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ŞİFA BAHÇELERİNİN OLUŞTURULMASINDA PEYZAJ TASARIM KRİTERLERİ

(LANDSCAPE DESIGN CRITERIA IN THE DEVELOPMENT OF HEALING GARDENS)

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ÖZET

Bu çalışma, şifa bahçelerinin peyzaj tasarım ilkeleri çerçevesinde nasıl planlandığını, tasarım kriterlerini ve bu özel mekânların sağlık üzerindeki olumlu etkilerini kapsamlı şekilde incelemektedir. Şifa bahçeleri; doğal unsurlar, duyusal uyarımlar, sürdürülebilirlik ve kullanıcı odaklı erişilebilirlik ilkelerini bir araya getirerek, fiziksel, ruhsal ve sosyal iyilik halini destekleyen çok işlevli alanlar olarak tasarlanmaktadır. Tasarım sürecinde, farklı kullanıcı gruplarının ihtiyaçları gözetilerek, mahremiyet, sosyal etkileşim ve duyusal deneyimlerin dengelenmesi önem taşımaktadır. Çalışma kapsamında dünya ve Türkiye'den seçkin şifa bahçesi örnekleri ele alınarak, bu projelerin hem yerel hem de küresel bağlamda peyzaj mimarlığında sağlık odaklı tasarım anlayışına katkısı değerlendirilmiştir. Türkiye'deki tıbbi ve aromatik bitkiler bahçeleri gibi projeler, şifa bahçesi kavramının eğitim, tedavi ve sürdürülebilir peyzaj uygulamalarıyla bütünleştiği örnekler sunmaktadır. Sonuç olarak, şifa bahçeleri peyzaj mimarlığının sağlık temalı uygulamalarında önemli bir yer tutmakta olup, bu tür mekânların yaygınlaştırılması kullanıcı deneyimini ve toplum sağlığını olumlu yönde geliştirecektir. Sürdürülebilir ve kullanıcı odaklı tasarım yaklaşımlarının benimsenmesi, sağlık alanındaki peyzaj projelerinin etkinliğini artıracaktır.

Anahtar Kelimeler: *Şifa Bahçesi, Terapi Bahçesi, Peyzaj Tasarımı, Sürdürülebilir Peyzaj, Sağlık Mekânları, Duyusal Tasarım.*

ABSTRACT

This study comprehensively examines how healing gardens are planned within the framework of landscape design principles, their design criteria, and the positive effects of these special spaces on health. Healing gardens are designed as multifunctional areas that integrate natural elements, sensory stimuli, sustainability, and user-centered accessibility principles to support physical, mental, and social well-being. In the design process, balancing privacy, social interaction, and sensory experiences while considering the needs of different user groups is of great importance. Selected exemplary healing garden projects from both global and Turkish contexts are analyzed within the scope of the study, evaluating their contributions to health-oriented design approaches in landscape architecture at local and international levels. Projects such as medicinal and aromatic plant gardens in Turkey exemplify how the concept of healing gardens integrates with education, therapy, and sustainable landscape practices. In conclusion, healing gardens hold a significant place in health-themed applications of landscape architecture, and the proliferation of such spaces will positively enhance user experience and public health. The adoption of sustainable and user-focused design approaches will increase the effectiveness of landscape projects in the health sector.

Keywords: *Healing Garden, Therapeutic Garden, Landscape Design, Sustainable Landscape, Healthcare Spaces, Sensory Design.*

1. GİRİŞ

People use nature for various purposes; however, they tend to interact with it particularly in pursuit of health and well-being. Especially during challenging and adverse experiences, individuals turn to nature to meet their needs for recovery, rest, and protection. In this context, it is revealed that contact with nature has positive effects on human psychology; individuals can benefit from nature in various ways and whenever they need, and nature functions as a balancing element in life. Receiving sunlight, breathing fresh air, spending time in a well-designed garden, and establishing contact with nature contribute to distancing individuals—who spend most of their time in enclosed, technology-oriented environments—from complex urban settings, stimulating their senses and reducing their stress levels (Bell et al., 2018; Demirkan, 2019; Pouya, 2015; Şakar, 2011).

Although contemporary urban development processes create specific positive outcomes for individuals, the challenges of urban life also led to negative consequences for both individual and public health. Therefore, necessary measures to mitigate these effects should be carefully considered. In recent years, the increasing international interest in research on the effects of the built environment on human health has led to the growing prominence of the "health design" approach. In landscape architecture, this approach is embodied in the concept of "healing gardens." Designers of healing gardens aim to create spaces in which natural and artificial elements coexist harmoniously, thereby generating positive impacts on users; such environments perform a supportive function for the physical and psychological health of individuals (Pouya, 2015).

Healing gardens are specially designed spaces intended to enhance both the physical and psychological well-being of individuals and to support patients' treatment processes. These gardens aim to minimize the adverse effects of stress that may trigger new health problems in healthy individuals or aggravate existing conditions in those with health issues (Minter, 1995).

In general terms, healing gardens are spaces where occupational therapy practices can be implemented, offering a high level of spatial organization and living comfort, and characterized by functional and aesthetically qualified landscape designs. Allowing for both active and passive use, these gardens provide social, cultural, and physical comfort for individuals and play a significant role in reducing the intense stress and pressure experienced particularly by individuals with psychological disorders, as well as by different patient groups (Keçecioğlu, 2014; Külekçi & Sezen, 2020).

Healing gardens offer multidimensional benefits that support the physical, psychological, and social well-being of individuals:

- **Physical Benefits:** The physical activities that can be performed in these gardens support individuals' health, particularly those with chronic illnesses. It is stated that outdoor exercise, such as walking, helps regulate blood pressure and heart rate and reduces the risk of coronary heart disease.
- **Psychological Benefits:** In healing gardens, plants and other landscape elements that stimulate the senses play a central role in supporting psychological and physiological well-being. Sensory stimulation, including olfactory input from aromatic plants, contributes to relaxation, stress reduction, and the perception of restorative environmental qualities. Within this context, healing gardens are defined as designed outdoor spaces that activate the senses and promote the renewal of the psychological, physical, and biological body (Çelik & Çalışkan, 2021; Elings, 2006; Marcus & Barnes, 1999; Sakıcı & Var, 2014). Therefore, the incorporation of fragrant and aromatic plant

species into healing garden design may be regarded as an important therapeutic design component that enhances multisensory engagement and supports emotional well-being.

- **Social Benefits:** Healing gardens foster interaction and communication among individuals, thus contributing to the development of social skills. Collective activities and group work organized in these spaces provide positive social experiences, particularly for children, and play a supportive role in their development (Ulrich, 2002).

2. MATERYAL VE YÖNTEM

When considered within the planning and design process, healing gardens share many similarities with other garden types; however, they also encompass conceptual approaches and design components unique to themselves. In general, the design of healing gardens is based on the physical and psychological effects of nature on human health. At the same time, visual and auditory stimuli, such as sound, color, and form, play a significant role in these designs. Depending on the target user profile, specific design approaches are developed for different groups, such as the elderly, people with disabilities, and children. In this context, it may be emphasized that design decisions must be shaped by taking into account the characteristics of patients and visitors throughout the process of creating healing gardens (Keçecioğlu, 2014; Külekçi & Sezen, 2020; Pouya, 2015).

Healing gardens, which are planned specifically for health-related purposes, may be defined as spaces created to support the physical, mental, and emotional well-being of individuals experiencing physical or psychological problems and to reduce their levels of pain and stress (Arslan, 2017). Although these gardens are not directly therapeutic in nature, they may:

- Support patients in recognizing their own healing potential,
- Provide morale and resilience in the face of challenging treatment processes,
- Offer opportunities for physical therapy and horticultural therapy to be carried out jointly by patients and healthcare personnel,
- Enable healthcare workers to rest and disengage from workload and stress,
- Provide patients and visitors with a relaxing outdoor experience distinct from conventional hospital environments (Demirkan, 2019; Serez, 2011).

Given users' physical and psychological conditions, it is essential that the garden includes diverse spatial arrangements that respond to different needs and preferences. Accordingly, it is necessary to organize seating areas with varied characteristics, including different viewing opportunities, open and enclosed spaces, and a balanced combination of natural and built elements. For some individuals, silence, solitude, and privacy may come to the forefront, whereas for others, spaces that encourage social interaction may be more appealing. Similarly, while some users may feel at ease in shaded, enclosed spaces, others may prefer broad, open areas. Another factor that enhances feelings of comfort and safety is familiarity. The designed spaces mustn't evoke a sense of strangeness but rather convey a feeling of recognition; otherwise, perceptions of unfamiliarity may heighten anxiety in individuals already experiencing illness, concern, or stress. Therefore, during the planning stage of healing gardens, inclusive designs that appeal to all user groups should be developed by considering the usage potential of the area and the diversity of its users (Bergeman, 2012; Hartig & Marcus, 2006; Marcus, 2007).

Another fundamental quality sought in healing gardens is naturalness. In this regard, designs should be configured to enable continuous interaction with nature. The sounds of water, leaves,

and birds, views of the sky, harmonious color transitions, fragrant plants, and persistent natural patterns all generate therapeutic effects throughout the year. Therefore, it is essential that healing gardens be planned as environments that attract harmless wildlife such as birds and small animals, benefit from nature's calming visual and auditory qualities, and accommodate medicinal plants. In addition, water features, open spaces that enable the observation of the sky and moving clouds, and—where possible—horizon views can be regarded as powerful symbolic elements that remind patients of the continuity of life (Bergeman, 2012; Hartig & Marcus, 2006; Marcus, 2007). Life cycles observed in nature—such as a plant anchoring itself firmly in the soil through its roots or a deciduous tree turning green again in the spring—carry noteworthy symbolic meanings in terms of resilience and the motivation to hold on to life (Külekçi. 2023).

Within the scope of landscape architecture, factors such as site layout planning, selecting an appropriate location, ensuring physical and visual accessibility, planting and equipment that promote a sense of safety, maintaining design diversity, and the use of reflective elements are observed to come to the forefront in healing garden design. Therapy-oriented healing gardens may gain different characteristics depending on the targeted age groups and types of illness. For example, while silence and calm are prioritized in gardens designed for elderly individuals, those designed for children should incorporate areas for play and exploration (Arslan & Ekren, 2018). One of the most distinctive features of healing gardens is that they address all five senses. Research indicates that each sense contributes differently and positively to the healing process (Mimarlar, 2020; Şakar, 2011);

- **Effect of Color:** Color plays a significant role in therapeutic landscape design due to its influence on human perception, emotional responses, and psychological well-being. The use of color in healing environments has been shown to affect stress levels, cognitive functioning, and overall emotional states. In particular, blue and green hues, commonly associated with natural environments, have been found to exert calming effects by reducing heart rate and alleviating stress (Ulrich, 1984). Green, strongly linked to nature, promotes feelings of safety, relaxation, and restoration, thereby supporting psychological recovery processes (Kaplan & Kaplan, 1989). Conversely, warm colors such as red and yellow are known for their stimulating and attention-enhancing qualities, which can increase energy levels and sensory activation when applied in moderation (Elsadek & Liu, 2021; Gündoğdu & Esringü, 2025). In therapeutic garden design, the deliberate and balanced use of color is therefore essential; while cool colors facilitate relaxation and emotional regulation, warm colors can be strategically employed to encourage engagement and sensory stimulation. Through thoughtful color composition, therapeutic gardens can contribute effectively to emotional balance, stress reduction, and overall well-being (Wan et al., 2024).
- **Effect of Sound:** Noise pollution, to which individuals are intensely exposed, particularly in urban environments, has negative consequences for mental health and may cause various long-term health problems (Şakar, 2011). Healing gardens provide an environment that supports mental relaxation through natural acoustic elements such as water and trees. The therapeutic use of water sounds dates back to ancient times, and it is known that fountains and waterfalls create a soothing atmosphere through their rhythmic flow (Mimarlar, 2020; Minter, 1995).
- **Effect of Scent:** In healing gardens, aromatic plants can provide therapeutic effects not only through visual qualities but also by stimulating the sense of smell, thereby positively influencing individuals' mood and stress levels. The literature indicates that plant scents may support emotional relaxation and psychological restoration; therefore, the inclusion of plant species that activate the olfactory sense is considered an important design

criterion in healing garden design (Hussein, 2012; Öner & Pouya, 2024; Ulrich & Addoms, 1981; Yun et al., 2018).

- **Texture and Form (Touch and Visuality):** The textural and formal characteristics of plant materials used in healing gardens directly influence users' spatial perception and psychological well-being. As plants exhibit diversity in terms of color, height, and surface qualities in response to seasonal changes, species with conical or columnar forms create a more dynamic and striking spatial effect, whereas those with softer, weeping, or rounded forms contribute to a calmer and more tranquil atmosphere. Therefore, the deliberate and purposeful selection of the textural and formal properties of both plant and structural elements in healing gardens not only enhances visual comfort but also supports the reduction of stress, thereby contributing positively to the psychological healing process (Aksu & Demirel, 2012; Demirkan, 2019; Yalçınkaya, 2006, 2021; Yıldırım et al., 2025).

Healing gardens may be classified into various types according to the needs and intended uses of target user groups. In this context, the main types of healing gardens designed for different user groups may be listed as follows:

- Gardens that support the physical and mental development of children,
- Nursing home gardens that strengthen the care and rehabilitation processes of elderly individuals,
- Designs that respond to the sensory integration needs of individuals with autism spectrum disorder,
- Safe gardens enriched with tactile and auditory elements for visually impaired individuals,
- Meditation-oriented gardens aimed at enhancing self-awareness and emotional tranquility,
- Holistic healing gardens that appeal to all senses and gain functionality through multisensory stimulation,
- Special landscape areas that support therapeutic processes for individuals with Alzheimer's disease and other cognitive or psychological disorders,
- Therapeutic green spaces that contribute to the psychosocial well-being of individuals living with chronic illnesses such as HIV/AIDS (Marcus & Barnes, 1999; Pouya & Demirel, 2015; Stigsdotter & Grahn, 2002; Turgay, 2021; Ulrich, 1981).

Design Criteria for Healing Gardens for Children

Factors such as dense urbanization, unplanned land use, and heavy vehicle traffic have gradually reduced the availability of children's play spaces. Children express their cultural practices primarily through play. Research indicates that children's intellectual development does not occur solely through innate processes, but rather through interaction with their external environment. This suggests that play environments play a determining role in shaping children's futures (Pouya et al., 2016). For this reason, creating and planning dedicated spaces for children has become a necessity.

Healing gardens are spaces that, through play and various activities, help children express hidden emotions. These environments serve as sanctuaries that offer happiness and tranquility. Furthermore, interaction with nature stimulates curiosity and strengthens children's desire for exploration. Certain groups of children with permanent impairments can also benefit from healing gardens. Within these gardens, various games and activities may be organized to support rehabilitation and habilitation (Akın, 2006). Spending time in the garden and engaging with soil

provides children with disabilities opportunities to improve attention, develop independent behavior, and support both personal and physical development. Participation of children with mental and physical disabilities in active and passive play within therapy gardens promotes psychological well-being; it encourages sharing, calmness, and more harmonious social relationships.

Key design criteria for children's healing gardens include:

- Children's healing gardens should provide direct and frequent contact with natural elements, such as vegetation, water, and natural materials, to support cognitive restoration and emotional regulation in pediatric healthcare environments (Kaplan & Kaplan, 1989b; Ulrich, 1984).
- Outdoor healing spaces should be designed to promote sensory engagement through visual, tactile, and auditory stimuli, which have been shown to reduce stress and improve mood among child users (Marcus & Barnes, 1999).
- Spatial diversity, including both active and passive areas, should be incorporated to accommodate different emotional states and activity preferences of children undergoing medical treatment (Marcus & Sachs, 2013).
- Clear visual connections between indoor treatment areas and outdoor gardens should be maintained to enhance feelings of safety, control, and environmental familiarity for pediatric patients.
- Healing garden layouts should encourage short, easily accessible outdoor experiences, recognizing the limited physical endurance of hospitalized children (Moore, Goltsman, & Iacofano, 1997).

Design Criteria for Healing Gardens in Elderly Care Homes

Ageing is an inevitable stage of the human life cycle, accompanied by physical and cognitive changes that alter individuals' relationships with their physical and social environments (Oğuz et al., 2010).

Spending time in natural environments has been shown to reduce mental fatigue and enhance individuals' capacity for focused attention. Such settings also foster psychological and physiological improvements by reducing stress. The literature indicates that older adults who regularly spend time outdoors experience fewer health problems than those who do not. Conditions such as Alzheimer's disease, dementia, sleep disturbances, urinary system disorders, and localized pain have been reported at lower rates among elderly individuals who actively use outdoor environments. The ability to visually connect with outdoor settings, even from indoors, also contributes positively to psychological health and quality of life. These findings clearly highlight the importance and necessity of healing gardens for older adults (Oğuz et al., 2010).

Although some design considerations overlap with other healing garden types, elderly-oriented gardens require specific design responses. Key principles include (Arslan, 2017; Bulut & Göktuğ, 2006; Külekçi & Sezen, 2020; Marcus, 2007; Oğuz et al., 2010).

- Functional suitability to the users' needs should take precedence, even when aesthetic quality is desired.
- Seating areas should be provided where residents can socialize with family members and visitors.

- These spaces should emphasize privacy and quietness. Noise and distracting elements should be minimized. They should also offer staff opportunities for stress relief.
- Sensory gardens can be highly effective not only for children with autism but also for older adults. However, while children's gardens emphasize exploration and play, elderly gardens should prioritize serenity and tranquility, fostering a peaceful and reassuring atmosphere.
- Designs should apply fundamental design principles to create balanced and stable compositions, as research suggests that static environments enhance feelings of safety.
- Seasonal changes should not compromise the garden's functional or sensory qualities; the environment should provide sensory stimulation throughout the year.
- Garden furniture and both plant-based and structural elements should comply with ergonomic standards.
- Paths and access routes must accommodate wheelchair use, allowing users to circulate comfortably and reverse direction when needed.
- High curbs should be avoided; handrails should be provided where necessary.
- Seating should include backrests and armrests.
- Spaces and objects should be easily perceived, supported by appropriate use of colour.
- Designs that may disorient or confuse elderly individuals with Alzheimer's disease should be strictly avoided.

Design Criteria for Healing Gardens for Individuals with Autism

Autism is a lifelong neurodevelopmental condition that affects higher-order cortical functioning and socialization, communication, language, and many daily activities. Individuals with autism often experience difficulties in communication, both verbal and non-verbal. Cognitive functions such as imagination and problem-solving may also be impaired. Common characteristics include difficulty making eye contact, limited use of facial expressions and gestures, lack of social engagement, deficits in empathy, and speech problems. Behaviorally, autistic individuals may resist changes in routine and respond atypically to stimuli—for example, persistently choosing the same path or displaying intense interest in particular topics (Şensoy, 2017).

Sensory perception in autistic individuals frequently differs from that of typically developing peers. They may respond in unusual ways to auditory, visual, or tactile stimuli. Some children display early-stage insensitivity to sound, which may be misinterpreted as hearing impairment; others fixate on moving or shiny objects. Some individuals prefer dark environments due to light sensitivity, while others may show either hypersensitivity or very little response to thermal or taste stimuli. Physical contact may be unwelcome, and tactile interaction can provoke adverse reactions. Overall, autistic individuals' sensory responses to environmental stimuli differ markedly from typical patterns, reflecting a distinct perceptual experience of the world (Kaya, 2019; Külekçi, 2023; Şensoy, 2017).

In the rehabilitation of autistic individuals, the beneficial role of sensory stimuli is central. Therefore, garden designs should aim to create environments that support sensory perception. A "sensory garden" theme may be adopted to emphasize multisensory engagement, thereby enhancing well-being and quality of life (Mostafa, 2014).

Design Criteria for Healing Gardens for the Visually Impaired

Multisensory design in therapeutic and healing environments recognizes that humans experience space through multiple sensory systems, and that built environments should respond to visual, auditory, tactile, and spatial cues in a coordinated way. Research suggests that access to natural light and views of nature supports psychological restoration and contributes to positive health outcomes in healthcare settings ((Sternberg, 2009; Ulrich, 2009)). Controlling acoustic conditions and incorporating appropriate textures and materials can enhance comfort, reduce stress responses, and support emotional regulation (Jenkins, Yuen, & Vogtle, 2015). Integrating these sensory principles into design contributes to environments that not only promote orientation and ease of movement but also support well-being across diverse user groups.

Design Criteria for Meditation-Oriented Healing Gardens

Meditation gardens are among the most prominent forms of healing gardens, designed to facilitate relaxation and contemplation. Their primary purpose is to enable individuals to distance themselves from stress, connect with their inner selves, and meditate. Rooted particularly in Far Eastern traditions, meditation involves a close connection with nature as a pathway to calmness and self-awareness. The essential aim of meditation gardens is to help individuals reconnect with their essence, recognize themselves as part of nature, and cultivate respect for it (Mimarlar, 2020).

Design Criteria for Sensory Healing Gardens

Therapeutic sensory gardens are designed to support physical, psychological, and social rehabilitation by activating all five human senses—vision, hearing, touch, smell, and taste—within a carefully structured landscape environment. These gardens are commonly integrated into healthcare facilities, rehabilitation centers, care homes, and educational institutions, where interaction with nature contributes positively to users' mental and physical well-being (Dilani, 2001; Marcus & Barnes, 1999). Design approaches emphasize both aesthetic and functional qualities, encouraging users to explore the space while experiencing emotional comfort and sensory stimulation. Key design principles include the use of multisensory plant selections, accessible circulation routes, non-slip and safe surface materials, and the integration of water elements that provide auditory and microclimatic benefits(Gerlach-Spriggs, Kaufman, & Warner, 1998). Zoning within the garden is often applied to accommodate different user groups and therapeutic needs, allowing for age-specific, treatment-oriented, or sensory-focused areas (Beckwith & Gilster, 2014). In addition, features such as raised planting beds, handrails, Braille signage, and varied paving textures support independent use by individuals with physical or sensory impairments, reinforcing the therapeutic potential of the garden environment (Land Transport NZ, 2009).

Design Criteria for Healing Gardens for Individuals with Alzheimer's Disease and Other Mental Disorders

Because cognitive impairment is more prominent among individuals with Alzheimer's disease and other psychiatric conditions, design criteria for these healing gardens differ from those intended for other user groups. Such gardens offer a variety of activity opportunities (Carpman, 2003). o support individuals who experience spatial orientation difficulties, simple pathway layouts are used, and buildings are typically connected via a single entrance/exit (Zeisel, 1999) In order to evoke memories of domestic life, large open spaces and naturalistic planting areas

are incorporated (Brawley, 2005). In addition, outdoor environments for the elderly are supported by semi-enclosed, transitional pathways that ease movement between indoor and outdoor spaces (Pouya, 2015; Zeisel, 1999).

Design Criteria for Healing Gardens for Patients with HIV/AIDS

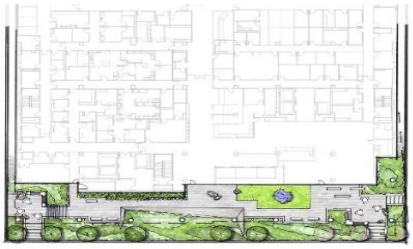
At the Cardinal Cook Hospital in New York, the Joel Schapner Memorial Garden—formerly housed within a tall building, was transformed by its designer into a vibrant green space for patients with HIV/AIDS and hospital staff. Because some of these patients must avoid direct sunlight due to health complications, shaded areas were intentionally incorporated into the design (Marcus & Barnes, 1999; Pouya, 2015; Salahesh, et al., 2013).

3. BULGULAR VE TARTIŞMA

3.1 Healing Garden Examples from Around the World

3.1.1. Richmond Children's Hospital

The designers made use of features such as the sky terrace with a green roof and a street-facing view. The James River, located to the south of the building, served as the main inspiration for the design. The changing patterns on the pavement represent the flowing river, while the use of natural vegetation imitates the wooded riverbanks (Anonymous, 2022a).



Figures 1–2. Concept and garden plan views of Richmond Children's Hospital (Anonymous, 2022a; Külekçi, 2023).

Figures 3–4. General and contextual views of Upper Chesapeake Cancer Center and Richmond Children's Hospital (Anonymous, 2022a; Anonymous, 2022b; Külekçi, 2023).

The Upper Chesapeake Cancer Center, located in the northeastern part of the state of Maryland, USA, is the only rehabilitation center in the region and makes a significant contribution to the regional healthcare community. The designers developed the project based on guiding principles such as enhancing the patient experience, creating a strong physical identity, and establishing a healing environment that helps reduce stress (Anonymous, 2022b).

Figure 5. Seating areas of Upper Chesapeake Cancer Center (Anonymous, 2022b; Külekçi, 2023)

The site features a multifunctional and flexible design. There is a clearly defined entrance with vehicle access and an open connection to the hospital. Two-storey courtyard gardens located entirely on the building provide views for inpatient rooms, diverse seating areas, and habitats attracting birds and butterflies. The plant selection emphasizes colours, textures, and patterns that remain visually attractive throughout all four seasons. The garden also includes calming and tranquil water features and a labyrinth. Open lawn areas are available for special events and exercise (Anonymous, 2022b; Külekçi, 2023).

3.1.2. Klinik Floridsdorf Hospital

Healing gardens were implemented in Austria as a pioneering application through the Klinik Floridsdorf (Vienna North Hospital) project. This project is one of the first examples in which a healing landscape garden was consciously integrated into the hospital planning process. Designed in collaboration between Martha Schwartz Partners and 3:0 Landschaftsarchitektur, the project aims to support the physical and psychological recovery processes of patients. The layout of healing gardens and therapy paths within Klinik Floridsdorf is shown in the visual below (Geneza, M., 2024; IFLA, 2022).

Figures 6–7. Views and project presentation of Klinik Floridsdorf Hospital (IFLA, 2022).

The project includes a variety of therapy gardens, movement rehabilitation areas, and walking paths of different lengths. These paths begin inside the hospital and extend through therapy gardens, lawns, and meadows, then continue by winding through the natural landscape. Patients may structure their walks according to their mobility levels and emotional states. The walking routes allow patients to challenge themselves and gradually increase the distance they cover (Geneza, M., 2024; IFLA, 2022).

In addition, the water features within the project connect different garden areas while also functioning as a stormwater management system. These elements create habitats for various invertebrate species and enhance the ecological value of the landscape.

The Klinik Floridsdorf project stands as a successful example of integrating healing landscape design into hospital environments and serves as an inspiration for future projects in this field.

3.2. Healing Garden Examples from Türkiye

3.2.1. Zeytinburnu Medical Herb Garden

Located in a central district of İstanbul and established on a 14-decare site, the Zeytinburnu Medical Herb Garden is recognized as Türkiye's first comprehensive medical herb garden. Operating for approximately 18 years since its establishment, the garden hosts more than 700 species of medicinal and aromatic plants and provides an important platform for the conservation, promotion, and sustainable use of plant diversity. Detailed information panels and technology-supported labels present the biological characteristics and uses of the plants to visitors. In the garden design, synthetic fertilizers and chemical pesticides have been completely abandoned, with organic waste reused as natural fertilizer and water resources managed efficiently. Drip and sprinkler irrigation techniques are used to ensure water conservation. The Zeytinburnu Medical Herb Garden functions as an important center both for scientific research and for public education and awareness. Visuals from the garden are presented below (Zeytinburnu Belediyesi, 2023).

Figure 8. Views from Zeytinburnu Medical Herb Garden (Zeytinburnu Belediyesi, 2023).

Most of the plants grown in the garden are labeled, and some labels include QR codes that provide visitors with detailed and audio information about the biological properties and uses of the plants. In line with ecological principles, plant waste is reused as natural fertilizer, and water-saving drip and sprinkler irrigation systems are implemented. Furthermore, the garden offers informative and experiential learning opportunities through educational programs and events organized on medicinal plants.

3.2.2. Kocaeli Medical and Aromatic Herb Garden

The Medical and Aromatic Herb Garden in Kocaeli was established by the İzmit Municipality within the Yenişehir District on an area of approximately 2,000 square meters. As the first thematic garden in the region, it was planned with the aim of introducing, conserving, and promoting the sustainable use of medicinal and aromatic plant species. A total of 64 species are cultivated in the garden, and detailed information on the biological characteristics and potential benefits of each plant is provided to visitors through prepared panels (Geneza, M., 2024). A visual presentation of the garden is shown below.

In the garden design, ecological conditions and the growth requirements of the plants were considered, with the dual goal of supporting botanical diversity and offering visitors an educational and experiential environment. In this way, both environmental awareness is raised and the conservation of natural plant resources in the region is supported. Thematic gardens play a critical role in maintaining biodiversity in urban areas and provide a foundation for public health and environmental education activities.

The Kocaeli garden also stands out for its sustainable landscape practices, including plant selections adapted to climatic conditions and site-specific spatial arrangements. The design approach, which respects the natural life cycles of plants, ensures the long-term functionality and ecological balance of the garden. In addition, the garden offers visitors an opportunity to interact with nature and reduce stress, serving as an important healing environment.

In conclusion, the Kocaeli Medical and Aromatic Herb Garden represents a model that may guide local governments in urban landscape projects and make significant contributions to biodiversity conservation, sustainable environmental management, and the development of public environmental awareness.

3.2.3. Trakya University Medical and Aromatic Herb Garden

Established in 2024 by Trakya University, the Medical and Aromatic Herb Garden was created to introduce the medicinal and aromatic plants used during the Ottoman period and to transmit this cultural heritage to future generations. The garden stands out as a practical example that serves both educational and therapeutic purposes. Visuals of the garden are presented below.

In addition to various medicinal and aromatic plant species, the garden also includes information panels describing the historical and therapeutic properties of the plants. QR codes placed next to the plants allow visitors to access detailed information about each plant's origin, use, and potential health effects.

Aiming to preserve Türkiye's rich flora and the Ottoman medical tradition, the garden also features a landscape design that enables users to directly interact with plants. The plant species in the garden were selected based on the therapeutic properties of their roots, leaves, flowers, and fruits.

This example demonstrates how the healing garden concept is interpreted in Türkiye and how landscape design is integrated with health tourism and educational functions.

4. SONUÇ

This study aims to reveal the role of healing gardens in creating health-oriented spaces within the context of landscape design. Healing gardens are multifunctional landscape areas that allow users to experience the restorative power of nature while supporting physical, mental, and emotional well-being. In the design process, fundamental criteria such as sensitivity to user profile, sensory stimulation, accessibility, safety, and sustainability emerge as key factors that directly influence the functional success of these gardens.

The international and national examples examined within the scope of the research demonstrate the positive impacts of designs tailored to the needs of different user groups (such as children, the elderly, individuals with disabilities, and people with autism) on health. Projects such as Klinik Floridsdorf stand out with therapy pathways designed for physical rehabilitation, while the Richmond Children's Hospital example enables children to build emotional connections with

color- and play-oriented spaces. In Türkiye, the Zeytinburnu, Kocaeli, and Trakya University Medicinal Plants Gardens represent qualified implementations that combine the promotion of therapeutic plants with nature-based health education.

In this context, healing gardens should not be considered only as hospital gardens; rather, they are spaces that can simultaneously accommodate multiple functions such as education, therapy, nature awareness, and the transfer of cultural heritage. The conscious use of natural elements, the spatial organization structured in accordance with the target user profile, and the adoption of design principles that appeal to the senses significantly enhance the success of these areas.
In Türkiye, healing garden applications are still limited in number. However, as such exemplary projects increase through the collaboration of local authorities, universities, and healthcare institutions, they will make important contributions to both individual well-being and societal health awareness. In this regard, it is essential to strengthen the health-oriented design approach within the discipline of landscape architecture and to integrate healing gardens as an inseparable part of urban life.

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