

## LANDSCAPE PLANNING OF HOSPITAL CONSTRUCTION RELATED GREEN AREAS - CURRENT TRENDS

### AMENAJAREA PEISAGERĂ A SPAȚIILOR VERZI AFERENTE CONSTRUCȚIILOR SPITALICEȘTI – TENDINȚE ACTUALE

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**Abstract.** Nature has been venerated since ancient times for its beneficial effects on human health from a holistic point of view. With the progress of science and technology, man has forgotten to look for healing in nature, sanitary facilities evolving in to a real industrial plant for health, the rigour of medical procedures and specialty of pharmaceutical synthesis products exclude almost brutal in most cases anything can we called healing effect of nature through what she gives us. Studies on the subject have demonstrated curative role of landscape and gave a new direction on designing medical centers. According with that, recently appeared so-called „therapeutic gardens” and „healing gardens”. This paper illustrates this tendency of returning to the therapeutic effects of the nature and compares the achievements of international medical centers with the first steps taken in the same direction in Romania.

**Key words:** hospital, healing landscaping, therapeutic gardens

**Rezumat.** Natura a fost din cele mai vechi timpuri venerată pentru efectele sale benefice asupra sănătății ființei umane din punct de vedere holistic. Odată cu progresul științei și tehnologiei, omul a uitat să mai caute vindecarea în mijlocul naturii, spațiile sanitare evoluând spre adevărate uzine medicale, în care rigorile procedurilor terapeutice și specializarea produselor farmaceutice de sinteză exclud, aproape brutal și în cele mai multe cazuri, orice poate fi numit efectul vindecător al naturii prin tot ce ne oferă ea. Studii realizate pe această temă au demonstrat rolul curativ al peisajelor și au dat o nouă direcție proiectării centrelor medicale. Au apărut astfel, în ultimii ani, așa numitele grădini vindecătoare precum și grădinile terapeutice. Lucrarea de față aduce în lumină această tendință de revenire la efectele terapeutice ale naturii și compară realizările unor centre medicale internaționale cu primii pașii pe aceeași direcție realizați în România.

**Cuvinte cheie:** spitale, amenajări vindecătoare, grădini terapeutice

## INTRODUCTION

Man and nature in its wholliness are in perfect cohesion for millennia, but this link is in a fragile balance. In last decades, the human being forgoted to

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maintain this balance, with the accelerated development of modern consumist society based on industrialization, robotics and computerization.

Human health is also given by a good balance between states of physical, psycho-emotional and spiritual, but also the harmonious integration into the natural environment. Although the concern for therapeutic gardens existed since the Middle Ages, by arranging monasteries courtyards where they took care of the sick people, nowadays, very few green areas related to hospitals or health care facilities are designed so as to be used for the benefit of patients, healthcare professionals or visitors. Many of them are taken with the historic buildings of the nineteenth century, pavilionar type constructions, which includes landscaped gardens already. Numerous studies have highlighted both the need for a return to the concept of holistic medicine (healing concomitant soul, psyche and then the physical body), but rather the restoration of the millennial traditions on healing methods by harmonizing between man and nature but also with our inner self. Thus appeared the so-called "healing gardens" or "therapeutic gardens" near the medical centers of the world where both sick people and the healthy ones, the elderly or young people with physical disabilities or mental illnesses, children and parents can regain their balance, self-confidence, life force and even its own healing resources.

## MATERIAL AND METHOD

A study conducted in 1995, by Clare Cooper Marcus, MA, MCP and Marni Barnes, MLA, LCSW, in University of California, Berkeley (Cooper-Marcus and Barnes, 1995), highlighted the history of medical centers gardens, a number of typologies of green spaces of hospitals, also several case studies of such gardens, after giving them some recommendations for the design and development of therapeutic garden.

This creates describes some types of green areas related to medical facilities, the authors found in this study (Cooper-Marcus and Barnes, 1995).

- Rarely seen, generally on the outskirts of cities, "**Landscape grounds**" or "**park**" or "**campus**" are surrounds and connects buildings of the same medical center through walking alleys and rest places, such as the medical center Kaiser Permanente in Walnut Creek, California, or St. Mary's Hospital, Newport, Isle of Wight, England (fig.1).



**Fig. 1** The images of St. Mary's Hospital Park, Newport, Isle of Wight, England (Cooper-Marcus and Barnes, 1995)

- **Landscape setback**, located between the principal façade and the property alignment to the main street building access. Being the only green space outside, this setback can become frustrating for patients and staff due to lack of rest places or paths for walking that are not found in most such gardens (eg.: main entrance of the Alta Bates Medical Center, Herrick Campus, Berkeley, California).
- **The front porch** at the main entrance of the building is often found to hospitals or care centers and holds both a representative role by giving visibility to entry, but also functional, to protect exterior stairs or ramps of the buildings, visitor reception with pedestrian and auto access protected from rain, with the possibility of placing some banks for waiting or telephone booths, and small places for smokers (eg.: Main Entry, John Muir Medical Center, Walnut Creek, California).
- **The entrance garden** is one that is designed from the start to be used by patients and staff as green space for relaxation and rest outdoors, being in danger of overexposure to noxes of the car traffic or parking lots adjacent to the main street (eg.: Main Entrance, Marin General Hospital, Greenbrae, California).
- **The patio** is usually surrounded by buildings or pavilions of the same medical complex and should be visible and accessible to visitors from entering in the main hall of the building. It can be a space planted with trees small and medium, flowers or decorative herbs, with even water games and can serve as rest area or outdoor terrace for a coffee shop or a buffet adjacent to the court (eg.: Cafeteria Courtyard, Novato Community Hospital, Novato); It can also be equipped with games for children (eg.: Children's Courtyard, Kaiser Permanente Medical Center, Vallejo, California).
- **The plaza** is an outside area of buildings that can be mostly paved, with little vegetation inserts and furnished so that it can be used for rest and relaxation by the beneficiaries of medical services but also by visitors or medical staff (eg.: Seating Plaza, Alta Bates Medical Center, Herrick Campus, Berkeley, California).
- **The roof terrace** is usually open space, bordered on one side of the building that can be used to enjoy views of the surrounding (eg.: Perimeter Terrace, Davies Medical Center, San Francisco, California).
- **Roof Gardens** of medical centers are specifically designed to benefit all users and can be too exposed to strong sunlight or wind, noise or air conditioning equipment usually positioned on the roof (ex.: Alta Bates Medical Center) (fig.2).
- **Healing gardens**, indoors or outdoors, are designed specifically for this purpose in hospitals and through the planning austerity, fosters retrieving self-consciousness or activities that require confinement - reading or meditation (eg.: Healing garden of Oncology Department, Marin General Hospital, Outpatient Medical Building, Greenbrae, California; The healing garden of Kaiser Permanente Medical Center, Roseville, California).



**Fig. 2** Roof garden of Alta Bates Medical Center, Berkeley, California  
(Cooper-Marcus and Barnes, 1995)

- **Viewing garden** is the kind of landscaped green space that can be viewed but can not be accessed within it, with all sensitive perceptions, what becomes frustrating some times (ex.: Central Atrium, John Muir Medical Center, Walnut Creek, California).
- **Viewing walking garden**, related with the aterior garden, is a space that can be accessed but very few people at the same time (ex: Internal Gardens, St. Mary's Hospital, Newport, England; Flower Gardens, Stanford University Medical Center, Stanford, California)

According to Roger Ulrich's theory, taken by Marcus C. Cooper and M. Barnes (Cooper-Marcus and Barnes, 1995, Cooper-Marcus, 2007) in order to draw up a guide to achieve a healing gardens, the researchers have start with the premises of meeting several requirements observed during the studies as essential necessary for such a space:

- to create opportunities for movement and exercise;
- to give the opportunity of choosing between spaces, to ensure discretion and create a feeling of self-control;
- to provide meeting space and socializing for all those who would like to use such spaces;
- to ensure access to nature and other fun activities and beneficial.

In addition to these basic requirements, to achieve the full potential of such gardens, the researchers stressed the importance of fulfilling several other features:

- the visibility garden space since its entry into the building or signs of proper medical;
- the easy access to this space;
- the familiarity garden;
- the peace and comfort of the garden;
- the presence of objects of art with positive message, unambiguous.

## RESULTS AND DISCUSSIONS

Compared with early foreign achievements in the field of therapeutic gardens, in Romania, not early than June 2014 was inaugurated the first

therapeutic garden in Mocrea courtyard of Psychiatric Hospital in Arad (fig. 3) (<http://www.healinglandscapes.org>). The garden covers an area of 1500 square meters and consists of three subareas:

- the seedlings product area where patients work on tables, planting seeds and sprouts in pots;
- the area for planting in wooden boxes
- the planting area on earth where patients can create floral arrangements.

The plants used are chosen based on their role, being distinguished three categories:

a) the plants that stimulate tactile sensory (Sedum, Miscanthus, Salvia argentea);

b) the herbs that besides the olfactory role they have also therapeutic and medicinal effects by domestic consumption (Mentha piperita, Ocimum basilicum, Thymus, Melissa);

c) the plants which relaxes by color and scent (Lavender, Jasmine, Impatiens, Dianthus, Euonymus, Clematis, Rudbeckia).

Each of the 40 patients of the hospital are empowered and helped to socialize, to join the group by attending various easy tasks, from preparing the soil, planting seeds and taking care of plants in their various stages of growth.



**Fig. 3** Therapeutic garden at the Psychiatric Hospital in Mocrea Arad, Romania (<http://www.healinglandscapes.org>)

The second event followed the previous one at short time, in November 2014, by opening the garden for horticultural therapy, at Căpâlnaș Psychiatric Hospital, Arad, under the supervision of horticultural engineer Marcela Necșanu (<http://www.romania-insider.com>).

Also in October 2016, the event Ecoweek (<http://ecoweek.org.wixsite.com>) presented a project to redevelop the green space for the Victor Babeș Hospital in Bucharest, so as to turn it into a useful space for patients, medical staff and visitors of the hospital, respectively a therapeutic garden.

Susan Erickson points out in his paper (Erickson, 2012) that every garden should be designed for the specific needs of its users: patients with various physical or mental disabilities, patients recovering from strokes or other injuries debilitating, patients suffering from terminal illnesses or other patient populations including children who want to regain vitality and joy of life. Also refers to the medical staff of that medical institution or hospital visitors who can spend relaxing moments in a revitalizing environment specially designed for them. This can only be achieved through close collaboration between landscape architect and specialized medical personnel to different therapies that can be done in an outer natural frame (eg.: occupational therapy including activities horticultural chineto and physio-therapy, therapy recreation or therapies complementary such as chromotherapy, music therapy, aromatherapy, cristaloterapy, etc).

## CONCLUSIONS

Studies have shown that green spaces related to hospital facilities are beneficial to both patients and medical staff or visitors, whether under these arrangements are taken into account the needs of each category of persons who benefit from them. The first part of this paper reviews the many types of design of green spaces, related to hospitals abroad and refers to some requirements and characteristics necessary for the successful implementation of such a design. In the second part refers to therapeutic gardens benefits of the two psychiatric hospitals mentioned, in western of Romania. This paper emphasize the importance of involving in the process of designing a healing garden of all those who are creating the garden but also the specialists in charge of treating and caring for patients.

## REFERENCES

1. **Cooper-Marcus Clare., Barnes M., 1995** - *Gardens in healthcare facilities: uses, therapeutic benefits, and design recommendations*, Published by: The Center for Health Design, Inc., Printer: Eusey Press, U.S.A.
2. **Cooper-Marcus Clare, 2007** - *Healing Gardens in Hospitals*, IDRP Interdisciplinary Design and Research e-Journal <http://www.idrp.wsu.edu/>; Volume I, Issue I: *Design and Health*, January,
3. **Erickson M. Susan, 2012** - *Restorative garden design: Enhancing wellness through healing spaces*, Art and Design Discourse, no. 2, June
4. \*\*\*, <http://www.healinglandscapes.org/blog/2014/07/the-first-therapeutic-garden-in-romania/>
5. \*\*\*, <http://www.romania-insider.com/western-romanian-psychiatric-hospitals-start-using-therapeutic-gardening/>
6. \*\*\*, <http://ecoweekorg.wixsite.com/ecoweekbucharest2016/gardens-that-heal>