

The opinions of others regarding the design of the gardens of the Imam Al-Sadiq General Hospital in Hillah / Babylon

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Abstract

This research was conducted to study the importance of patients' opinions in garden design, Imam Al-Sadiq General Hospital / Hilla City - Babylon province. The study was conducted in two phases:

The first stage: - The theoretical study and included a presentation of the most important studies and research related to the subject of the study.

The second stage: - Field study and included (description of the current site and questionnaire).

The results were that (82.1%) of the respondents think that the hospital location is not appropriate, and that (98.5%) of the respondents prefer having gardens in the hospital, and that (68.7%) of the respondents believe that the gardens in the hospital help the speed of recovery.

أهمية آراء المرضى في تصميم حدائق مستشفى الامام الصادق (ع) العام في مدينة الحلة /بابل

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الخلاصة

أُجري هذا البحث لدراسة أهمية آراء المرضى في تصميم الحدائق مستشفى الامام الصادق (ع) العام/مدينة الحلة - محافظة بابل . وقد أُجريت الدراسة على مرحلتين :-

المرحلة الأولى :- الدراسة النظرية وشملت عرض لأهم الدراسات والبحوث ذات العلاقة بموضوع الدراسة .

المرحلة الثانية :- الدراسة الميدانية وشملت (وصف الموقع الحالي والاستبيان) .

وكانت النتائج إن (82.1 %) من المبحوثين يرون أن موقع المستشفى غير مناسب ، وأن (98.5%) من المبحوثين يفضلون وجود الحدائق في المستشفى ، وإن (68.7%) من المبحوثين أن الحدائق في المستشفى تساعد على سرعة التعافي .

Introduction

Health care is one of the important services that countries provide to their people due to its importance in building healthy individuals. This is reflected positively on their mental and physical performance, and thus they contribute effectively to building and developing their countries. The budgets that countries allocate for health care have become a measure of countries 'development and progress. Historians have mentioned that humans began

to be interested in gardens and natural places since ancient times as a place for healing and treatment. This interest has continued throughout the past years, despite some periods when interest in the gardens decreased. During the twentieth century, the advent of complementary and alternative medicine, and researchers began to study the effect of gardens and natural places on the healing of patients, and they reached important results in this field. Nowadays, gardens have become an important part of the hospital. Hospitals and health care

facilities are relatively unpleasant places for a person to reside in, regardless of his physical condition. These places often expose people to a high degree of tension and psychological pressure from anxiety in their families. Therefore, many studies and research have been conducted on the design, style and design standards of hospital gardens to reach the required results in reducing the severity of stress and anxiety of patients and visitors at the lowest cost to reach a full recovery. The patient has had an important role in designing hospital gardens, through knowing their opinions, requirements and desires, in order to contribute positively to achieving a complete recovery and reducing the period of their stay in the hospital after treatment. As for Iraq and some other countries, government officials in this sector and many of their employees do not care about hospital gardens and their healing importance, so they are designed as any garden or other park without taking into consideration the design and planning considerations for gardens. In Iraq and Hilla in particular, hospital gardens suffer from great neglect of gardens due to their lack of knowledge of the important role of gardens in healing the patient, due to the lack of sufficient cadre of agricultural engineers and also the lack of allocations to the gardens, which may be to exploit the spaces allocated for the gardens to expand the construction of new buildings.

Research problem

Although the studies indicated that the first healing gardens originated in Mesopotamia, this aspect is neglected in the Iraqi hospital gardens. The problematic of the research lies in the absence of the healing role of the gardens within the general planning of hospitals in Iraq. As the gardens, if any, are in small areas that do not match the number of hospital users. Any urban expansion takes place at the expense of garden areas, in addition to their design, not by people specializing in this field, at a time when garden design in the developed world needs a comprehensive cadre that includes various specialties in addition to the participation of hospital users. Most hospital gardens, if any,

are random, neglected, and not designed according to the international planning and design standards of hospital gardens. The previously designed and newly designed hospitals do not take into account the spaces allocated for the gardens to provide a suitable environment for the users of the parks and the important events that must be provided. And not taking the patients' opinion in the design of the hospital gardens and benefiting from their suggestions in a way that suits their needs.

Research aims

1. Designing the gardens of Imam Al-Sadiq (PBUH) General Hospital in accordance with the internationally approved design standards for hospital gardens in terms of providing the necessary and appropriate activities for hospital gardens that meet the desires and requirements of patients, so that they have a positive psychological effect on patients and relieve the medical staff from the trouble of work and provide visitors and reviewers with places Suitable for sitting, waiting and serving them.
2. Developing social relationships between patients with each other.
3. Reducing anxiety and stress and reducing depression in patients by interacting with nature and avoiding the internal hospital environment.
4. Involving patients in garden design by taking their opinion and knowing their desires by involving them in garden design and this helps to enhance the healing role of gardens.

Research method and structure, including:

The first stage: the theoretical study, which includes the following:

Definition and concept of healing gardens

Healing gardens, according to Ulrich (2002), that these gardens are used for treatment and recreation purposes and were used in ancient times, but now they are used in hospitals, nursing homes and rehabilitation centers to include various activities, the importance of this

type of gardens lies in the positive effect on the patient's psyche and health. Other definitions of it were mentioned (as gardens are designed in special forms to meet the physical, psychological, social and spiritual needs of their users so that they have a curative and curative effect as well as benefit those in charge of caring for patients, their family members and friends from the benefit of their caregivers, members of their families and friends, Hospital gardens are designed as specialized gardens with a complete treatment program or as part of a medical treatment program (Hilal and Al-Qusaybati, 2013). It can be said that this type of gardens is specialized to perform a treatment program by giving special attention to the needs of hospital users with the addition of healing features, where they are characterized by stimulating Senses, improve the immune response, promote physical and psychological recovery from illness, give a feeling of energy, Giving a sense of the ability to overcome the disease. It also reduces stress, keeps the patient in a state of psychological balance, adapts the patient to the disease, relieves workers of work pressures and provides a welcoming place for visitors, (Marcus, 2005 and El Barmeigy, 2013).

Second: The concept of healing gardens, according to Marghani's interpretation (2015), is that it is part of a group of material and psychological factors that stimulate what is known as self-healing resulting from reducing tension and psychological pressures on the patient through his presence in a homogeneous environment in which treatment and psychological comfort interact to provide an opportunity for psychological support to the patient To overtake the disease.

Third: definitions of healing gardens, as shown below:

Ulrich (1986) knew that any healing garden could function as a healing garden.

- Eckrling (1996) defines a healing garden as the garden that aims to make its users feel better

and safer, reduce stress, and make them more active (Gharipour and Zimring, 2005).

- Faba (2002) defined that a healing garden is the right place to relieve pressure on health care home users by using a variety of natural elements with a specific design for the garden, which helps restore physical, mental and psychological health, Momtaz (2017).

- Defined Stark (2004), is a park that enables its users to reach higher levels of spiritual strength through the presence of a simple space or is a miniature model of the larger world. These gardens should be able to stimulate the senses, improve response to treatment and encourage relaxation.

The importance of gardens in healing the sick

The natural environment is considered one of the most important sources of healing in history, where many people escape from routine life by spending the most time in natural places to obtain physical, spiritual and mental healing. This appears in studies conducted by Marx ((1968 and Williams 1973)) that show the healing power of rural life compared to the stressful city life and places that contain natural elements such as sunlight, fresh air, natural water and green plants give a calming effect to people. The importance of gardens lies in healing the sick through the benefits they provide, which are:

1. Physical benefits: It lies in enhancing physical health, improving the immune response, and reducing stress and tension on patients (Hilal and Al-Qibsati, 2013). Research and scientific studies have shown that interacting with nature has a positive effect on the patient's feeling of calm and the ability to recover, such as a positive effect. On blood pressure, cholesterol levels and reducing stress level, (Yücel, 2013).

2. Psychological benefits: The psychological benefits lie in an increase in the feeling of confidence, control, and stability, an increase in

the feeling of contentment and calm, an improvement in mood, and a reduction of stress. The patient's ability to choose between enjoying privacy or interacting with groups may positively affect his recovery, as the rigor of the hospital system in time and activities can generate a negative impact on the patient such as loss of self-esteem, lack of self-confidence, loss of a sense of control or a feeling of stress and tension (Hilal and Al-Qusaibati, 2013 and Yücel, 2013).

3. Social benefits: Everyone, regardless of age or illness, needs entertainment and social support. The social benefits lie in developing social relationships and increasing social interaction. As participation in social activities is an effective method of treatment, Studies have shown that patients who have strong social ties are less stressed and healthier, which positively affects treatment than isolated people. Evidence indicates that it helps significantly to increase social support for patients, their families, and staff (Marcus and Barnes, 1995).

- Tariq (2018) summarized the history of hospital gardens development in Table 1 as follows:

Nature of use	Time period
Use gardens in ancient civilizations such as Mesopotamia, Egyptian civilization, Persian, Japanese, Romanian, Greek civilizations and others	Ancient Civilizations
The use of outdoor gardens for patients in places of worship such as monasteries and others	Middle Ages
<ul style="list-style-type: none"> • The emergence of large hospitals. • The hospital building surrounds a central courtyard that is used to provide ventilation and natural lighting, in addition to exercise. 	Renaissance century 17th and 18th
<ul style="list-style-type: none"> • The emergence of pavilion-style hospitals in hospitals to provide ventilation and natural lighting, which positively affects health. • • Using external gardens to help the patient heal. 	Mid-19th century and early 20th century
<ul style="list-style-type: none"> • The emergence of high-rise, mega hospitals. • • Focus on job competence. • • Lack of interest in outdoor spaces and their use as car parks. 	Mid 20th century
<p>The orientation towards establishing a patient-centered Care for the following reasons:</p> <ul style="list-style-type: none"> • Negative reactions to the functional environment of hospitals, so designers began to search for comfortable environments for patients and workers. • Pay attention to the patient's needs. <p>Hospitals are gradually transforming into a welcoming environment.</p> <ul style="list-style-type: none"> • • Pressures from workers to use external spaces for therapeutic spaces. 	End of the 20th century until now

* We conclude from the foregoing healing gardens that have undergone variable periods between neglect and recovery depending on scientific progress and material conditions ...

etc., and at the present time they have become an important component in hospitals due to their multiple importance.

Design standards for hospital gardens

The well-designed hospital garden provides a pleasant and beautiful view, and reduces stress, tension and anxiety that arise in this environment, as it improves therapeutic outcomes by promoting social communication, providing privacy and providing opportunities to get rid of stressful treatment conditions (Marcus, 1995 and Ulrich, 1999), and the planning of the external spaces for hospitals depends on their design standards and this must be done through the availability of sufficient information at an early stage on the site to develop the basic concepts in order to create an external space in the hospital (Nedučín et al. 2010), and when establishing the gardens of the care facility There are several important issues that must be taken into consideration, namely:

The garden location in the hospital

When designing a hospital garden, the focus should be on location, accessibility, and patient needs and priorities (Stigsdotte et al. 2003 and Epstein 2006). Nedučín et al. (2010) mentioned, When planning the external spaces of the hospital, there are many issues that must be taken into consideration such as: - Environmental factors, which include (direction - solar radiation - wind direction - looking direction) and distance from (pollution - noise in urban areas - garden lots - Mechanical systems and machinery), the physical components of the health complex, pathways, access points, and the various needs of users, ... etc., as a sound decision in implementing these factors may generally enhance obtaining the greatest value for the external space in the hospital.

Paths

The main purpose of the paths in the gardens is to connect the parts of the garden with each other, they are considered the arteries of movement in the garden, and the paths vary in length and width according to the area of the garden and the purpose of its creation and use, (Hoozooz, 2011).

Paths in parks must perform the following main functions:

- Connecting sections of the garden.
- Directing visitor traffic.
- Contribute to securing places for seating in green areas.
- Separation of different functional areas.

In hospitals, Paths have special specifications and standards that differ from other types of parks. Usually, the main roads and Paths in hospitals lead directly to the user entering from one entrance to another and direct him quickly to the desired point of course, this technology provides fast movement and a clear view through the garden, but this is not desirable, and this situation may sometimes be undesirable in hospitals for reasons of privacy. In order to create a place that will make a big difference from the outside world, it is necessary to make the visitor, patient, or any user of the garden inside the hospital to spend some time and pass on every part of it, and this is achieved through curved paths as well as helping him to feel that it is a natural area 2017 and <http://www.healing>). When designing Paths in the gardens of a health care facility, the following things should be emphasized

- It should be borne in mind that some users may suffer from movement problems during recovery, or that the patient may need medical assistance at a certain stage of his visit to the park. It is, therefore, necessary to have large enough corridors throughout the garden.
- The width of the Paths shall be at least 1.5 m (Extension. Umn. Edu, 2017). Furgeson (2012) mentioned, when the one-way traffic roads are at least 1.5 m wide, to allow a complete circle for the wheelchair, but when the two-way traffic roads are at least 2.1 m wide. As stated by Yücel (2013), the paths used in the hospital gardens should be wide enough to accommodate two chairs, with a minimum of (6 feet) equivalent to (185 cm).

- Handrails and wheelchair rails must be positioned to prevent falls when surface levels change in Paths.
- Special attention should be given when designing Paths, in terms of Paths surfaces and the materials used when constructing them. The Paths surfaces should be easy and spacious. Where it is possible to use materials and surfaces that prevent slipping.
- The paving surface must be smooth enough, to be used easily when using wheelchairs, because slotted paver is not suitable for them (Yücel, 2013 and Momtaz, 2017, <http://www.healing>).

Water elements

Water is the second most important element in landscaping after plants. Water is an essential element in the garden. small pools and fountains can provide a sense of relaxation and enjoyment for hospital users. Hearing the sound of a fountain, seeing fish in the pond, or the rays of the sun reflected in the water can be meaningful to patients. The water stream greatly reduces the noise of the disturbing mechanisms in street gardens and squares, and the sound of running water, in particular, can block or reduce external noise and other sounds that negatively affect the therapeutic value of the outer space. The water and the little creatures it contains will create a feeling that you are closer to nature. Additionally, seeing a stream of water can reduce stress, anxiety, and thinking. The function of the water may be that it gives an appearance similar to nature. In addition to its importance, by modifying the local climate of the regions in which it is located, it works to reduce its temperature and raise its relative humidity. Water from plants is characterized by modifying the microclimate of the regions in which it is located, (Yücel, 2013 and Shura, 2016).

Parking area

Kunders (2008) stated that the parking spaces should be sufficient to accommodate the cars of

all users, be the medical staff, employees, auditors, visitors, and even some patients. The parking spaces for patients, especially those with disabilities, should be as close as possible to the entrances in the hospital. Also, patients and visitors are not used to being hospitalized before, so it is difficult for them to know where the parking is. This problem can be solved by placing indicative signs in clear places indicating the required location in the hospital, (International Parking Institute, 2009).

Site furniture

This term refers to several free-standing elements such as seating seats, receptacles, lighting and signage, which should be chosen to meet the needs of the users. These elements must be fixed on concrete pallets so that they cannot be moved or tampered with. (Epstein, 2006 & Main & Hannah, 2010), and in general, every material should be chosen carefully. Materials that are harmful to garden users should be avoided and are compatible with each other. It is important to maintain a balance in choosing colors and shapes and try to mix them with each other. If there is no variety, the result can be boring. On the other hand, if there is a lot of colors and elements used in it, it may give the garden a severe and confusing perception, <http://www.healing.com>.

Seating

Seating is one of the important things in the garden, and its presence is still one of the aspects of the garden, in which garden users sit, rest and relax, and then enjoy the beauty of the garden when waiting in the hospital gardens. When choosing seats for patients, the health and physical condition of the patients must be taken into account, where the healing park should contain a lot of seating seats in different shapes, and it is preferable that the seats are covered or under trees so that they can stay in the garden for a longer period, (Verderber and Refuerzo, 2006 and Momtaz , 2017), While Shackell and Walte (2012) also mentioned that hospital seating seats must have special

specifications, for example, the seating base is (20-45 cm) wide, and the sides may range from a height of (35 cm) for a child and (60-75 cm).) For a visitor or more for those who cannot bend easily .Where the materials used for the seats must not retain heat or cold, so wood or hard plastic is preferred.

Lighting

The main purpose of lighting is to enhance safety and security, where the lights on stairs, corridors or ramps increase safety and prevent falls, and it is necessary to specify lighting for parking areas, entry Paths and services, as well as attention to lighting isolated and dark areas. It gives an aesthetic to the garden during the night, especially when the patient watches from the window of his room when looking at the garden at night, and the lighting must be installed along the pedestrian paths at an appropriate height, where faces can be seen and recognized, and an additional advantage of night lighting is that it allows the safe use of the gardens at night and viewing The garden from the inside and illuminating isolated and dark areas, (Marcus and Barnes, 1995).

Signage

This element is considered one of the most important elements that can be used inside and outside buildings and between different buildings. Its importance lies in its being the main element of the process of perception of the way, and it is specialized in the process of inference of different places. The well-designed level of strategically placed index panels can reduce the loss between corridors of outdoor spaces in the hospital, which is one of the main sources of frustration among patients and visitors, Miller and Lewis, 1999).

Receptacles

The location of garbage containers should be considered an essential component of health care facility planning, as they are used to easily dispose of food and paper and plastic products from inside the hospital. The number of vessels

required depends on the number of hospital users.As well as how often it is emptied; Garbage containers should be in all areas that pass the transition phase from one place to another, such as doors, building entrances, access points to car parks, social spaces and walkways. And to provide a less disturbing environment. Containers should be placed at least 3.6 m from where people tend to sit or socialize (Main and Hannah, 2010).

Gateways and Entrances

Gateways and Entrances welcome all hospital users, so the following must be observed:

- Tagging function to find their way around the site.
- The main entrance must logically be accessed through the most direct path.
- Entrances should be wide enough to accommodate people with special requirements. As for people with visual impairments, the entrances and gates can be somewhat different.
- Tactile elements should indicate entrances and doors.
- Entrances should contain seating for people waiting in the hospital (Marcus, 1997, Main and Hannah, 2010 and Shackell and Walte, 2012).

(<http://www.health.gld.gov.au/cwamb/agedguide/13037.pdf>)

Active activities are beneficial psychologically and physically, because they improve the patient's cardiovascular health and reduce stress, depression and anxiety. In addition, physical therapy and rehabilitation centers in the natural environment may improve the positive results of many medical treatments. The majority of patients during their stay in the hospital are constantly subjected to a difficult and strict discipline, so they often suffer from a loss of self-esteem or control of their lives. so, Activities may be positive, providing them with great privacy and social interaction, (Nedučin et

al. 2010 and Momtaz, 2017). Marcus (2007) mentioned that there is a wide range of curative garden-related activities that may be negative or positive: such as watching and looking at the garden, sitting, eating, taking a nap in the garden, praying and meditating, walking to favourite places, gardening (growing plants), Doing exercises. The activities that will take place in the gardens of the healthcare facility is a topic that can be discussed with patients who are recovering and any garden user at that facility. However, the following activities may be considered essential in a hospital park: -

- Exercise.
- Walk around in the park.
- Sit in the garden.
- Social support.
- View the grading .
- The practice of horticultural activities, (Marcus, 2007).

The second phase: an overview of the Imam Al-Sadiq General Hospital with the field study. Development of the proposed design for the gardens of the building of the corridor in the Imam Al-Sadiq General Hospital

First: The stage of a comprehensive field survey of the site and an analysis of the site's physical components

A case study of Al-Sadiq General Hospital in Hilla - Babylon

The aim of choosing Imam Al-Sadiq General Hospital to be the case of the study because it is one of the largest hospitals in the city of Hilla to treat all diseases and therefore must have the latest treatment methods. The Imam Al-Sadiq General Hospital has the main medical specialties ,As Al-Sadiq Hospital covers its services in Babylon province, its districts and sub-districts, and the province close to it, in normal cases and emergencies, and this hospital is considered the first in Iraq in terms of capacity and advanced devices. It helps speed recovery and has good green areas) to create an atmosphere of calm and comfort for hospital

users. Studies are carried out for Imam Al-Sadiq General Hospital, and surveys and field studies were conducted through field surveys, personal interviews and questionnaires to extract and derive the most important needs of patients, as in Figure (1).

General site of Al-Sadiq General Hospital

First: Al-Sadiq General Hospital is located in the Hilla city, Babylon province , which is located to the south of the capital, Baghdad, about 100 km away from it. Babylon is considered strategic because it connects the capital, Baghdad, with the southern provinces. It is located between two latitudes (32.7 - 33.8 north) and between longitudes (43.42 - 45.50) to the east.

Second: As for the hospital's location in relation to the Hilla city , it is located in the center of the Hilla city and is surrounded by streets on three sides, namely: -

- 60th Street // It is characterized by high traffic density of small and large cars because it connects Baghdad with the southern province, contains the Al-Batoul Bridge, and borders the hospital from the east.
- Al-Tahmaziah Street // It is bordered on the north side and has a high traffic density, but it is less than 60th Street.
- Martyr Mustafa Al-Asadi Street // It borders the hospital to the south and is characterized by low traffic.

Soil analysis

The soil sample was taken from the garden opposite the lobbies, and the soil texture in this

site was also slightly sticky in the dry state, friable in the wet state, and low in viscosity in the wet and non-plastic state. The electrical conductivity that represents the salinity in the soil of this site was (7.3 ds.m⁻¹). As for the organic matter, its percentage was low, as its percentage at this site was (0.92%).

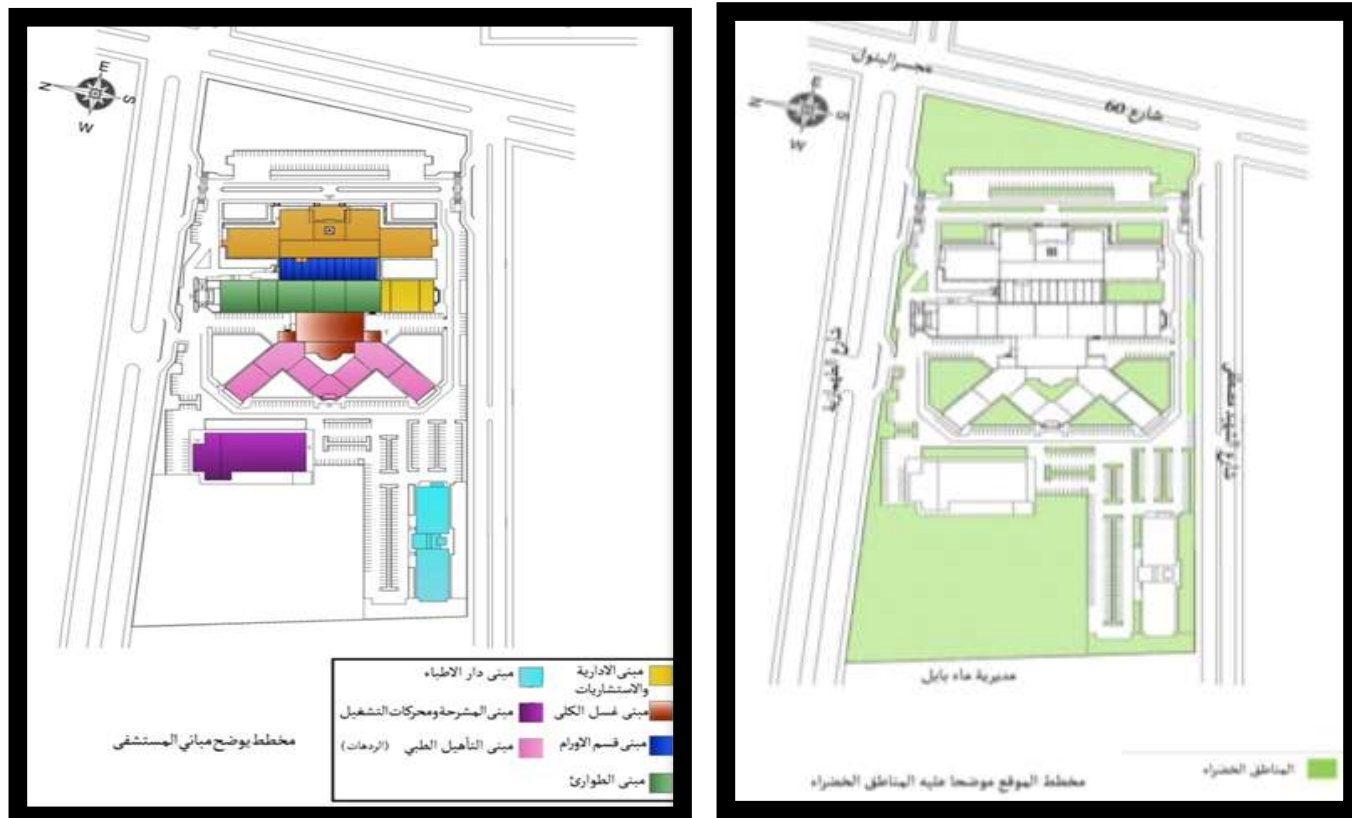


Figure (1): Shows the green areas and hospital buildings

References (design suggested by researchers)

Questionnaire

According to the methodology used for this study, the statistical method has been relied upon to reach the results required of this research, which is the questionnaire. The questionnaire is defined as a group of various questions linked to each other and in a way that achieves the aim that the research seeks in light of the research problem, As, the questionnaire is a direct contact method and an important tool in design studies because it ensures clarity in answering the questions asked, as well as

enabling verification of the validity of the information and directing questions to the participants in the questionnaire according to their culture, and also the questionnaire is one of the most important means of collecting data from scientific research for his ability to provide the necessary description of the local place to be studied, in addition to measuring the divergent and similar opinions of the different groups about the elements that make up the garden environment to be studied (Kandilji, 1993 and Khader, 2010).

Sample questionnaire

This sample is concerned with studying the case of Al-Sadiq Al-Imam General Hospital through one of its user groups, namely the patients. The number of this sample was estimated by the number of patients who use the Sadiq Imam (PBUH) General Hospital daily. As the hospital capacity (500 beds) is occupied, including 493 beds, and the number of patients in the hospital is about (200) patients, * (personal interview, director of statistics), samples were taken according to the number of patients who used the hospital.

Accordingly, the sample was calculated on the basis of the following law:

$$1 + N(e^2) / N = n$$

n :Represents the sample size.

N :It represents the number of members of a community.

E: The permissible error at a confidence level of 90% equals (0.10). Yamane, 1967)

To calculate the patient sample

$$67 = 200 / 1 + 2 = 200 / (0.10)^2 + 1 = 1 + 200 (0.10^2) / 200 = 1 + N(e^2) / N = n$$

Results and discussion of the questionnaire

The results of this research study reveal and give us an insight into the opinions and

Table (1) Opinion of the hospital's location in relation to the city of Hilla?

percentage %	Numbers	suitability
17.9	12	suitable
82.1	55	unsuitable
100	67	Total

As for the question of preference to establish gardens. The results showed that 98.5% of the respondents prefer to establish gardens, and this

preferences of the patients of the Imam Sadiq General Hospital regarding the garden spaces in the hospital, where most of the participants in the survey were not satisfied with the current situation of the gardens in the hospital, as no gardens have been designed since the establishment of the hospital. If you find green spaces, they are jungle plants and very few and small plants. Garden users expressed their strong desire to have good and beautiful landscapes in design surrounding the hospital, and they felt that this would positively contribute to the psychological and health state of hospital users, and provide the opportunity to spend part of their free time there.

• The suitability of the hospital location

The location of the hospital is definitely one of the most important things that must be focused on from all sides, the most important of which is to provide ease of access and provide services. Results showed that 82.1% of sick respondents see the hospital's location as inappropriate and this is due to overcrowding and difficulty in accessing the hospital, especially in emergency situations, and also because of pollution or after their residence. About the hospital website. That 17.9% of the respondents believe that the hospital location is appropriate may be due to the proximity of their residence to the hospital site, as shown in Table (1)

is because having gardens in the hospital reduces stress, pressure and anxiety for a patient. As for the number of parks

construction, no, 1.5% of the respondents answered (no), as in Table (2).

Table (2): It is preferred to create gardens in the hospital

percentage %	Numbers	Create gardens
98.5	66	Yes
1.5	1	no
100	67	Total

The results of the questionnaire showed that 88.1% of sick respondents found that gardens and green spaces affect their psychological state and 11.9% of them answered to some extent,

this shows that green spaces and gardens have a great impact on their psychological state, and as shown in Table (3)

Table (3): The presence of garden and green spaces in the hospital affects your psychological state

percentage %	Numbers	The influence of gardens on the psychological state
88.1	59	Yes
-	-	No
11.9	8	To some extent
100	67	Total

The results of the study showed that 68.6% of the respondents answered (yes) and 10.4% of the respondents answered (no). And 20.9%

answered (to some extent), as shown in the Table (4)

Table (4): The presence of the garden inside the hospital helps speed recovery

percentage %	Numbers	Having a garden recover quickly
68.7	46	Much
10.4	7	A little
20.9	14	To some extent
100	67	Total

The presence of different types of plants is important when designing the hospital gardens, as the presence of trees and shrubs in the garden provides shade and a cosmetic image for the gardens and also affects the weather factors and

reduces noise and air pollution. Where the results of the study showed that 3.0% prefer the presence of trees and shrubs, this may be due to their lack of knowledge of plants, and 26.9% answered that they prefer flowers, especially if

their colors are comfortable to look. While shown in Table (5).
70.1% of them answered both of them, as

Table (5) Types of plants that are preferred to grow in hospital gardens

percentage %	Numbers	plants type
3.0	2	Trees and shrubs
26.9	18	Flowering
70.1	47	both together
100	67	Total

The results of the study showed that 74.6% of the respondents prefer to confront visitors in the gardens in order to avoid the hospital atmosphere, while 25.5% of them prefer not to

confront visitors in the gardens, and they prefer to visit them inside the room, as shown in Table (6)

Table (6): It is preferable to meet visitors in the hospital gardens

percentage %	Numbers	The possibility of facing visitors
74.6	50	Yes
25.4	17	No
100	67	Total

The results of the study showed that 25.4% of the respondents preferred to walk and roam in parks, especially if there were paths that reach to attractions and are designed according to international standards for the design of paths, and also these paths are shaded when there is

the high sun, and also these paths overlook all parks. And 74.6% of them answered sitting and enjoying the landscape. This depends on their health if they are allowed to walk or sit in the gardens, as shown in Table (7).

Table (7): The activities you prefer in the hospital gardens

percentage %	Numbers	Events and activities
25.4	17	Walk around and walk
74.6	50	Sit down and enjoy the scenery
100	67	Total

Noise is one of the most important problems that must be solved in the Imam Al-Sadiq General Hospital, due to the hospital's location

between three main and important streets, and also the presence of the Al-Batoul Bridge very close to the hospital on Street 60, which is

considered one of the important streets that connect the southern province with the capital Baghdad and the northern province. For this reason, the noise very much affects the gardens, where this issue must be addressed by raising the level of the outside wall of the hospital and by planting dense and high trees to reduce the noise generated by these streets. While 26.9% of them answered that noise does not affect

garden users and this percentage of the answer is 26.9%, because some patients do not understand the question, where they understood that the effect may be when they are inside the buildings and not in the gardens. Because inside the hospital buildings the noise does not affect it because of the laying of sound-insulating layers when constructing the hospital buildings. As in Table (8).

Table (8): The effect of noise generated in vehicle movement outside and inside the hospital on garden users

percentage %	Numbers	Noise effect
73.1	49	Much
26.9	18	little
100	67	Total

This question depends on the health status of the patient, can he go out to the garden, and does he have a garden that provides him with suitable conditions to sit in it with the doctors and nurses?

and this indicates that they prefer to sit in parks when their health allows them to do so, while 28.4% of the respondents answered (no) and this is due to their personal opinion on this topic, as shown in Table (9).

This was shown in the results of the study, where 71.6% of the respondents answered (yes)

Table (9): Prefer to sit with the doctors and nurses in the hospital gardens

percentage %	Numbers	Sitting in the gardens with doctors and nurses
71.6	48	Yes
28.4	19	No
100	67	Total

The results of the study showed that 52.2% of the respondents preferred group sessions, while 47.8% of them preferred individual sessions.

The reason is due to the patient's health status, his psychology and his social relations with people, as in table (10)

Table (10): Group sessions are preferred or individual sitting in the hospital gardens

percentage %	Numbers	The type of sessions
52.2	35	Collective
47.8	32	Individual

100	67	Total
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The results of the study showed that 41.7% of sick respondents suggest establishing green spaces in the hospital, and 32.8% of respondents suggest establishing a cafeteria because there is only one cafeteria on the fourth floor in the lobby building and it is difficult to access due to the health condition of patients or because of the failure of the hospital elevators. In most cases and 25.3% of sick respondents suggested treating noise in the hospital due to the movement of cars in the three streets surrounding the hospital, as shown in Table (11).

Description of design proposals

They are four gardens, two of which are behind the lobby building and the two are in front of the lobby building. The back gardens are paved courtyards and the front gardens are in the form of similar triangles, they are designed in the natural style, As for the gardens behind the corridors building, they are also similar in size and design. Plants that succeed in cultivating in the city of Hilla have been suggested, which are green areas, trees, shrubs, annual and perennial flowers, and some defining plants, as in Figure (2).

Conclusions

We conclude from this study that it is difficult to convince patients of the importance of gardens in the hospital due to the poor health services available to them at the present time, as well as the lack of necessary treatment that they

see more important than gardens, and after a detailed explanation of the importance of gardens, and we conclude the following: -

1. The current hospital site was chosen extemporaneously and was not determined by a specialized committee in the field. The international design standards for hospitals, the results of the questionnaire, and the analysis of the data of the current location have many problems that require the development of appropriate treatments and solutions.
2. Insufficient green areas commensurate with the number of users of this hospital.
3. Most hospital users are not aware of the healing, environmental and aesthetic importance of gardens.
4. The need to pay attention to the design of healing gardens (hospitalization) because of the benefits they contain (physical, psychological, and social) and to educate the users (patients, visitors, workers) of this facility about these benefits.
5. The area allocated for each of the hospital users and their visitors is 10 m², which is within the international standards, but the spaces between the patient lounges building (medical rehabilitation), which are often used by patients, companions and visitors, the area allocated to each patient is 3.5 m² which is less than the internationally recommended standards. .



Figure (2): The state of the front and



Figure (3): Explains the design proposals (natural model) by the researchers .Scale 1: 300



Figure (4): Explains the design proposals (natural model) by the researchers .Scale 1: 300

Recommendations

1. Increasing awareness among hospital users of the importance of healing gardens and their contribution to the speed of patient recovery and their recreational, aesthetic and environmental role, by holding informative seminars and screening documentary films about hospital gardens around the world.
2. That the site designated for the hospitals be chosen by a committee specialized in various fields in accordance with international standards, taking into account the privacy of the Iraqi community.
3. Designing sensually and aesthetically pleasing gardens, taking into account the design characteristics of rhythm, gradation, difference, simplicity, diversity, harmony and contrast, as well as design elements, foundations and design rules.
4. That the site was designed by a committee that includes various specializations, including the garden designer, and that a comprehensive analysis of all the elements of the site was studied.
5. Before starting to design gardens and after completion, it is preferable to take the opinion of hospital garden users. The botanical elements are chosen that withstand the city's climatic conditions and be widespread and successful in its gardens and available in the nurseries.

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