2025
volume 22 | issue 1

ENQ
The ARCC Journal for Architectural Research

Perception Of Healing Architectural Elements In Women's Healthcare Facilities In Lagos, Nigeria

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Abstract

This study looked at the use and influence of healing elements in the Women's Health Facilities (WHFs) architecture in Lagos, Nigeria. It investigated the extent to which healing architecture has been adopted and its implications on patient healing by assessing their perception and the perspectives of practitioners on its effect on patients. The study collected data from selected WHFs in Lagos using a questionnaire-based survey, allowing for an in-depth examination of the efficacy of healing architectural elements in enhancing patient and practitioner experiences. It employed structured questionnaires shared among 101 respondents out of the estimated 237 users in the seven WHFs by assessing the perceptions of two key respondent groups, patients and healthcare practitioners, on the effect of healing architectural elements. Data were analysed based on themes and statistical software (SPSS v26) for descriptive statistics. Findings revealed that most users were highly aware of the adopted healing elements, and practitioners reported significant effects of these elements on the patients' stress levels, blood pressure, heart rates, autonomic function, and mental engagement. Based on these findings, proposals for advancing the inclusion of healing elements in WHFs are given, including the use of natural elements, flexible spaces, colour and cultural sensitivity, and highlighted useful insights for future design considerations and healthcare practices.

Keywords: healing architecture; healthcare; women's healthcare facilities; Lagos, Nigeria; perception.

Stable URL: https://arcc-journal.org/index.php/arccjournal/article/view/1243

DOI 10.17831/enq:arcc.v22i1.1243

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INTRODUCTION

Architects and artists have used many approaches to promote healing through architecture throughout history (Ghazaly, Badokhon, and Alyamani). This research approach reflects on the physical, psychological, and emotional requirements of patients and their families. It entails creating settings that are pleasant, peaceful, and therapeutic. Healing architecture therefore plays a critical role in discussions about the connection between architectural features and health outcomes by seeking to explain the underlying relationships between built environment design and the delivery of care. (Simonsen, Sturge, and Duff 2022). There is a growing recognition of the importance of the design of healthcare facilities in the physical and emotional well-being of patients. A healing environment is psychologically beneficial for patients' well-being in dealing with the stress of disease (Amankwah, Weng-Wai, and Mohammed 2019). Studies have identified unique design improvements in the healthcare setting that can manage stress reduction and remedies (Ghazaly, Badokhon, Alyamani, and Alnumani 2022). In the field of nursing, the environment is said to have a substantial influence on the health of the patient (Alfa and Öztürk 2019). The objectives of this article are to: i. describe socio-demographic characteristics of user respondents; ii. examine the perceptions of users regarding the healing elements in architecture; iii. compare the perception of patients and practitioners regarding healing architecture elements in the WHF; and iv. analyse the influences of healing architecture elements on patients' care. The study aims to evaluate how patients and practitioners perceive the presence and impact of healing architectural elements in women's health care facilities in Lagos, Nigeria, thereby providing data to guide future design interventions, especially in environments with limited resources.

According to scoping research published in PubMed, healing architecture in clinical environments can influence

professional practice and patient experiences (Simonsen, Sturge, and Duff 2022). Nigeria accounts for about twenty percent of all maternal fatalities worldwide (WHO 2019). A Nigerian woman has a four to5percent lifetime chance of dying from complications of pregnancy, delivery, or postpartum or post-abortion, whereas the risk in most high-income nations is one in 4,900 or about 0.02 percent (Etuk, et al. 2023). To lower the risk of maternal morbidity and mortality, women of reproductive age must receive consistent, high-quality therapy to prevent and manage chronic conditions before, during, and after pregnancy, and to improve their well-being and overall health.

In response to this, the WHO stated that its contribution to maternal mortality reduction is through enhanced research evidence, evidence-based clinical and programmatic recommendations, global standards, and member-state technical support (World Health Organization 2019). Healing architecture, however, requires an evidence-based design to be successful. In alignment with the WHO's goals of reducing maternal mortality through improved care standards and environments, healing architecture, when guided by evidence-based design, offers a complementary strategy to support women's well-being in clinical settings. It is grounded in research, and the outputs influence not just broad therapeutic outcomes (Ullah, Khattak, and Shah 2022), but also health outcomes. The buildings and places in which patients are treated are important drivers of the experience, cost, and outcomes of health treatments (Heller 2018).

Considering the Southwest has more healthcare facilities than all other regions of the country, it is more prone than other geopolitical zones in Nigeria to produce problematic healthcare issues (Akinluyi, Fadamiro, Ayoola, and Alade 2020). According to the study, Southwest Nigeria has the most human resources for health in Nigeria. The significance of healthcare facility infrastructure as a critical component of the healthcare system is widely recognized and essential to its effectiveness (Obubu, Chuku, and Ananaba 2023). Although the study includes healthcare workers as respondents, their input was focused on their professional observations of how architectural elements affected patient care, not on their workflow or productivity. Understanding these elements can aid in the development of more effective healing settings for women in this area.

This study aims to understand healing architecture and its significance in current development and design deliberations in Lagos, Nigeria, particularly in terms of its potential to positively impact the health and well-being of individuals using these spaces. (Healing architecture ought, in the context, to be understood as the design of a physical space, in this case, healthcare facilities.) The study was founded on scientific evidence that the physical environment in which medical treatment is delivered can have a substantial impact on a patient's health and well-being (Akinluyi, Fadamiro, Ayoola, and Alade 2020).

1.0 LITERATURE REVIEW

Architects and artists have used several approaches and techniques to encourage healing through buildings over the history of architecture (Ghazaly, Badokhon, Alyamani, and Alnumani 2022). Healing architecture is a design concept where architecture contributes to the course of healing in the individual (Sigalingging,

Ismanto, and Sudarwani 2021). Evidence-based design (EBD) is the process of making key choices utilising evidence from research, studies, and practices in an explicitly informed manner (Rafeeq and Mustafa 2021). In the context of EBD, these different environmental variables have been shown to have an impact on patients (Brambilla, Rebecchi, and Capolongo 2019). A study conducted by Ulrich in 2008 recognized the relationship between the physical design of hospitals and the key outcomes of the patients. Specific design elements include lighting (natural and artificial), colors, biophilia, spatial organisation, and circulation, ventilation, acoustics, and aesthetics.

Light is crucial not only for seeing objects and doing tasks but also has psychological and physiological effects on humans (Gaminiesfahani, Lozanovska, and Tucker 2020). Light is an essential element in the healing architectural concept (Ghazaly, Badokhon, Alyamani, and Alnumani 2022). Ambient color is one factor to consider while designing healthcare facilities. In general, color may improve tranquilly, decrease pain, lessen depressive tendencies, and increase a sense of comfort (Gaminiesfahani, Lozanovska, and Tucker 2020), some colors, according to color medical aid, can impact numerous parts of one's existence, such as our emotions, cognitive state, disposition, and stamina level (Chittanuru 2022). Colors can influence a person's optimism, pessimism, and emotional state. (Ghazaly, Badokhon, Alyamani, and Alnumani 2022). Providing greenery and nature within the areas of the building is an important part of creating an environment for healing. However, if the transition between these places is badly constructed, it can have a detrimental impact on comfort (Ghazaly, Badokhon, Alyamani, and Alnumani 2022). Views of nature are among the most prevalent and beneficial distractions in healthcare settings. "Exposure to natural elements (e.g., nature-filled windows, water, landscape paintings or photographs) could foster positive feelings while reducing negative emotions," according to a study (Gaminiesfahani, Lozanovska, and Tucker 2020). Professor Irving Biermann discovered that observing sights can help to relax the mind and eyes (Chittanuru 2022).

Implementing a focus points or common zones system, in which larger spaces positioned at numerous path junctions may act as rest places and repositioning points, can help individuals ensure they are on the proper route.

Adequate ventilation can help to dilute and remove pollutants, such as volatile organic compounds (VOCs) and biological contaminants, from indoor air. This can improve indoor air quality and reduce the risk of respiratory problems for patients and staff (Cao 2018). Proper ventilation can also help reduce the risk of infection by diluting and removing pathogens from the indoor air. This is particularly important in hospital environments where the risk of infection is high (Nash 2019).

Exposure to a healing natural atmosphere is soothing, less stressful, and hence good for those receiving medical treatment. As a result, being exposed to a restorative natural setting can have long-term advantages in terms of medical outcomes that are directly and indirectly connected to stress reduction, for example, quicker wound healing through improved immune function and less pain (Gaminiesfahani, Lozanovska, and Tucker 2020). Clinical sensory stimuli are experienced by patients; such stimuli are new and unfamiliar, and are presumed to induce an unfavourable mood and raise a sense of vulnerability (Riisbøl and Timmermann 2020).

Healthcare facility design is a complicated process that influences the dynamic flows of patients, workers, visitors, equipment, and information in addition to creating and allocating physical spaces (Halawa, Madathil, Gittler, and Khasawneh 2020). According to the research, if we can design our healthcare based on healing architectural elements, patient outcomes, quality of experience, and staff satisfaction and effectiveness are all expected to increase dramatically (Sigalingging, Ismanto, and Sudarwani 2021).

However, several cultural considerations might influence healthcare facility design in Lagos, Nigeria. According to one study, EBD has become a good approach in healthcare design and is mostly used in the United States and Europe. This design practice, however, has not been widely used in the design of Nigerian healthcare institutions (Timothy, Uwajeh, and Bamisaye 2023).

2.0 METHODOLOGY

The review began with a comprehensive search of published literature spanning back to 2018. The goal was to identify elements, characteristics, and design criteria associated with healing in architecture. Positivist philosophy and deductive approach were adopted in this study (Aduwo, Ejale, and Ibem 2022; Ediae, Egbudom, and Abeng 2022; Ekhaese and Solaja 2022) for achieving its purpose. A quantitative research method is appropriate for this study given that it allows for an in-depth analysis of the perception of the phenomena of healing elements in architecture in WHF design while taking the perception of effect in patients as seen by practitioners in Lagos, Nigeria into account (Bartlett, Kotrlik, and Higgins 2001; Ojo, 2005; Odukoya and Oludotun 2007; and Pallant, 2011). This method allows the researchers to collect rich, descriptive data and obtain a better grasp of the complexity and subtleties involved in the perspectives of the users of

WHF, Respondents were asked to rate the presence and impact of twelve healing elements on a scale of one to ten. Questions focused on their experience of design features (e.g., lighting, color) and perceived effects on stress, comfort, and wellbeing. The questionnaire was developed by the researchers, drawing on existing literature on healing architecture. It was reviewed by academic experts and piloted in one facility to validate clarity and relevance before full deployment. It included sections on socio-demographic data, perception ratings

S/N	Buildings	Location	All facilities	Stage 1	Stage 2	Stage 3
1	Ayinke House LASUTH	Lagos State Teaching Hospital (LASUTH), 1Oba, Akinjobi St, NBSP, Lagos	*	*	*	*
2	Bridge Clinic	66 Oduduwa Way, Ikeja GRA 100001, Ikeja, Lagos	*	*	*	*
3	Lagos Island Maternity Hospital	10 Campbell St, Lagos Island 102273, Lagos	*			
4	Outreach Women's Hospital	6, Muritala Eletu Way, Osapa London. Lekki, Eti-Osa, Lagos	*	*	*	*
5	South Shore Hospital	6b Goriola St, Victoria Island 106104, Lagos	*	*		
6	St. Ives Hospital	6, Maitama Sule Street, Ikoyi, Lagos State	*	*	*	
7	The Breast and Gynae	276A Kofo Abayomi St, Victoria Island 106104, Lagos	*			
	Selected		7	5	4	3

Table 1: Multi-Stage Selection of Women's Healthcare Facilities in Lagos State, Nigeria

Source: Authors' Fieldwork (2023)

S/N	Facility	No. of Users	Sampling Frame	Calculated Sample Size	Actual Sample Size	No. Retrieved
Patients						
1	Ayinke House LASUTH	24	24	11	24	24
2	Bridge Clinic	12	12	5	12	12
3	Lagos Island Maternity Hospital	18*	-			
4	Outreach Women's Hospital	17	17	7	17	16
5	South Shore Hospital	18*	-			
6	St. Ives Hospital	18*	-			
7	The Breast and Gynae	18*	-			
	Total/Selected	125*	53	23	53	52
	Practitioner					
1	Ayinke House LASUTH	21	21	9	21	21
2	Bridge Clinic	12	12	5	12	12
3	Lagos Island Maternity Hospital	16*	-			
4	Outreach Women's Hospital	15	15	6	15	14
5	South Shore Hospital	16*	-			
6	St. Ives Hospital	16*	-			
7	The Breast and Gynae	16*	-			
	Total/Selected	112*	48	20	48	47
	Total	237*	101	43	101	99

Table 2: Study Population, Sampling Frame, and Sample Size

*Estimated users Source: Authors' Fieldwork (2023)

of healing elements, and observed effects on patient outcomes. The data retrieved on this objective from the questionnaires were analyzed using SPSS, version 26, through descriptive statistics and the results were presented in descriptive form through tables.

The number of WHFs in Lagos, Nigeria, was established initially using numerous sources such as healthcare directories, professional networks, and discussions with local healthcare authorities. The seven were chosen using selection criteria of being freestanding and designed specifically (not rented apartments). Based on multistage random selection, a final random selection of three facilities as the sampling frame for the study was made.

The researchers conducted in-person visits to the selected facilities to distribute surveys and observe the spatial context. However, the primary data were perception-based and not supplemented with technical environmental audits

The sample size (see Table 2) was calculated using standard sample size formulas, with an acceptable margin of error of 0.03 and an alpha level of 0.05 for continuous variables, given that variables of interest are measured on a ten-point Likert scale. The first sample size, Sf, was calculated using the standard formula.

Sf = t2 x s2/d2;

where, the initial sample size Sf was calculated, using the standard formula Sf = t2 x s2/d2; where,

t = value of selected alpha level of 0.025 in each tail = 1.96

(An alpha level of 0.05 shows the level of risk the researchers are willing to accept that the true margin of error may exceed the acceptable range.

s = estimated standard deviation in the population

= estimated variance deviation for a ten-point scale divided by nine (number of standard deviations

in the range) = 10/9 = 1.1111

d = acceptable margin of error for the mean being estimated [number of points on primary scale (10) x

acceptable margin of error (.03)] = 10 x .03 = .3

N = study population = 237

Thus, Sf= t2 x s2/d2= (1.96)2 x (1. 1111)2 /(.3)2

= 3.8416 x 1.2346/ 0.09

= 52.6982 ≈ 53

But since the Sf (=53) is greater than five per cent of the study population (237) in Table 1, the second sample size correction formula (where the second sample size is Smin) was applied as follows:

Smin = Sf /[1+ Sf /N]= 53/[1+53/237]= 43.31≈ 43

Although the minimum calculated sample size Smin is 43, to take care of the non-responses and invalid entries, and the need for more complex analyses, such as multiple regression, which require larger datasets this was increased to 101, the total number of users in the sampling frame (Table 2) for the structured questionnaire. SPSS version 26 was used to conduct descriptive statistical analysis, including frequency counts and mean score calculations. No inferential statistical tests were applied, as the study focused on perceptual trends rather than hypothesis testing or prediction modeling. Fieldwork was conducted between November 2022 and February 2023.

3.0 RESULTS AND DISCUSSION

The data obtained from the field survey were examined. Responses to structured questions from surveys conducted at the three randomly selected hospital facilities, which served as the sampling frame for a detailed study, were analyzed in line with the research objectives. Fifty-two responses were gathered from patients, and forty-seven were gathered from practitioners (or a total of 99 out of 101 users sampled). This exceeded the minimum required sample size of forty-three for both groups. Data were analyzed thematically and with statistical software (SPSS 26) to generate descriptive statistics.

It is worth noting that the majority of patients surveyed were short-term visitors or outpatients, which may account for the lower ratings related to exposure to nature and other immersive elements. Longer-stay inpatients might experience or value these differently. Future research could stratify perceptions based on patient length of stay.

Socio-Demographic Characteristics of Users in WHF in Lagos State, Nigeria

The results of the analysis presented in Table 3 reveal that the majority of users of Women's Health Facilities (WHF) in Lagos, Nigeria were highly educated female practitioners and patients with qualifications ranging from OND/HND to Ph.D. They were between twenty-one to fifty years old, had no physical or mental challenges, and were frequent users who spent at least four hours per visit.

Variable	Classification	Frequency	Percentage (%)
Gender	Male	28	28.3
	Female	71	71.7
	TOTAL	99	100
Age (Years)	< 18	3	3.2
	18-20	5	5.3
	21-30	32	33.7
	31-40	39	41.1
	41-50	15	15.8
	>50	1	1.1
	Total	95	
	Missing	4	
	TOTAL	99	100
Educational Attainment	No Formal Education	-	-
	SSCE	8	8.1
	OND/HND	13	13.1
	BSc	41	41.4
	MSc	30	30.3
	PHD	7	7.1
	TOTAL	99	100
Physical/Mental Challenge of Respondents	No	90	90.9
	Uncertain	9	9.1
	Yes	-	-
	TOTAL	99	100
Frequency of Visit	Once	-	-
	Rarely	18	18.9
	Occasionally	29	30.5
	Frequently	29	30.5
	Daily	19	20.0
	Total	95	
	Missing	4	
	TOTAL	99	100
Time Spent per Visit (Hours)	3 or fewer	36	37.9
	4-6	30	31.6
	7-9	23	24.2
	10 or more	6	6.3
	Total	95	
	Missing	4	
	TOTAL	95	100
Category of respondents	Patient	39	39.4
	Practitioner	47	47.5
	Visitor	13	13.1
	TOTAL	99	100

Table 3: Socio-Demographic Characteristics of Users

Source: Results Authors' analysis of data acquired from fieldwork (2023).

Perceptions of all Users Regarding Healing Architecture Elements in the WHF

Certain healing architecture elements, as outlined in the aforementioned literature, were presented to respondents, who were asked to rate the level of implementation on a scale of one to ten, where one represents the "lowest rating" and ten the "highest rating."

Scale	Inference
1 and 2	Very Low
3 and 4	Low
5 and 6	Average
7 and 8	High
9 and 10	Very High

Table 4: Table of Inferences Level of Implementation

Table 5 presents the frequency of valid and missing responses from patients regarding the implemented healing architectural elements in women's hospitals. The table also summarizes the mean scores of all responses, allowing for inferences to be drawn based on the pre-established criteria outlined in Table 4.

The result on implemented healing elements as reported by all users (practitioners and patients), are presented in Table 5. Ten elements were rated high, one was rated average, and one was rated low. The element rated average was "Exposure to nature" (connection to the environment and nature when inside the building), the one rated low was "Presence of a body of water (fountains, streams, etc.)," The remaining ten elements received high ratings.

Overall, the implementation of healing elements identified in the literature was perceived as high by all users. According to the inference criteria established in Table 4, both practitioners and patients demonstrated a strong positive perception of these healing elements. In general, users in the facilities surveyed expressed favorable opinions regarding the presence and impact of these architectural features.

Comparison of Perception of Patients and Practitioners Regarding Healing Architecture Elements in the WHF

After analyzing the data from both patients and practitioners using descriptive statistics and categorizing the mean scores based on the provided inferences, the following comparison can be made:

Patients' Perception Levels of Healing Elements: The mean obtained from the patients' responses is seven, which falls within the "High" category of perception. This suggests that, on average, patients perceive a high level of healing elements in the WHFs.

Practitioners' Perception Levels of Healing Elements: The mean obtained from the practitioners' responses is eight, which falls within the "High" category of

	Frequency (/99)	Mean Score (10.00)	Mean 10	Inference
The extent of natural lighting	99	7.25	7	High
The extent of artificial lighting	96	8.22	8	High
Presence of good color designs (coordinated colors, harmony, tonal contrast, and details)	99	7.23	7	High
Seamless transition between spaces	96	7.85	8	High
Ease of movement	96	8.30	8	High
Exposure to nature (a connection to the environment and nature when inside the building)	99	5.89	6	Average
Presence of a body of water (fountains, streams, etc.)	93	3.10	3	Low
Ventilation levels within the building	98	7.51	8	High
Air quality	92	8.22	8	High
Sense of freedom and ability to optimize any space	99	7.77	8	High
Presence of intriguing decorations, wallpapers, and paintings	99	6.60	7	High
Level of indoor noise	99	6.72	7	High
Overall	97	7.06	7	High

Table 5: Summary of Perception of all Users of Healing Architecture Elements in the WHF

Source: Results Authors' analysis of data acquired from fieldwork (2023).

perception. This indicates that, on average, practitioners perceive a high level of healing elements in the WHFs.

Comparing the results, both patients and practitioners have a similar perception of the healing elements in the WHFs, with both groups rating the level of healing elements as "High." This suggests a general agreement between the two groups regarding the presence and effectiveness of healing elements in creating a supportive and healing environment. It is important to note that, while the overall perception levels are categorized as "High," further analysis was conducted to explore specific aspects of healing elements that received the highest and lowest ratings from both patients and practitioners. Table 6 Summarizes the Comparison.

Overall, both patients and practitioners evaluated the healing elements highly, with practitioners frequently scoring somewhat higher than patients. Also, eight elements were rated at least high by the patients, while nine elements were rated at least high by the practitioners (Table 6, columns 5 and 9).

Healthcare practitioners, due to their prolonged and regular exposure to the facilities, may have a more nuanced perception of the architectural elements. This difference in duration of exposure could account for the higher mean ratings observed in their responses. However, these data show that patients and practitioners generally agree on the presence and practicality of healing elements inside the facilities, with slight differences in perception. These findings can be used to guide future design decisions and treatments targeted at improving the healing environment for patients and practitioners alike.

	Frequency (52)	Mean Score (10.00)	Mean 10	Inference	Frequency (47)	Mean Score (10.00)	Mean 10	Inference
The extent of natural lighting	52	6.16	6	Average	47	8.34	8	High
The extent of artificial lighting	51	7.46	7	High	45	8.98	9	Very High
Presence of good color designs (coordinated colors, harmony, tonal contrast and details)	52	6.42	7	High	47	8.04	8	High
Seamless transition between spaces	51	7.52	8	High	45	8.18	8	High
Ease of movement	49	8.04	9	Very High	47	8.56	9	Very High
Exposure to nature (a connection to the environment and nature when inside the building)	52	5.70	6	Average	47	6.08	6	Average
Presence of a body of water (fountains, streams, etc.)	51	3.10	3	Low	42	3.10	3	Low
Ventilation levels within the building	52	7.24	7	High	46	7.78	8	High
Quality of air	52	7.50	8	High	40	8.94	9	Very High
Sense of freedom and ability to optimize any space	52	7.16	7	High	47	8.38	8	High
Presence of intriguing decorations, wallpapers, and paintings	52	5.76	6	Average	47	7.44	7	High
Level of indoor noise								
All elements	52	7.20	7	High	47	6.26	6	Average
	51	6.61	7	High	46	7.51	8	High

Table 6: Comparison of Perception of Users on Healing Architecture Elements in the WHFs

Source: Results Authors' analysis of data acquired from fieldwork (2023).

Influences of Healing Architecture Elements on Patients' Care

The result of the analysis of the effects of healing architectural elements on the recovery process of patients in WHF were evaluated based on the perceptions of health practitioners. Respondents were asked to rate the level of impact on a scale of one to ten, where one represents the "least impact" and ten represents the "highest possible degree of impact." color

The results of the effect of literature-based healing elements on patients, as seen by health practitioners and presented in Table 8, showed that of the eight attributes considered, only one was rated as Severe, while the remaining seven were rated as Major. The attribute rated Severe was the positive effects of colors. Overall, the evaluation of the healing elements' effects on patients, as perceived by health practitioners, revealed that all were rated at least Major.

Scale	Inference
1 and 2	Insignificant
3 and 4	Minor
5 and 6	Moderate
7 and 8	Major
9 and 10	Severe

Table 7: Inferences Level of Effect

	Frequency (47)	Mean Score (10.00)	Mean 10	Inference
Lighting on patients' relaxation	47	7.96	8	Major
Natural Lighting on Stress Levels and Comfort	47	7.21	7	Major
Positive effects of colors	47	8.57	9	Severe
Colors on and blood pressure, autonomic functioning, and heart rate	46	6.65	7	Major
Nature and outdoor activities on stress and anxiety	46	7.89	8	Major
View of nature on blood pressure and heart rate	47	7.85	8	Major
View of nature on mental involvement, happiness, and concentration	47	7.85	8	Major
The quietness on stress levels	47	8.09	8	Major
TOTAL	46	7.76	8	Major

Table 8: Effect of Healing Elements on Patients as Seen by Health Practitioners

Source: Results Authors' analysis of data acquired from fieldwork (2023).

DISCUSSION

The examination of data gathered from both patients and practitioners offers valuable insights into their overall impressions of the incorporation of healing elements in the WHFs. Although both groups expressed generally positive perceptions, slight variations emerged in their ratings and viewpoints. Unlike Ulrich's study, which relied on physiological measurements, this research is based on user perceptions. While not medically diagnostic, the responses of patients and practitioners nonetheless provide meaningful information regarding user satisfaction, perceived design effectiveness, and the potential psychological impact of architectural elements. Patients assessed the use of healing elements with an average rating of seven, indicating a high level of perception. Practitioners, on the other hand, evaluated the use of healing elements slightly higher, with a mean of eight, also indicating a high perception level. This shows that practitioners, compared to patients, hold a more favorable view of the incorporation of healing elements in the WHFs. While these variations in perception can be attributed to different factors, it is crucial to consider the perspectives of both groups. The examination of practitioners' responses to the influence of healing elements on patient care revealed important insights into their views and opinions. All the healing factors were regarded as having significant impacts, demonstrating that practitioners recognized the value of these elements, such as lighting, colors, nature, and quietness in improving patient care.

The high mean scores across most healing elements (ranging from seven to nine on a ten--point scale) support the conclusion that respondents perceived strong implementation. Additionally, practitioners rated the perceived effect of these elements on health indicators such as blood pressure and mental engagement as "major" to "severe," further reinforcing the link between environment and care outcomes.

The positive ratings for artificial lighting assume constant availability, which in Nigeria is subject to power instability. The role of backup generators or solar power systems may influence perception and should be explored in future studies.

4. LIMITATIONS

This study relied on subjective self-reports rather than clinical health records. While perceptions are valuable,

they do not directly measure physiological outcomes such as recovery time or blood pressure changes. The urban setting of selected WHFs may also limit the generalizability of findings to rural or under-resourced areas. Most respondents had tertiary education, which may not reflect the general patient demographic in Nigeria. Future studies should explore the perspectives of less-educated users, who may perceive and engage with architectural elements differently.

CONCLUSION

Healthcare facility infrastructure is a key component of any healthcare system, and understanding its elements can aid in the development of more effective healing environments for women in this area. Healing architecture refers to the design of a physical space, in this case, healthcare facilities, that can have a positive impact on the health and well-being of the individuals who use them. This study is grounded in scientific evidence demonstrating that the physical environment in which medical treatment is delivered can significantly effect patient outcomes.

The study contributes to the body of knowledge on healing architecture and its essential elements. It also offers practical insights for architects, designers, hospital facility providers, and health practitioners, among others, regarding the integration of healing-focused design in medical settings.

The implications for practice emphasize the significance of EBD as well as the positive influence of healing elements in architecture. Furthermore, they highlight how integrating such elements into architectural design, can enhance patient care, strengthen patient-practitioner relations, reduce stress, and improve the overall patient experience.

Patients' opinions reflect their personal experiences as well as the immediate impact of their surroundings on their health. In contract, practitioners' perceptions are shaped by their professional expertise, experience, and understanding of the theoretical principles underlying healing architecture. Therefore, to guide future design decisions and improvements, a comprehensive evaluation should consider both the points of convergence and divergence between these perspectives.

The overall perceptions of both patients and practitioners regarding the adoption of healing elements in healthcare facilities are positive, with minor variations. An analysis of practitioners' responses revealed an awareness on the influence of healing elements on patients' care such as lighting, colors, nature, and calm, in improving patient well-being.

The study offers recommendations for advancing the inclusion of healing elements in WHFs, including the use of natural features, flexible spaces, color use, and cultural sensitivity. These findings provide valuable insights for future design considerations and healthcare practice.

AREAS FOR FURTHER STUDY

Long-Term Impact: Conduct longitudinal research to investigate the long-term effects of healing architectural elements on patient outcomes, such as recovery rates, readmission rates, and general well-being. This would allow for a better understanding of the long-term advantages and possible cost-effectiveness of including therapeutic components in women's hospitals.

Explore the adaptation and integration of healing architecture elements to distinct cultural situations in Nigeria. Examine how cultural preferences and beliefs influence both the perception and efficacy of healing elements in WHF. This study can help to establish culturally responsive design standards for healthcare facilities.

Comparative Studies: Future research should investigate similar elements in rural hospitals or resource-constrained settings, where architectural interventions could have an amplified impact on patient experience and outcomes.

CONFLICTS OF INTEREST

There are no conflicts of interest to declare.

ACKNOWLEDGEMENTS

The Authors wish to express their gratitude to Covenant University Proprietor Base and Management for this research, publication, and financial support through Covenant University Centre for Research Innovation and Development (CUCRID). The provision of a conducive environment for conducting this study is also gratefully acknowledged. They would also like to thank all those who helped with data collection. Appreciation is also extended to all authors and sources cited in this article, whose work and materials have contributed meaningfully to the development and strengthening of this research.

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