to' and 'when'. These react and behave in certain ways in certain environments based on the dictates of culture exhibited in their values and beliefs.

In a study of the Ibibios of Nigeria, some authors argue that '*while people adopt, adapt and develop certain forms of health and health care, as influenced by the changes in their sociocultural, political and historical contexts, they will fight to maintain what they perceive as valuable in their culture and unique regarding health and health care*'.[27] These perceptions, the authors explain, takes precedence over the Ibibios' feeling and belief of healing, even when they are exposed to diagnosis and treatment with modern medical care and facilities.

One way however to bring these varied responses to a balance is through EBD, which is gaining grounds today. Through EBDs, more humanistic healthcare environments are created; these are more effective and enhance healing.

Humanisation of healthcare environments in Nigeria

Three healthcare systems are identified in Nigeria, namely traditional, modern medical (which is also referred to as the orthodox medicine) and faith healing. Each of these has different systems of operations and environments.[27] The most organised of the three, with respect to facilities and environment, is the modern medical practice. This paper however focussed on the modern medical healthcare system.

The earliest documentations of modern healthcare environments in Nigeria can be traced to the establishment of a dispensary in 1880, by the Christian Missoinary Society, in Obosi Nigeria; Sacred Heart Hospital in Abeokuta, established in 1885 by the Roman Catholic Mission and St. Margaret's Hospital in Calabar, which is reckoned the first government hospital established in Calabar in 1889. Before these, non-orthodox medicine was the only healthcare practice in Nigeria.[28] The practice of traditional non-orthodox medicine was linked to traditions, religion and cultural practices generally, and they still exist in contemporary times parallel to the modern medicine.[27-29]

In Nigeria, it is observed that discourses on humanisation, in relation to healthcare environments, are rare. Nigeria, being the most-populous African nation, is worth examining. It is one developing country in Africa that is expected to dictate trends in different domains of healthcare: from healthcare delivery, teaching and research, to post-graduate training. Although this may be so in certain regard, and to some degree, one setback for healthcare environments in Nigeria, like in other developing countries, especially in Africa, is the consistently inadequate healthcare facilities to service its soaring population.[30] This deficit is not only in the number of facilities or how equipped they are, but also that the quality of these healthcare facilities may be contested.

Further, in Nigeria healthcare environments, especially in the formal sector, different administrations in governance moderate what obtains with the facilities.[28] The concern here however is with respect to how humanised this healthcare environments are today. Hence, questions raised are: Are healthcare facilities in Nigeria humanised? How humanised are healthcare facilities in Nigeria? How is humanisation defined and interpreted into healthcare designs across the country?

It appears that more healthcare design-related research in Nigeria have focussed more on facility maintenance,[31-33] energy use,[34] indoor environmental quality[35,36] and not on the actual design and use of spaces. The suspicion is that like many authors reveal[11,13,18,37] conducting research in healthcare environments is irksome. In some cases, gaining access to data sources and the facility is impossible and purely an exercise in futility. This is because of the sensitivity of such facilities and also the complexity of the hospital structure, organisation and the different user range as well. However, a cursory look at healthcare facilities in Nigeria shows a mix of healthcare facilities which were either inherited, donated, adapted or purpose-built and either private or public owned and managed. There appears to be a mixed collection of healthcare designs, with different principles of design and compromises. Most state-of-the art technologies, which are also purpose-built, are fewer in number and are concentrated in certain areas of the country.

What is not clear however is what humanistic design approaches typifies the Nigerian healthcare environments. This paper is incapacitated by a lack of empirical evidence to figure this out. It is not clear yet what humanistic design efforts are adopted by Nigerian hospitals or whether these are humanised at all. What is clear is that whatever measures there are, will be best interpreted through our culture as a nation, which may be interpreted as our national values as well as the culture of healthcare facilities borrowed from developed worlds and local to the context of the facility. In addition to this are the needs of healthcare facilities users through evidence-based research, which will also highlight the users' values. Hence, an empirical study, either qualitative or quantitative or both, will suffice to decipher the definition and meaning of humanisation in Nigeria, as well as the current state of things.

CONCLUSION

Humanistic designs of hospitals initiate positive responses in users and make them more responsive to work, treatment and healing, as the case may be. As design centred on users' needs with these sought out through rigorous research activities and produced as EBD, humanistic designs are rewarding in any healthcare environment. This is because their primary purpose is to meet the needs of users of the environment.

When the healthcare environment is designed in a way it does not reflect cultural requirements, the target of healing is compromised. This will lead to stress, anxiety as well as dissatisfaction with healthcare services. This shows how central culture is to healthcare design because it captures the values, attitudes, belief system, norms and lifestyle and expectations of users of the facility. Even though this is known about culture, and the concept is said to inform all human behaviour, it is under-explored in health-related researches. However, operationalising culture in ways that make it become understandable is key. The need to also understand humanistic design and the knotty areas which are best revealed in EBD is important.

Finally, users of healthcare environments are never unanimous with decisions and behaviour in any space generally. While some are soothed by state-of-the-art technologies in hospitals, others have more emotional and sensory needs. It is important not to assume that everyone feels the same way. Proper empirical studies will give a consensus and general view of the categories of users. Since this study is set to open up a discourse on humanistic design of healthcare environments and culture as an influence, empirical studies are hence recommended to enrich the discussion within the Nigerian context which has been long ignored.

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There are no conflicts of interest.

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