



What is a healing garden?

Şifa bahçesi nedir?

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ABSTRACT

The interest in healing gardens has increased around the world. Several research disciplines and professions deal today in different ways with healing gardens. What determines whether or not a garden is a 'healing garden?' The idea that particular gardens are beneficial to human health was the spark that began this investigation to find if there were certain qualities that distinguish a 'healing garden' from any other garden type. If there are particular qualities that make up a healing garden, then what are they and could a list of guidelines be created to aide in the design of a healing garden? There are some important scattered researches about healing garden that had conducted in this subject by famous and professional researchers like Clare Cooper Marcus, Roger Ulrich, Rachel and Stephen Kaplan. The purpose of this research is definition of healing gardens, features of design and benefits of it for visitors in a clear and compact way with help of recent significant researches on healing gardens. As a result, detect a clear image of healing garden for landscape architects in designing.

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ÖZ

Şifa bahçelerine ilgi dünya çapında artmaktadır. Bugün birçok araştırmacı disiplinler ve meslekler, şifa bahçelerine farklı şekillerde yaklaşmaktadır. Hangi özellikler, bir bahçenin şifa bahçesi olup olmadığını belirler? İnsan sağlığı için yararlı olduğu düşünülen bu özel bahçeler düşüncesi, şifa bahçesini diğer bahçe türlerinden ayırt eden nitelikleri bulmaya ve araştırmaya neden olmuştur. Eğer bir şifa bahçesini oluşturan belli nitelikler varsa, o zaman ne olduklarını açıklayıp ve bahçe tasarımına yardımcı bir kurallar listesi hazırlanabiliyor. Clare Cooper Marcus, Roger Ulrich, Rachel ve Stephen Kaplan gibi ünlü ve profesyonel araştırmacılar tarafından şifa bahçeleri hakkında önemli araştırmalar yapılmıştır. Bu araştırmanın amacı, mevcut olan araştırmalar ışığında şifa bahçelerinin tanımını, tasarım ilkelerini ve ziyaretçiler için sağlanan faydaları öz ve net şekilde açıklamaktır. Sonuç olarak bu makale, peyzaj mimarlarının şifa bahçesi tasarımındaki rolünü tanımlamaktadır.

1. Introduction

Healing landscapes have long been an important aspect of human life. When people first began erecting dwellings, healing places could be found within nature through sacred groves, special rocks and caves. Through time, different cultures have ascribed healing powers to the natural environment and have used sacred natural spaces for spiritual and personal guidance (Marcus and Barnes 1999).

In Islamic culture, Garden are depicted as paradise on earth, in the Quran, describing a place with four rivers which produces shade and food as a metaphor of heaven in deserts (Rogers 2001). Applying this concept into the landscape design, the Islamic gardens present a particular pattern: water flows toward four different directions from a distinct center and divides a square plane into four parts where plants are grown (Pouya 2012). More recently, there has been a growing interest in the

healing effects of nature. In the Western world, monastic communities supported infirmaries that were based in the use of herbs and prayer and almost always included a cloistered garden (Figure 1).

Nature displays its beauty by various colors, multiple fragrances, different textures and unlimited power of life, inviting people to walk in. Attraction is the first step toward. There is a great deal of research, both empirical and evaluative, that suggests healing gardens provide a number of positive benefits to individuals in terms of their physical, spiritual, and emotional health (Marcus and Barnes 1999; Martin 2002; Nakamura 1992; Sternberg 2009; Ulrich 1981; Ulrich et al. 1991) (Figure 2).

Speaking of the term "healing gardens", many questions always arise: what is a healing garden? What makes a garden

become a healing garden? What are the health outcomes it provides? So the majority of this research is definition of healing gardens, features of design and benefits of it for visitors in a clear and compact way through recent significant researches on healing gardens.



Figure 1. Shahzadeh Garden, example of Iranian Garden (Pouya 2012).



Figure 2. Griffin-Williamson Campus, Healing garden (Bergeman 2012).

2. Materials and Methods

Speaking of the term “healing gardens”, many questions always arise: what is a healing garden? What makes a garden become a healing garden? What are the health outcomes it provides? There are some important scattered researches about healing garden that had conducted in this subject by famous and professional researchers like Clare Cooper Marcus, environmental psychologist Roger Ulrich, Rachel and Stephen Kaplan. In this study, taking advantage of these researches as the present material, firstly review the various terms and concepts of healing gardens and brief history of it and then analyze the health benefits of these gardens on visitors and eventually prepare guidelines for the design of healing and therapeutic garden. The majority of this research is definition of healing gardens, features of design and benefits of it for visitors in a clear and compact way with help of recent significant researches on healing gardens. As a result, detect a clear image of healing garden for landscape architects in designing.

3. Finding

3.1. Terminology: therapeutic landscape, healing garden , therapeutic garden

In the existing literature, authors have used an array of terms to refer to the therapeutic segment of landscape architecture. Spaces are often referred to as healing gardens, healing landscapes, or therapeutic gardens. Frequently, these words and phrases are used interchangeably. The term “healing garden” will refer to a specific space designed to “foster restoration from stress and have other positive influences on patients, visitors, and staff or caregivers” (Ulrich 1999). The term “healing garden” is not only the most commonly employed term but it also appears in a number of prominent texts including Healing Garden Therapeutic Benefits and Design Recommendations, likely the most comprehensive text on the subject. In this fundamental text, the term “healing garden” refers to “a variety of garden features that have in common a consistent tendency to foster restoration from stress and have other positive influences on patients, visitors, and staff or caregivers”. It is also stated that “the contention here is that to justify the label ‘healing,’ a garden should have therapeutic or beneficial effects on the great majority of its users” (Ulrich 1999). Thus, a healing garden is a space which is designed with the intention of providing specific therapeutic benefits. (Hazen 2010) (Figure 3).



Figure 3. Craig Hospital Garden, USA.

3.2. Brief history of the healing garden

The idea of Healing Gardens is both ancient and modern. Following the beginning of human settlements and erect of communities, local healing places were nearly always found in nature (Brown et al. 2010 and Marcus and Barnes 1999). The earliest hospitals and infirmaries in the Western world were dependent on plants, herbs and a cloistered garden as essential parts of the healing process. For a long time the importance of health and well-being has been noticed in the presence of urban green space, green ways, parks, green areas, schoolyards, and house private gardens. All these factors are viewed as the health creating elements of the city (Morse et al. 2011). The great gardens of Egypt were built to offer an escape from the external environment offering a healing relief.

By the late twentieth century the idea of nature and healing was totally lost; nature ‘landscaping’ came to be merely portrayed as a green sort of decoration. Starting from the 1990’s

the idea of healing gardens, once again, gained interest and began to appear in the research field of sustainable landscape (Vapaa 2002). Today the aspect of Healing Gardens is gaining its popularity due to the harsh living and environmental conditions that people are suffering from all over the world (Barmelgy 2013).

3.3. The health outcomes of the healing garden

Why is nature restorative? There are many theories regarding the effects nature has on human beings. In Clare Cooper Marcus' book *Healing Gardens*, Rodger Ulrich writes in an article "Effects of Gardens on Health Outcome: Theory and Research", that people learn to associate restoration with nature settings and associate stress with urban settings. As an example, people may find vacations in rural settings relaxing because as a society we were "taught" these landscapes were calming and restorative. Another theory is that the urban or built environment is overstimulating, causing increased stress in the body. Nature is less complex making it more restorative. Evolutionary theories contend that many cultures have the same positive responses to nature. Humans may be genetically inclined to respond to certain landscapes more positively because these environments were favorable for their survival (Cooper Marcus 2003). Nancy Gerlach-Spriggs contends that our "response to nature is not Gardens have the ability to heal in many ways. The simple exposure to nature causes heart rate to decrease. Muscle tension and blood pressure also decrease. Rodger Ulrich explains, "it is justifiable to propose that gardens in healthcare situations are important stress-mitigating resources for patients and staff to the extent that they foster: a sense of control and access to privacy, social support, physical movement and exercise, and access to nature and other positive distractions" (Cooper Marcus 2003). Ulrich explains in another article entitled "View through a Window May Influence Recovery from Surgery," that patients who were able to view nature had a shorter hospital stay, lower analgesic use and fewer complaints during recovery (Gerlach- Spriggs et al. 1998).

Another study by Dr. Joanne Westphal, a practicing physician and landscape architect, evaluated the effects of exposure to a garden on Alzheimer's patients. She found that patients who spent zero to five minutes in a garden per visit showed little if any effect on behavior, medication usage, pulse rate, blood pressure and weight change. Patients who spent more than ten minutes in the garden per visit showed great improvements in all categories except medication usage, which remained the same (Westphal 2003). Restoration from stress is an important goal in and of itself. But, it is also important because it directly affects many other health outcomes. Ulrich (2001) listed some benefits according to figure of 4.

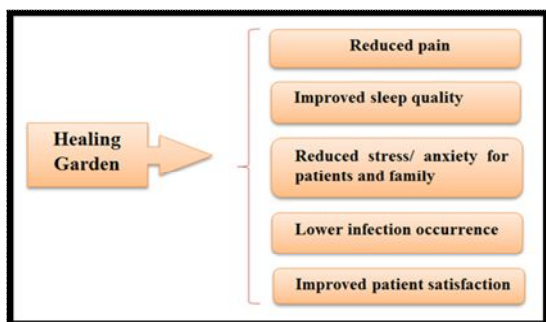


Figure 4. Some benefits of healing garden that listed by Ulrich.

Benefits for employees (reduced workplace stress, improved satisfaction, possibility of reduced turnover, improved capability of workplace to attract and retain qualified employees). Additionally, there are several other advantages found in healing gardens:

- Social support: Users are encouraged to meet other people, sharing stories or experience and receiving spiritual support or physical aid that can help to re-build their self-confidence and enhance healing (Brannon and Feist 1997; Cooper Marcus and Barnes 1999).
- Sense of control: A sense of control is an important factor affecting a person's ability to cope with stressful events or situations, including stress associated with illness and hospitalization (Ulrich 1999; Cooper Marcus and Barnes 1999). Assisting patients to retrieve their capacities will improve the rate of recovery.
- Exercise: Exercise can decrease stress, blood pressure and depression (Pretty et al. 2005) and strengthen body and mind, especially the functions of heart, lung and nervous system (Ulrich 1999).
- Positive distractions: Positive distractions are environmental criteria that can attract people's attention, thus disturbing negative thoughts or emotions and improving the issues of blood pressure and stress (Ulrich 1992), for instance, music, art, flowers and animals.
- Reduction of mental fatigue: Experiencing a natural environment has the efficacy of decreasing mental fatigue (Hartig et al. 1991; Kaplan and Kaplan 1990; Cimprich and Ronis 2003). People feel relax and recover from attentional fatigue by engaging in natural surroundings and being away from stressors.

3.4. Role of landscape architecture

In "Landscapes: A Typology of Approaches to Landscape Architecture," the authors describe therapeutic settings as places of "healing and transcendence" and argue that landscape architects play a critical role in creating these environments.

Here the connection between humans and the natural world is emphasized in ways that go beyond the common professional concerns to re-establish spiritual emotional connections between humans and nature. Of all the design professions, landscape architects have a unique capacity to make this connection, particularly in their sensitivity to growth and change (Crewe and Forsyth 2003).

Perhaps no one is more well-versed in the profound union between the landscape and healing than Dr. Joanne Westphal. Dr. Westphal is not only an M.D. but is also a certified Landscape Architect who has written extensively on the subject of therapeutic spaces. In "A Reflection on the Role of the Landscape Architect in American Health-care Delivery" (2003) she first outlines the "normal pathway in the diagnosis of disease and the prescription of a treatment protocol" from the medical perspective and then highlights the important role a landscape architect can take in this sequence (Westphal 2003).

3.5. The Healing Garden: Essential design elements and environmental Qualities

An emerging area of research and design focus within landscape architecture has sought to address the relationship of designed natural environments to health and healing. As landscape architecture increasingly addresses the interface between designed natural environments and health, confusion

has developed regarding various terms applied to this concept. "Healing gardens" is a term frequently applied to gardens designed to promote recovery from illness. "Healing," within the context of healthcare, is a broad term, not necessarily referring to the cure from a given illness. Rather, healing is seen as an improvement in overall well-being that incorporates the spiritual as well as the physical. Numerous healthcare institutions within and outside the United States have begun to incorporate therapeutic landscape design. As Clare Cooper-Marcus and Marni Barnes have noted in their book *Healing gardens* focus on providing stress relief, alleviation of physical symptoms, and improvement in the overall sense of wellness for both patients and healthcare staff. Successful gardens include the following design principles:

- Variety of Spaces: Spaces for both group and solitary occupancy. By providing a variety of spaces, the patient is given choices, thus providing an increased sense of control-leading to lower stress levels. An area for solitary occupancy allows one to "get away" from the sterilized environments of the hospital. Areas for small groups (e.g., family members or support staff) to congregate provide social support to the patient.
- A Prevalence of Green Material: Hardscaping is minimized and plant materials dominate the garden. The goal would be to minimize hardscaping to only one-third of the space being occupied. It is through the softening of the landscape patients can feel an improvement in their overall sense of wellness.
- Encourage Exercise: Gardens that encourage walking as a form of exercise have been correlated with lower levels of depression.
- Provide Positive Distractions: Natural distractions such as plants, flowers, and water features decrease stress levels. Other activities such as working with plants and gardening can also provide positive distractions in the garden setting.
- Minimize Intrusions: Negative factors such as urban noise, smoke, and artificial lighting are minimized in the garden. Natural lighting and sounds are additive to the positive effects of the garden.
- Minimize Ambiguity: Abstract environments (i.e., those with a high sense of mystery or complexity) can be interesting and challenging to the healthy, but to the ill they may have counter-indicated effects. Numerous studies show that abstraction in design is not well tolerated by persons who are ill or stressed (Figure 5).

In the book *The Sanctuary Garden* by C. Forrest McDowell and Tricia Clark-McDowell (1998), they say, "the key to a (healing garden) is to honor and celebrate our broader human relationship with nature and spirit, not just plants." The McDowells proposed six design elements as a guideline for design and as a means to identify the intention of the space. That is, a marriage between the garden keeper and the spirit of nature (McDowell and McDowell 1998). The six design elements are: 1) A special entrance that invites and embraces the visitor into the garden. 2) The element of water for its psychological, spiritual, and physical effects (Figure 5). 3) A creative use of color and lighting (be they plant or human-designed light sources) to elicit emotion, comfort, and/or awe in the visitor. 4) The emphasis of natural features as grounding points-such as the use of rocks, wood, natural fences, screens, trellises, wind, sound, etc. 5) The integration of art to enhance the overall mood/spirit of the garden. 6) Garden features that attract wildlife and provide habitat to a diversity of wildlife. There are several guidelines for the designing of healing and therapeutic gardens. This list is based on recommendations by

Clare Cooper Marcus and Marni Barnes that is given in the table below (Table 1).



Figure 5. Gardens can be 'stress-free zones' where people can relax alone or in company as preferred (Ching Yang 2010).

Table 1. Guidelines for the designing of healing and therapeutic gardens (Marcus and Barnes 1999).

- Lush, colorful plantings should be used which is varied and interesting to reinforce the image of a garden.
- The use of flowering plants over many seasons in order to mark the seasons will help provide a sense of cyclical rhythm through the year. It is important for people to understand the changes in season, especially in areas where the climate does not change much.
- Use trees with foliage which moves easily and creates noise even in slight breezes. Place the trees to create patterns of light and shadow, color and movement. This can help muffle some of the urban noise as well.
- Use plants, birdbaths, feeders to attract birds and butterflies. Avoid plants which attract large numbers of bees for safety reasons.
- Utilize a harmonious variety of plant textures, forms and colors. These attributes can be important for patients with limited eyesight and for tactile stimulation.
- Utilize water if possible. Moving water is very soothing in sound as well as sight. It can create a psychological screen which can help the restoration process. Moving water is an excellent way to reduce outside noise. Still water can promote meditation and peacefulness. If using water, consider wind exposure.
- Create a planting buffer between public garden spaces and private offices or patient rooms bordering the garden.
- Provide meandering paths where possible to encourage strolling and observation of objects in the garden. Provide a variety of vistas, levels of shade and textures of planting.
- Assure that paving materials are suitable for wheelchairs or gurneys. Make sure that the main paths are at least wide enough for patients in wheelchairs to pass each other.
- Provide nighttime lighting so the garden can be utilized after dark. Use low path lights so light does not shine into patient rooms, nor does it create a glare into people's eyes.
- Provide plenty of seating in the garden. Movable chairs or benches at right angles allow for social interaction. Place some seating at the entry of the garden for those with limited time (such as staff on a short break). Seating should be sturdy, have backs and arms, and be pleasing to the touch. Be careful of colors that might become hot in the sun.
- Provide a variety of shelter and exposure so the garden may be utilized in all seasons. Provide shady areas for those sensitive to the sun, as well as for hot, bright days. Covered areas at the entrance to the garden may allow it to be used during a rainstorm.
- Take advantage of natural views from the site.
- Provide one or two memorable features by which people can remember the garden.

4. Results

The interest in healing gardens has increased around the world. Several research disciplines and professions deal today in different ways with healing gardens. According to environmental psychologist Roger Ulrich, a garden “should contain prominent amounts of real nature content such as green vegetation, flowers, and water.” He further states that by labeling a garden as a “healing” garden, “the garden should have therapeutic or beneficial effects on the great majority of its users” (Cooper Marcus and Barnes 1999). Ulrich’s definition of a healing garden is rather simple and allows for a variety of forms that the garden may take on as well as the various levels of healing that may be achieved. The idea that a garden should contain elements such as green vegetation, flowering plants and water is open to dispute. Overall, the healing garden design should comfort the soul and renew the spirit—no matter if it consists of a bench next to a tree or an intricately designed landscape. Of greatest importance is the intention of honoring the design element and its relationship to the spirit of nature (Figure 6).

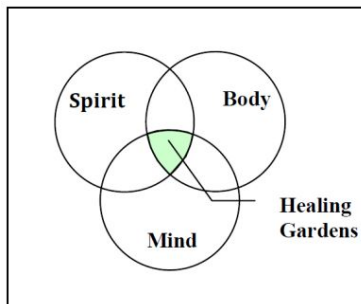


Figure 6. The notion of healing gardens (Vapaa 2002).

A residential or a private garden is the climax of the healing garden typology. It allows the user(s) to gain the maximum benefit from the healing qualities of a garden because it is their own personal space where they express their individual identity, needs and level of engagement. Evidence attributes a wide range of health benefits to contact with nature for people of all ages and in all manner of mental and physical health or infirmity. Physiological benefits such as better sleep patterns, improved hormone balance, lowered stress level, restoration, decreased agitation and aggressive behavior have all been observed in association with contact with nature and the outdoors.

In this research, along with the definition of the concept of healing garden it also reviews design criteria and to create different gardens with healing properties this research provides guidelines and recommendations designed to architects.

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