

Examining common features of Persian gardens and healing gardens

B.Taheri¹ , HR.Azemati²

1.Department of architecture, Faculty of architecture & urbanism, Shahid Rajaie teacher training university, tehran, iran

2.Department of architecture, Faculty of architecture & urbanism, Shahid Rajaie teacher training university, Tehran, Iran

Abstract

Nowadays, after redirection of medical sciences from sterile and artificial spaces to the natural environment and changing treatment approaches from purely microscopic and local studies to a holistic approach about the process of treatment and recovery, special attention has been given to the design of the healing environments. The use of healing gardens has also been expanded in hospital grounds. The features and characteristics of Iranian gardens classify them among the healing gardens. Attention to the various physical, mental and psychological characteristics of human beings who have to recreate in this garden has been embodied in the delicacy of the body. In this study, common features of Persian gardens and healing gardens are investigated. This descriptive-analytical study is of a practical-theoretical nature. In identifying the process, the literature on the subject is reviewed first and the features of the Persian gardens and the healing gardens are examined and finally the common aspects are reviewed. Due to the features of Persian garden and its characteristics, they have a lot in common with the modern healing gardens and can be considered as a base for Iranian healing gardens. With regard to the Iranian identity and historical background as well as their eco-design, its properties can be used to enrich the healing gardens. In this way, we may take a step closer to using the most of our country's valuable heritage.

Keywords: healing garden, Persian garden, healing features, common features.

• e-mail: azemati@sru.ac.ir

1. Introduction

In Iran's vast land, many efforts have been made to adapt the features of the Persian garden for use in gardens and landscapes or healing gardens. The ability of a nation to survive and perfection is crystallized and realized in its cultural production capacity and to transmit that culture, which is, in a simpler language, indigenous knowledge to future generations (Barati, 2004).

However, in the case of Persian gardens, there is a wide range of studies to unravel the secrets behind its planning and organization, because despite the success of this art and craftsmanship in Iran, for example, quantitative research on micro-climate characteristics and climate adjustment, hidden aspects in the spatial structure, infrastructure, and non-formal aspects of Persian gardens are very little (Taghvaei, Tahbaz & Motaghi Pische, 2015).

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Designed spaces in general and especially in the architectural profession, in addition to physical comfort, also affect the spirit of the human being. According to Alexander, every architect and therefore, every architectural work has only one claim, and that is to understand and improve the quality of human life (Alexander, 2002).

Nowadays, the architecture of treatment centers is changing from mere functionalism to creating a healing environment in the changing part. Ward's healing environment in health centers means creating a space that has positive effects on disease treatment (Ulrich, Quan, Zimring, Choudhary, 2004).

Bu Ali Sina writes in "The Book of Law" that, "It is very beneficial for the patient to seek out things that strengthen the psychic forces, such as the joy and enjoyment of pleasant landscapes." (Ibn Sina, 1991, as cited in Mardomi, Mirhashemi & Hassanpour, 2014). Kaplan has presented the role of nature in reducing stress. "Presence in the natu-

ral environment not only helps to reduce stress but can also prevent it" (Kaplan, 1989: 180) In Europe, for the first time in the Middle Ages, in hospitals related to the monks, there were gardens with the primary goal of changing the morale of the patients. In the West, the effects of the natural environment on patient improvement were clearly written and published for the first time by Florence Nightingale in "Nursing Notes". She believed that visual communication with nature, such as natural landscapes through windows or flower beds, would help patients recover (Shan Jiang, 2014). Nightingale (1863) says if you can excite one by books or conversation, than by any direct reasoning; or if the patient is too weak to laugh, some impression from nature is what he wants (p. 60).

Samuel Institute, a medical research organization, developed the concept of an optimized healing environment (OHE as defined by the institute, is one where the social, psychological, physical, spiritual and behavioral components of healthcare support and stimulate the body's innate capacity to Heal itself" (Ananth, 2008, p. 273). This concept considers both inner and outer environments. Healing environment can be described simply as the overall environment (both physical and non-physical) created to aid the recovery process. In contrast to curing, healing is a psychological and spiritual concept of health. Since perception is also psychological, there is a likelihood of a relationship between healing and the physical environment (Ozcan, 2006, as cited in Ghazali & Abbas, 2011). In recent years, healing gardens have been increasingly used in health and wellness complexes. Evidence from expanding research results suggests that exposure to natural environments improves both patient experiences and treatment outcomes. This is not surprising given that gardening itself is a therapeutic practice (Gentry, Anderson, Krause, Tucker & Tuddenham, 2015).

In a study, using Islamic sources and emphasizing the use of nature healing in health centers, the feasibility of using Persian gardens as a healing gar-

den in hospitals has been suggested (Mardomi et al., 2014).

In a 2007 study by Nagasawa on Japanese hospitals, 85 percent of the 35 hospitals surveyed devoted more than half of their unused space to green space, and reported faster patient's recovery and lower return rates compared to hospitals with less than half the space allocated to the landscape. (Marfo, 2007).

2. Research Method

Various studies have been done on Persian gardens and healing gardens. This research seeks to extract commonalities between the two through library studies. This descriptive-analytical study is of a practical-theoretical nature. In identifying the process, the literature on the subject is reviewed first and the features of the Persian gardens and the healing gardens are examined and finally the common aspects are reviewed. Finally, an analytical comparison is made on two examples of the famous Persian gardens and healing gardens of the last century and the common features emerging from the research are confirmed.

3- Persian Garden

Tradition and culture of the Persians have given special importance to, and praise, agriculture and gardening (Aryanpour, 1986). The construction of the garden in Iran has a long history and has been considered in all periods, especially the Islamic period. There are large gardens inside and outside the city's ancient aqueducts and irrigation systems that have a history of five to six thousand years. Apart from solving the problem of irrigation from a distance to the gardens, the water supply problem inside the garden itself has been well solved by the Iranians. Irrigation method, using regular geometry and water transfer from main stream as main artery into streams and sub-streams, had a direct and powerful effect on the design of the garden. In addition to being careful about the efficiency of the irrigation systems, the gardeners have also tried their best to display the water. Using floor masonry slabs, stair-like water's path to hear the sound of water on gentle slopes,

fountains, shores, constructing waterfalls and pools and ponds have all been done to show the water's movement and enjoy the beauty and sound of it in the garden (Pirnia, 2001). Observance of the principles of Iranian architecture - folklore, avoidance of futility, self-sufficiency, the use of modulus and pimon, introversion, and nihilism -have also been taken into consideration in gardens. Different plant species were planted for different reasons. Cedar, pine, maple, etc. for shading, fruit trees with calculated distance according to life span and fruiting, spraying to eliminate harmful insects, preventing water loss and providing forage for livestock, oleander to disperse insects and all kinds of flowers for their beauty.

Persian garden is a collection of all three conceptual-spiritual, functional and aesthetic aspects of the above elements combined in the best possible way, forming a unified system called the Persian garden (Cullen, 2004).

Persian gardens have undergone a number of changes in appearance and body over the course of their growth and development, but they have been nearly identical in content and have not undergone much change, so that, in addition to meeting the physical needs of humans (functional and aesthetic), the transcendental features (Conceptual dimension) have also been taken into account. This has led to its survival over time and its being indexed as a single set (Okhovat, 2014).

Persian garden has been a domesticated nature reflecting over the centuries how communication between humans, the natural environment and the artificial environment been possible. (Abdollahiet al., 2015).

Motedayen , apart from specific factors in the formation of gardens, such as religious, leisure and governmental reasons, list the common factors in the formation of gardens as in table1(Motedayen, 2011):

3.1 - Persian garden features

In villages and cities that have long been a place of residence, one can see the beauty values similar to

| Formation factors | Main reasons | Examples | Garden names | Time period |
|-----------------------------------|--|-------------------------|---|-----------------------|
| Common Factors in Shaping Gardens | Fullfruitness of the gardens | Orchards-fruits garden | Mulberry Garden -Barberry Garden | Safavid |
| | Creating beautiful spaces by relying on the art of gardening | Orchards-flowers garden | Darius' Gatades Garden Vafa Garden "Babur" | Achaemenid Gurkani |
| | | Horticultural gardens | Vafa Garden "Babur" | Gurkani |
| | | Medicinal gardens | The Shah Abbasi gardens | Safavid |
| | | Garden - Regular | Orchard - Cyrus Gardens Babur Grand Garden | Achaemenid Gurkani |

Table 1: General Factors of Garden Formation
References: Motedayen, 2011.

most natural places. The enjoyment of this kind of beauty is due to the use of all senses in its perception. Aesthetics and philosophers divide the senses into two, those dealing with distant distances and those with close distances. Vision and hearing, and sometimes olfactory senses, are called aesthetic senses because they allow close attention to the distant landscape, and tactile senses are used to perceive close distances; that is, their stimuli are directly received. With a sense of touch, we feel the shape of the tissue and the pressure, gain information about temperature, humidity, and pain with the other cells on the skin, and with the movement of the body, we gain information on the direction, height, and degree of surface resistance on which we stand. The human senses are rarely used separately as they are interconnected and it is important to get a complete picture of the environment. However, under certain conditions and some senses become more important (Bell, 2007).

On the one hand, the system of concentration in the Persian garden disrupts the environment of the garden and, on the other hand, creates a sense of meaning and connection to the realm of meaning. The Persian Garden Architecture System, which forms its functional, physical, and semantic systems, creates a concentration system in it by configuring the five sensory elements in the garden, that, along

with the main orientation system and direct motor paths in the garden, invites qualities such as peace, contemplation, self-esteem, and self-bloom to the inhabitants of the garden (Shahcheraghi, 2009).

Existing systems in Persian garden landscape design with a direct impact on the five senses of men aggravate the senses with factors such as playing with light and shade, aroma of plants, cool air touch and hearing the sounds of nature, so that eventually it leads to concentration, relaxing, enjoyment and It becomes an opportunity for human reflection (Neili et al., 2012). Bemanian, taghvaie & sharif shahidi (2008) considered the main elements of the Persian garden apart from its specific design and structure as water, soil, fire, wind and plants. The first four are quadruple elements that are rooted in ancient beliefs, and the fifth is the plant which is the sacred element whose existence comes from the quadruple elements. In the Islamic period, some of its features are in line with the concepts of paradise promised in the Qur'an such as the Gardens of heaven, the vest Paradise, the Paradise Streets that design, construct and maintain Persian gardens using two climatic and dedicatory environmental perspectives. Teimouri Gordeh & Heidarnattaj (2014) in the study of Persian paintings, considered the pavilions as the most prominent element in Persian gardens, with their common feature being the best

view of the garden. Gardens design has been always featured with palaces, pavilion and Ivan so that the design, shape, and location of pools, water display, and Sofe at the entrance were based on these main elements. The pool or water display and other natural elements were the main elements viewed from the pavilion. In this regard, among the all elements of Persian garden such as water, plants, human, etc., the most featured elements are the structures designed to enjoy the view such as pavilion, Ivan, Sofe, tent, and so on (in general term "Nazargah").

Bemanian et al. (2008) regard Persian garden as the relationship of human and the divine nature which, considering the human need in all physical and metaphysical dimensions, seeks to satisfy his desire to create this wonderful, useful and beautiful link. For this purpose, it uses foundations that may have undergone changes throughout the history of the Persian garden but has been always persistent in content and can be used as a set of indicators by landscape architects.

Encouragement to move and go can be seen in the arrangement and design of the garden. Planting tall trees on both sides of the garden's long axis makes it appear longer, and utilizing the natural slope of the ground and building a kiosk at the highest point of the garden, makes it look closer from the entrance of the garden and encourage the viewer to travel this short distance. On the return road, the garden seems to be longer and extensive (Sharghi & Teimoori, 2012). Other features of Persian gardens are the attention to climate change in such a way that the elements and systems in are perceptible to create a climate for people's comfort and climate adaptation of these gardens in winter and summer with environmental conditions can be clearly seen (Taghvaei et al., 2015).

4- Healing gardens

4-1 healing

Healing is a broad term that does not necessarily refer to the treatment of illness. Rather, it is referred to

a general process of healing that considers the soul and the body together. According to Cooper Marcus and Barnes's theory in 1995, healing is a relief from physical symptoms, illness, and trauma, and is considered a factor in reducing nervous pressure and increasing comfort (Neili et al., 2012). They cited Parsons (1991), who has shown that observation of natural landscapes (visual stimuli) and exposure to natural elements (tactile sensory, olfactory, and auditory stimuli) can reduce psychological stressors and increase biological well-being. It can also improve internal anxiety. It has been widely emphasized that landscapes, especially mild and favorable landscapes, rapidly evoke one's emotions and are effective in relieving one's stress. It also avoids anger, fatigue, and relief from physical symptoms. Gessler, Ulrich, and Marcus played an important role in the use of medical landscapes in health care; they not only used the concept of hospital landscape in designing a hospital as a privately funded project for health services, but also provided insight into how it was designed. Hospitals have offered to promote this concept from a health perspective. They conducted studies on mental health in particular that provided information on physical, social, and symbolic landscapes and identified how design features affect the health of patients and staff.

In a study of the features of healing gardens applicable in urban spaces, Abdullahi et al. (2015) concluded that a healing garden should provide the visitor with a supportive and positive way of communicating. Depending on the stress level of the clients, the garden should have different spaces with different characteristics; quiet, emotional, rich in different species, spacious, shared, enjoyable, happy and nurtured. Finally, a healing garden, like all public parks and gardens, should be accessible to all.

4-2- Healing Gardens features

Healing Gardens are a bridge between modern landscape design and medical science. which are not only aesthetically functional but also because of the communication with users, heal their physical and especially mental illnesses, and, on a higher level,

prevent them from getting sick. The secret of these gardens success is the inherent attraction of Human to nature and the creation of a feeling of life and peace. Nikbakht (2004) outlines the principles of healing gardens as in table2.

Naili et al. (2012) characterized therapeutic landscapes as spatial variability, distribution of green materials and medicinal plants, spreading colorful flowers and plants, Encouragement to practice, reduction of ambient noise with the help of sound

| principles | Method | |
|--|---|--|
| User involvement in the design process | Questionnaire or interview | |
| stimulate as much as possible all the user's emotions | Sight | Application of colors |
| | smell | Use of aromatic herbs |
| | Taste | Planting fruit trees and edible medicinal plants |
| | touch | Planting trees and plants with the desired Texture in the skin, leaves, flowers and fruits |
| | hearing | Use of water and plants such as bamboo, Some grasses and birds singing |
| Ease of Understanding the Space of the Garden | Being clear about the garden boundaries Clearness of the entrance and exit of the garden Create traction to discover the garden | |
| Providing the elements for relaxation, self-awareness, and escape from a stressful day | Designer awareness of the stressor factors of garden users | |
| Ease of movement | Easy user movement and considering the necessary measures for users with movement problems | |
| Encourage wildlife in the garden | Encourage wildlife species such as birds, butterflies and small animals that need shelter by planting trees and attractive plant species for them | |
| Revive life cycles | Use plants that show the change of seasons | |
| Create a sense of thinking and self-awareness in the garden | Providing a quiet and peaceful place applying gentle water | |
| Providing users with a sense of comfort and relief | Providing a pleasant environment to escape the outside world and create peace | |

Table 2: principles of healing gardens
References: Nikbakht (2004)

system, minimize ambiguity (readability) and the appearance of water in different species.

Mardomi et al. (2014) described the characteristics of healing gardens in hospital environment as follows:

1. Providing access to and interacting with nature,
2. Providing the opportunity to choose, retreat and experience control over affairs,
3. Creating an environment for social gathering and interaction,
4. Creating a space for physical mobility (walking),

5. getting familiar

6. Silence and Being away from mechanical and machine noise,

7. Peace and security,

8. Readability,

9. Create positive and obvious features

Saeidian, Memarzia, Zakeri, Habibi (2016) mentioned sensory stimulation, relaxation, mental security and readability as the healing garden features.

5. Common features of Persian gardens and

healing garden

Naili et al. (2013) have described components of the Persian garden that give a sense of relief and relaxation in the individual and bring about healing of the eyes and the soul:

1. Spatial diversity
2. Green plant species
3. Colorful flowers and plants
4. Medicinal plants
5. Reducing undesirable environmental noise with the help of AVA system
6. Minimize ambiguity
7. The emergence of water in different species

The results of studies by Naili et al. recognized Persian gardens in accordance with the components of a therapeutic perspective as having an impact on one's mental health and proving the healing values of them.

study of Mardomi et al. (2014) showed high adaptation of features of Persian garden and healing gardens. They saw it as the most adaptable in terms of both readability and the ability to access and interact with nature.

The results of studies by Saeidian et al. (2016) showed the most similarity of Persian gardens with healing gardens in terms of readability, tranquility and providing sensory experience of nature and passive experience of nature.

6. Conclusion

The direct relationship between human and nature has positive effects on improving the mental and even physical condition of the people. Long-standing awareness of this has led to the design of what we call healing gardens. Persian gardens with thousands years of history and the wisdom appeared in their design and organization stimulate the human senses and provide the peace of mind. This study was conducted to extract the similarities of Persian gardens with healing gardens and use of principles of Persian gardens as a healing garden in therapeutic cases. The results show that these gardens are highly adapted to healing gardens. And they can be considered as a base for healing gardens, given Identity and histori-

cal background as well as their eco-design. And use the benefit of their positive features in the design and operation of Iranian healing gardens.

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