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Therapeutic Waiting Areas: A Study of Perceptions of Patients and their Companions in Hospitals

Research Article by
Dr. Lateef Ademola Lawal

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Therapeutic Waiting Areas: A Study of Perceptions of Patients and their Companions in Hospitals

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Abstract

The waiting area has an influence on patients and their companions and plays an important role in accessing medical services. Research suggests that hospitals are stressful environments, with high levels of uncertainty, fear, and anxiety. While the impact of healing and therapeutic features on patients' in waiting areas of healthcare settings is known in Western cultures and contexts, there has been little or no research focused on the therapeutic features in waiting areas, particularly in Nigeria. This present study examined the perceptions of the features of therapeutic waiting areas and their effects on patients' hospital experience, stress, and perceived relaxation. A survey questionnaire was employed to collect data from patients and their companions at two hospitals in North Central, Nigeria about their perceptions of therapeutic features in the waiting areas. The data were analysed using standard statistical methods. The results from this study demonstrated the significant importance of having well-designed waiting areas/rooms equipped with appropriate furniture in healthcare settings for the comfort of patients's and carers. Additionally, views of nature, waiting areas with easy access to natural greenery, the presence of large windows, and calming and relaxing colours were identified as features that improve visual connection to nature and increased positive feelings and moods. The study, the first in a series of waiting room studies in Nigeria, provides valuable insights that can be useful for designing waiting areas in healthcare facilities. It also has the potential for fostering comfortable waiting areas for the wellbeing of patients and users in healthcare environments.

Keywords: Healthcare Environments, Patients, Therapeutic Features, Views of Nature, Waiting Areas

Introduction

Waiting areas are important healthcare spaces that can impact the patient experience. Waiting in healthcare settings is an aspect of the "servicescape" in which patients' and staff interact, and healthcare services are provided [1]. According to Pati and Nanda, wait times are unpredictable, and make less for a less pleasant hospital experience for patients and families [2]. In addition, waiting area can influence service users' perceptions of the quality of care, as well as their satisfaction health outcomes [3]. Patients and their families spend time in hospital waiting areas before receiving treatments. Mark observes that many patients find hospital visits very stressful, and encounters in the waiting rooms are marked by uncertainty, fear, and anxiety [4,5]. Patients' waiting time, and the stress that comes with it may be reduced if the waiting area is designed to emphasise the psychological benefits of therapeutic features.

Existing research suggests that waiting periods have an impact on patients' health and wellbeing [6]. Improving the physical hospital environments may lead to improved mood and satisfaction among patients and families [7]. Furthermore, redesigning stressful events in waiting areas with therapeutic elements can promote improved mood, less stress and better wellbeing for patients and their companions. Caspari and colleagues' empirical study emphasised the importance of aesthetic surroundings in promoting patient health and wellbeing, and this aesthetic area has many different aspects that need to be considered [8].

Therapeutic healing environments have several attributes, such as nature, daylight, positive distractions, indoor greenery and plants, art images, and have received increased research attention [9,10]. Previous studies on waiting areas in hospitals have been generally inclined towards Western cultural context and have focused on different aspects of therapeutic features, and research focusing on waiting areas of hospitals

in Nigeria is important. Significant research investigations should focus in the waiting area as this is where healthcare service users' judge the quality of care and health outcomes [3].

This study was conducted to address the knowledge gap about the preferences of therapeutics features in waiting areas, particularly in the Nigerian context. Investigating the perceptions of therapeutic waiting areas and their impact on patients' stress and perceived relaxation could help to improve the wait times and satisfaction in healthcare settings.

The current study aims to determine the perceptions of therapeutic features in healthcare facility waiting areas and their effects on patients' stress and perceived relaxation levels. The study sought to answer the question: "what are the therapeutic features in waiting areas that have an impact on stress, anxiety, and perceived relaxation for patients' and their companions in the waiting areas?"

Literature Review

Healthcare facilities are regarded as one of the most stressful environments, this is especilly true for adolescents and young children patients in hospitalised settings, as well as for nurses [11,12]. The stressful tendency of healthcare facilities may be in part, experienced in waiting areas, where patients wait to access medical services. Considerations about improving the quality of environment in which healthcare is delivered gained attention, mostly with the Roger Ulrich's seminal work [13]. Ulrich found out that patients recovered faster and were less stressed when they viewed nature from their bed sides compared to patients who did not. Consequently, the theory of supportive design was proposed [14]. Ulrich posits that a supportive design enables patients to cope better with the stress of illness and hospitalisation [15]. A supportive design comprising a sense of control, social support, and positive distractions has been found to be valuable to allevate stress and foster improved health outcomes for users [14,16].

An attractive waiting area that reduces the healthcare burden can benefit both patients and staff health outcomes. A study which examined three waiting rooms using Feng Shui elements and measured their comfort levels of waiting areas and correlated them with the effects of pre-experience and expectations found that the waiting area designed with Feng Shui was rated most comfortable than the other two waiting rooms, which were rated lower, and that awareness of external environment combined with expectation significantly influences comfort for patients [17]. These findings suggest that the interiors of healthcare facilities can influence patients' health experiences. In addition, healthcare administrators and personnel, should consider the "attractiveness" of waiting areas and physical healthcare settings in order to promote a healthy and safe environment while making wait times interesting, relaxing and stress-free. The attractiveness or ambience of healthcare facilities falls under the concept of therapeutic environment, which is simply defined as a healing environment or setting that supports medical quality in the treatment of the physical body, as well as patients' psycho-social needs, all of which contribute to a patient's health outcome [18].

Positive Distractions, Connections to Nature, and Impacts on Patients and Staff Health Outcomes

Research investigations focused on positive distractions in healthcare environments are suggested to have beneficial health outcomes for patients and staff. A positive distraction is an environmental feature that induces positive feelings by diverting attention away from stressful or anxious thoughts [19]. For example, indoor nature exposure, views of nature, colour and artworks, music, and ambient scent. Within the context of waiting areas in healthcare facilities, positive distractions have been examined by previous studies. Mediums such as viewing TVs were found to be the most calming distraction for children and reduced stress in waiting areas of cardiology and dental care [2]. Existing studies which investigated pictures of nature and other nature-related distractions were found to mitigate pain and the number of times medications is required [10]. Similar study by Dijkstra et al. also found that the presence of plants in hospital rooms conferred the feeling of home and comfort in patients, which reduces stress and anxiety [20].

Connection to Nature

Views of nature, natural light and images of nature within healthcare facilities promote calm feelings and a sense of well-being for patients' staff, and significant others. According to Smith, connection to nature creates positive effects by reducing the psychological effects of stress on the nervous system, decreases sense of pain and enhances stress recovery [21]. Similarly, Ulrich found out that the nature views influences well-being of patients [14]. Pretty explained the connection between nature and health and identified three levels of engagement in which nature can influence to human health and wellbeing [22]. First, is viewing nature through a window, in a book, or in a movie; second, being in the presence of nearby nature, and third active involvement in nature through gardening or farming etc., [22]. Existing research in the intensive care unit (ICU) has also found that the natural environment had the highest restorative effect on both the physiological and psychological states of patients [23]. In general, access to greenery brings patients close to nature as a means of positive distractions, leading to reduced stress and anxiety in patients. The next section will present a review of the following elements: nature and natural elements, daylighting, and indoor landscape and green spaces.

Nature and Natural Elements

Nature has always played a significant role in creating a healing environment [24]. Research studies have found that nature has the potential to reduce negative emotions, lessen stress, and contribute to improved positive emotions [24,15]. Previous research has shown that a dosage of nature is linked to anxiety reduction in patients and family, assisting with pain management, and reducing the need for analgesics [21,13]. Moreover, evidence indicates that nature significantly contribute to improved health outcomes related to post-operative problems associated with stress [10, 14-15]. Asides the presence of real nature, paintings that portray natural scenery and sights help ameliorate tension and stress [14]. Placing of television screens in places where patients undergo painful treatments, in such a manner that they produce both visual and audio nature, has been shown to lessen discomfort [10]. Overall, views of nature, images of nature exhibited on walls, the use of natural materials, and the presence of plants in patient rooms have the potential to foster beneficial impacts for patients' and staff well-being.

Daylighting

Research evidence has suggested that adequate lighting can foster increased patients' satisfaction, and the presence of daylight reduces pain and the incidence of depression. Patients suffering from depression could have their length of stay reduced through morning daylight [10]. Daylight in patients' rooms plays a key role in the health and wellbeing of patients, aiding both recovery and rehabilitation [21]. Notably, daylight has beneficial impacts on overall patients' health since

it provides comfort on a visual and psychological level as well as pleasantness and calming effects.

Careful use of natural lighting in therapeutic settings produces vibrant, inviting, and appealing interior spaces and decreases tension and anxiety [25]. Furthermore, daylight fosters a good atmosphere, saves energy, increases occupant comfort, lessens feelings of isolation, and helps patients feel less depressed [26]. Bright artificial light has been shown to be effective in improving mood and decreasing depression [10]. Artificial lighting can also add to a visual environment; bright indirect lighting is considered to prevent glare [27]. Overall, patients and staff feel better with appropriate illumination and lighting, which promotes better health outcomes, satisfaction, and wellbeing.

Indoor Landscaping and Greenery

Bringing nature to the indoors of the hospital environment has become a frequently used approach in areas where there is minimal presence or a lack of nature in the surrounding environments. For example, existing research suggests that including indoor natural scenery, such as visual trees, greenery, and cultivated fields help in lowering anxiety and enhancing favourable therapeutic impact on patients [15]. Additionally, the presence of greenery near the bed or the view of green spaces through windows strengthens the patient's visual connection to nature and fosters an aesthetic experience that lowers stress, enhances well-being, and elevates the patient's recovery [22]. Moreover, the presence of indoor plants and gardens in healing environments enhances patients' quality of life and can motivate them to engage in outdoor exercise [28].

Art

This study was a quantitative research, utilising a survey questionnaire for data collection. The study population consisted all eligible patients, families or visitors who were found sitting or standing in the waiting areas of the selected hospitals. The two hospitals for the study were located in the Federal Capital Territory (FCT), Abuja, Nigeria.

Materials and Methods

This study was a quantitative research, utilising a survey questionnaire for data collection. The study population consisted all eligible patients, families or visitors who were found sitting or standing in the waiting areas of the selected hospitals. The two hospitals for the study were located in the Federal Capital Territory (FCT), Abuja, Nigeria.

Participants

The study was conducted with the cooperation of the patients, families or visitors who were present in the waiting areas of the selected hospitals. In total, the participants included 16 males and 44 females. Out of this number, 45 were patients, seven were their friends, and eight were family members. The participants' ages range from 15 to 59 years. Figure 1 shows that 16 of the participants were between the ages of 15 to 29, 40 were between the ages of 30 and 44, and only four were between the ages of 45 and 59.

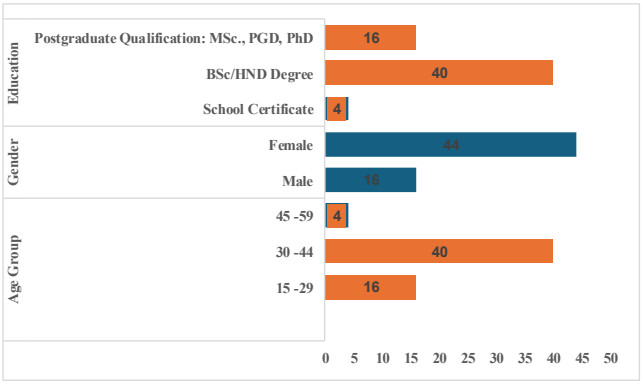


Figure 1: Participants Characteristics by Gender, Age, and by Education Qualification

Measure

The authors created and validated a structured questionnaire for data collection before proceeding to hospitals to meet the participants. The survey questions were written in simple and direct English that the participants could easily understand. After receiving explanations on the purpose of the present study, participants were asked to imagine features that could be used in the waiting areas that could reduce stress for patients', increase perceived relaxation and improve hospital experiences. The participants were then given a survey questionnaire to complete. A total of sixty (60) participated and filled out the survey. The participants responded to each survey item on a 5-point Likert scale ranging from "1 = Not at allimportant" to "5 = Very important". Similarly, some questions were presented in a form that asked participants to ranked them on a "agree or disagree" basis. Similarly, the options prompt is anchored at "1 = strongly disagree" and "5 = strongly agree".
Table 1 shows the details of the participants characteristics.

Table 1: Participants' Characteristics

Characteristics/Age	15-29 Years	30-44 Years	45-59 Years	Total
Sex		N		N (%)
Male	6	8	2	16(26.7)
Female	10	32	2	44(73.3)
Patients	13	25	7	45(75)
Family members	2	5	1	8(13.3)
Friends	1	4	2	7(11.7)
Education Levels				
Secondary School Leaving Cert	2	2	-	4(6.7)
Bsc/HND degree	6	30	4	40(66.7)
Masters, PGD/PhD	1	12	3	16(26.7)

Survey Procedure

The survey was administered to the participants through pen-and-paper based approach from 15 to 20 November 2022. Administering the survey questionnaire to participants using the traditional approach while they fill the survey is an approach widely employed before the emergence of the internet-based surveys [32,33]. According to research evidence, there are no significant differences in how traditionally based questionnaires were answered versus internet-based questionnaires [34]. Therefore, paper-based approach is an effective method for reaching out to the hard-to-reach population, especially when

access and time are limited. Overall, 60 participants filled out the survey questionnaires and returned them.

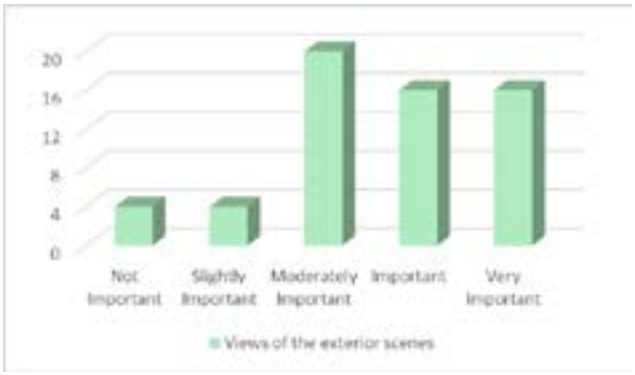
Method of Data Analysis

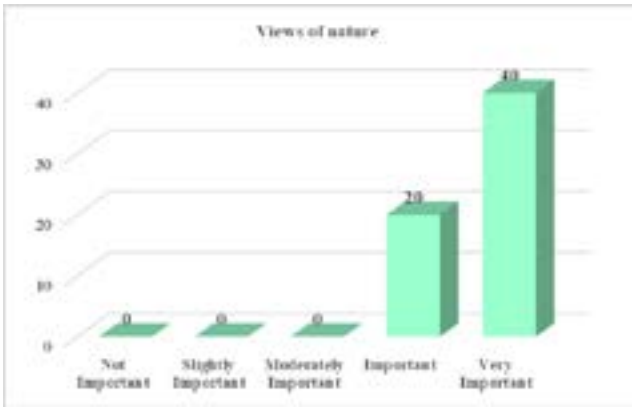
Descriptive analyses were performed on the responses on the perceptions of therapeutic features of hospital waiting areas. Completed surveys were exported into Microsoft Excel and analysed using SPSS version 24 and Excel. Relative importance index was derived following calculations of the means and weighted means scores from the survey data. This paper reports the first initial findings in a series of waiting rooms studies related to features of the therapeutic waiting areas from the Nigerian context. Subsequent findings would be discussed in another publication.

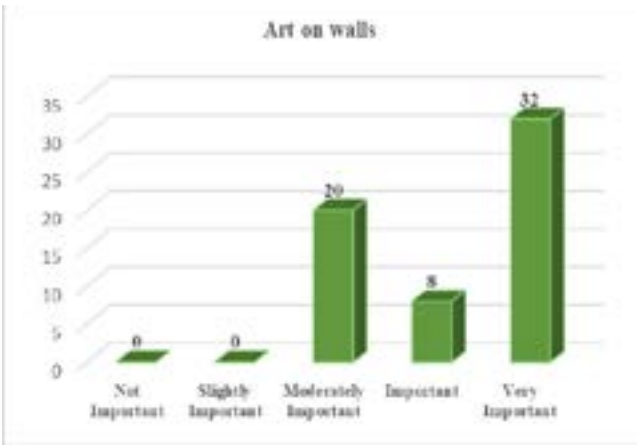
Results

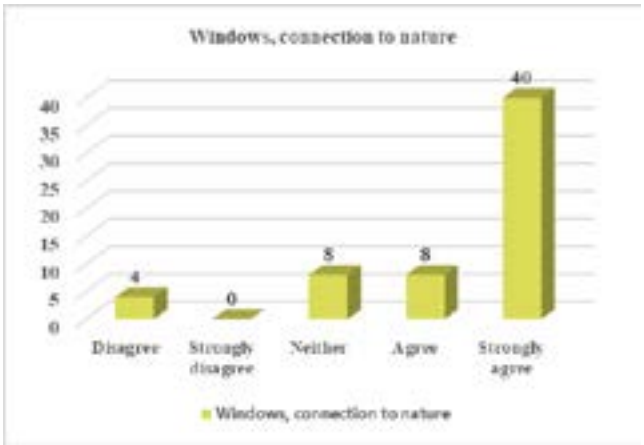
The descriptive statistics of the ratings of the perceptions of the features of therapeutic waiting areas are illustrated from Figures 1 to 6 and from Figures 8 to 15.

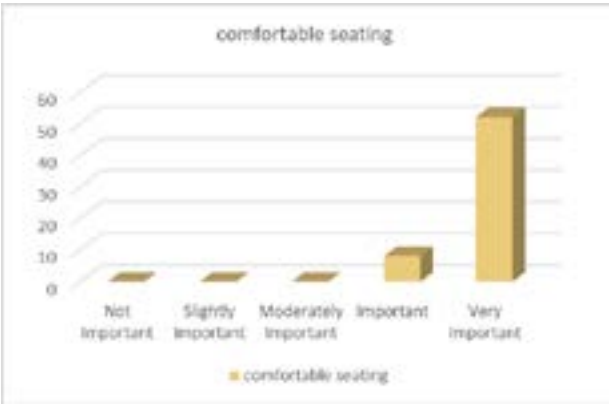
In addition, Table 2 shows the preference ratings of therapeutic waiting areas with their calculated weighted mean scores, indicating the important index for the perceptions of the therapeutic design features for hospital waiting areas. As can be seen from Table 2, the presence of comfortable furniture for seating in a waiting area was ranked the topmost with a weighted mean score of (M = 4.87). Not surprisingly, "views of nature" was ranked second with a weighted mean score of (M = 4.70), while unit design of waiting areas was ranked the third highest with a weighted mean score of (M = 4.67).

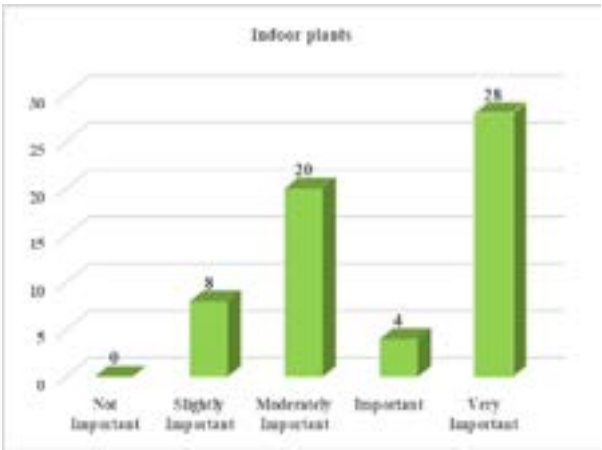












Figures 1-6: Descriptive Statistics of the Ratings of the

Perceptions of Therapeutic Features

Furthermore, a significant observation of the results indicates that many of the items were also ranked very high, with a weighted mean score of 4 and above. This suggests the therapeutic importance of the design elements in stress reduction for patients and their companions. These items include "images of nature has a calming effect on moods" (M = 4.6), "presence of greenery around a waiting area helps reduce patients stress and anxiety" (M = 4.53) as well as "large windows from waiting area fosters visual connection to nature (M = 4.4).

Table 2: Participants Ratings of the Perceptions on Therapeutic Features on Stress and Perceived Relaxation

Perceived Relaxation				
S/N	**Survey item**	**Total**	**Important index**	**Rank**
1	Provision of comfortable seating in the waiting area/ room	292	4.87	1st
2	Views of nature; scenes, gardens, or flowers	282	4.7	2nd
3	Well-designed waiting area contributes to patients and their family comfort	280	4.67	3rd
4	Images of nature have a calming effect on mood	276	4.6	4th
5	Presence of greenery around a waiting area helps reduce patients' stress and anxiety	272	4.53	5th
6	Large windows foster visual connection to nature	264	4.4	6th
7	Nature-rich surroundings foster patients' hospital experience	264	4.4	6th
8	Material and type of furniture in the waiting area enhance relaxation	264	4.4	6th
9	Daylight entering a waiting area helps reduce stress	256	4.3	9th
10	Calming colours (green, yellow) promote positive moods	260	4.3	9th
11	Presence of TVs screens fosters positive distractions for patients and users	252	4.2	11th
12	Wall decorations with art and nature images	252	4.2	11th
13	Presence of waterscape has a soothing effect on patients	236	3.93	13th
14	Provision of indoor plants in waiting areas	232	3.87	14th
15	Views to the outdoor scenery from the windows	222	3.7	15th

Similarly, three therapeutic features in the survey items had the same mean score of 4.4; 'large wicndows foster visual connection to nature", "nature rich surroundings foster positive hospital experience", and "material and type of furniture in the waiting area". Additionally, "daylight entering the interiors of waiting areas" and "calming colours promote positve moods" were ranked similarly (M= 4.3). These three environmental features have links with feelings, emotional wellbeing, and the potential to alleviate stress in hospital environments.

Almost all the survey items, with the exceptions of "presence of waterscape (such as aquariums, water bodies) has a soothing effects on patients" (M = 3.93), and "views to the outdoor scenery from the windows" (M = 3.7) were ranked 4 and above (see Figure 2). The presence of waterscape was ranked a bit lower compared to other environmental design features. First, a plausible explanation for these results on aspect of waterscape was that hardly could waterscape or a mimicking water fountain be found in Nigeria healthcare facilities. The participants may likely to have reasoned that that was a lofty goal to pursue. Second, responses regarding views to the outdoor scenery, was somewhat low, in part, due to a relatively sparse vegetation and lack of inviting surroundings in the selected hospitals. Even though the participants ranked this feature as important (M = 3.7), it is likely that there was little conviction that the outdoors could be improved to provide a better therapeutic waiting experience. Figure 7 shows the summary of the topmost therapeutic features for hospital waiting areas that are likely beneficial to reduce stress and anxiety, foster improved mood and relaxation levels.

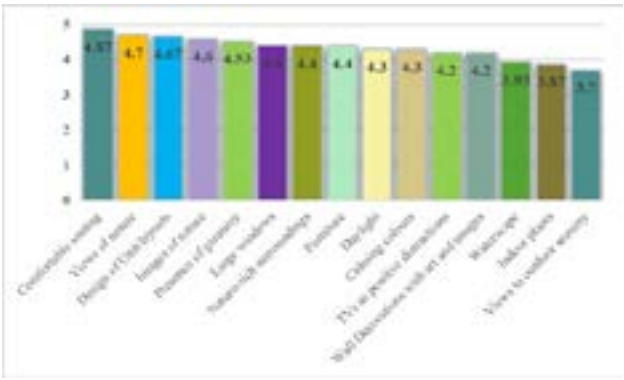
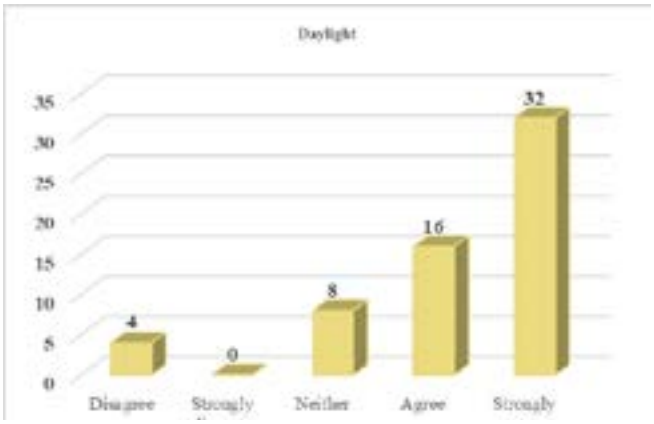
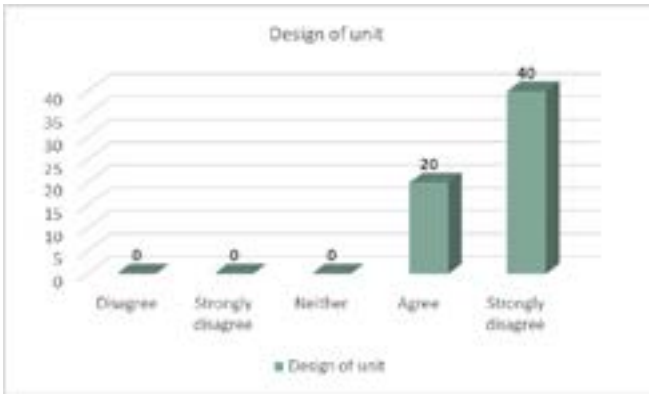
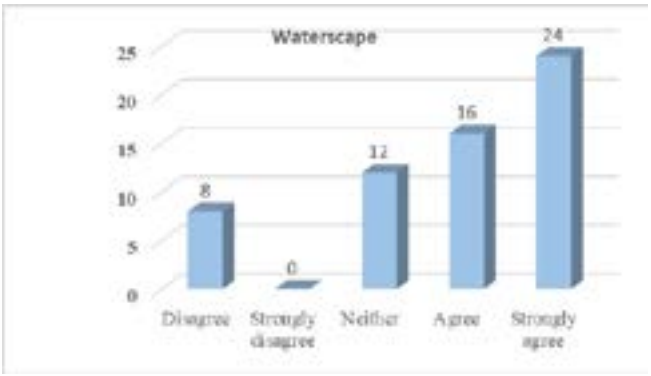
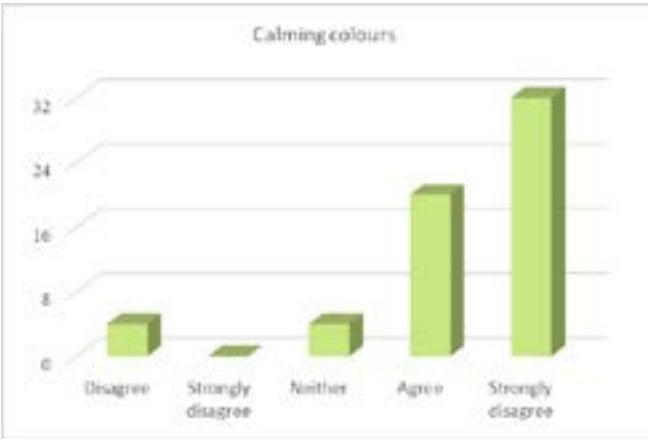


Figure 7: Relative Important Index of Perceptions of Therapeutic Features in Waiting Areas

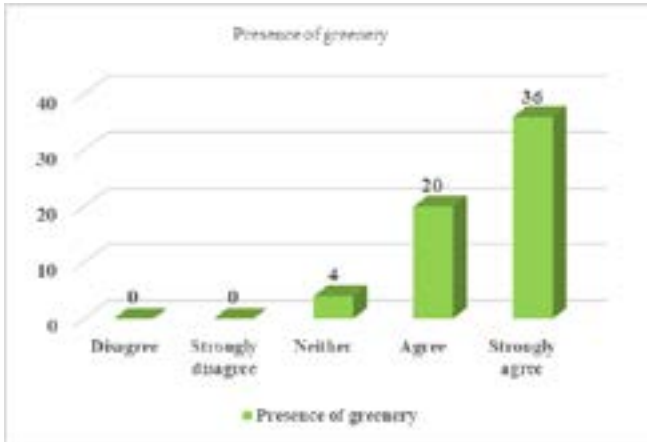


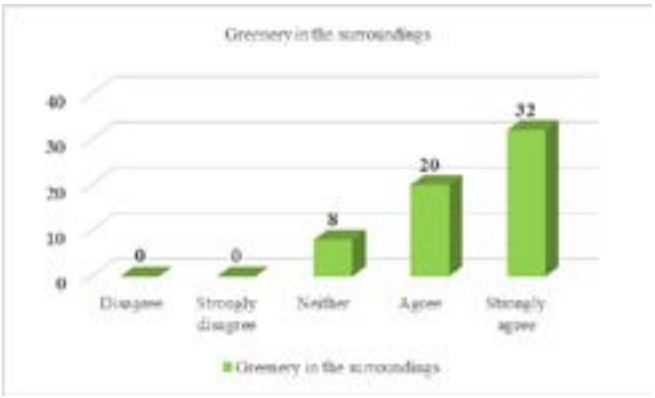


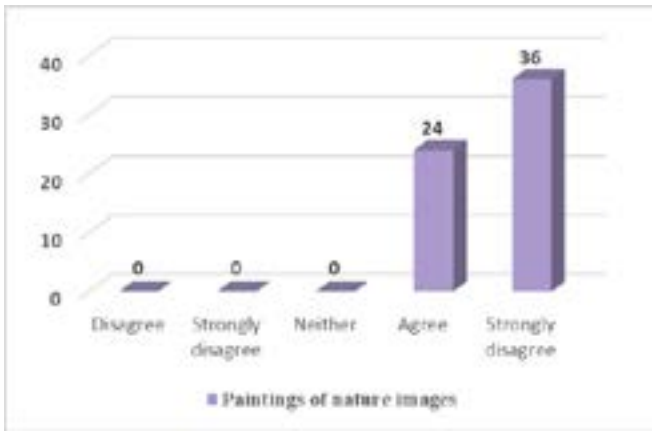


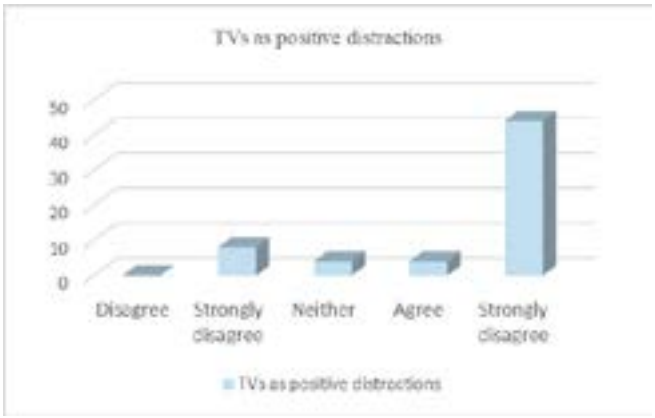


Figures 8-13: Descriptive Statistics of The Ratings of The Perceptions of Therapeutic Features









Figures 14-15: Descriptive Statistics of The Ratings of The Perceptions of Therapeutic Features

Discussion

Previous research has shown that healing and therapeutic environments are beneficial to patients, staff and healthcare users, by reducing stress and anxiety levels, promoting positive mood and fostering restoration and wellbeing. The current study found a range of therapeutic environmental features in waiting areas can help to promote psychological wellness and perceived relaxation for stressed patients. A large number of participants preferred comfortable seating, allowing patients and their companions to relax while waiting for medical personnel. Inadequate seating in the waiting area can be frustrating, and cause stress and anxiety for patients who are already stressed and weak as a result of illness. A study conducted in the waiting area of one Chinese healthcare setting found that the size of the waiting area, including seating had a significant impact on patients' hospital waiting experiences of patients [35].

Additionally, a well-designed layout/unit, which contributes

to patients and family comfort, was found to be an important feature for hospital waiting experience in the present study. Qi et al. conducted an evidence-based study of appropriate waiting environments in three paediatric clinics [36]. Their study found that optimising the design of waiting area in paediatric clinics, with a focus on functional layout, had a significant positive impact on satisfaction. Moreover, a study focused on affective design of waiting rooms in six primary health centres in Sweden found that the most desired feeling in the interiors is "calm," with design attributes such as good seating arrangements, colour and greening contributing to the feeling [37].

Furthermore, views of nature, including greenery and natural surroundings were thought to have therapeutic benefits. The health benefits of nature have been extensively studied in a variety of settings, including a hospitalisation setting such as in post-surgical wards, residential rehabilitation centres, urban natural environments, and hospital's waiting areas [13,38-40]. All these studies confirmed the beneficial effects of nature on stress reduction, positive feelings, and psychological wellbeing. Thus, these findings lend support to the beneficial effects of green spaces and nature.

The findings regarding nature-rich surroundings in waiting areas were confirmed in a study that exposed patients to an unobstructed bedroom view of natural surroundings. The study found that having an unobstructed view of the natural surroundings improved self-reported physical health during rehabilitation [40]. Furthermore, a study that assigned employees to a post-surgical unit of a large hospital, found that the majority of staff with limited contact to outdoor nature have limited ability to reduce stress through nature contact exposures, which impact their perceived levels of work stress and health outcomes for staff who were assigned to the post-surgical unit [38]. The present study found that images of nature have a calming effect on mood, and greenery around a waiting area contributes to decreased stress and perceived reduced anxiety for patients and companions.

In terms of daylight, Heldi et al. concluded in their review that daylight has been associated with improved recovery rates, alleviated pain, improved mood and reduced need for analgesia for patients [41]. For the employees, the benefits of daylight included fewer errors, less fatigue, and higher job satisfaction. The current's study findings indicate that daylight through windows reduce stress. In addition, calming colours in waiting areas promote positive feeling for patients and companions. However, existing research on colours is diverse, spanning gender, age demographics, and settings, suggesting that preferences can vary based on contexts [42-44].

Positive distractions in a healthcare setting can improve patients' mood and wellbeing by making them feel more relaxed. Pati and Nanda used a plasma TV screen to introduce five distraction conditions in the waiting area of dental and cardiac clinics of a paediatric hospital, and they assessed attention, behaviour and activities of the children [2]. Their study revealed that distraction conditions were significantly associated with more calm behaviour. Additionally, Jiang's study of positive distractions and play opportunities in paediatric healthcare environments also identified themes of positive distractions, such as art and environmental aesthetics, sound and lighting, access to nature among others [19]. The author concluded that positive distractions help to improve behavioural and emotional wellbeing, reduced stress and anxiety, and enhanced healthcare experience and satisfaction. Previous research has found that exposure to art in healthcare settings reduced anxiety and depression, and art when carefully considered can promote wellbeing [45]. The present study similarly showed that positive distractions using TVs display screens, and art were perceived to provide significant positive distractions in waiting areas.

Conclusions

This study examined the perceptions of therapeutic features of healthcare facility waiting areas and their effects on patients' stress and perceived relaxation levels. The findings generally indicated that providing comfortable seating in waiting areas, views of nature, including a well-designed unit layouts in waiting areas had a significant impact on patients' stress and perceived relaxation levels. The findings also demonstrate that having large windows, with views of nature greenery, and nature-rich surroundings helps to foster visual connection of patients' and companions to nature and the outdoors, thereby improving the patients' hospital experiences in waiting areas.

The study's findings provide insights and strategies for architects and designers in creating a more welcoming and inviting waiting environments, thereby improving the emotional wellbeing of patients and their companions. The findings also have implications for healthcare managers' awareness of features in waiting areas that can benefit patients by improving the physical environment and lowering stress associated with healthcare settings. Further research might investigate individual therapeutic elements in healthcare waiting areas and how they affect patients' stress, anxiety and perceived relaxation.

Author Contributions

The first author did the conceptualisation; the writing - original draft preparation. The second author did the review, the third author did initial data analysis, while the last author did data collection. The first author did data curation, editing and organised the final manuscript. All authors have read and agreed to the published version of the manuscript.

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Data Availability Statement

The data is available from the corresponding author on reasonable request.

Conflicts of Interest

The authors declare no conflicts of interest.

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