

UDC 72.01/.05

DOI <https://doi.org/10.32782/uad.2022.4.4>**Kryvuts Svitlana Vasylivna,**

PhD, Associate Professor,
Department “Environmental Design”,
Kharkiv State Academy of Design and Arts
ORCID ID: 0000-0003-3916-7142
svkdesignsvk@gmail.com

Mruye Fatme Ali,

Master of the second year of study,
Department “Environmental Design”,
Kharkiv State Academy of Design and Arts
ORCID ID: 0000-0003-1262-0402
tatimrouwe99@gmail.com

MAIN ASPECTS OF THE PEOPLE-CENTERED APPROACH IN THE FORMATION OF THE ARCHITECTURAL AND LANDSCAPE ENVIRONMENT OF THE HOSPITAL TERRITORY

The article defines the main accents for the formation of the design of the architectural and landscape environment of the territory of hospitals. Design issues of health care facilities are extremely important for ensuring the quality of life of citizens of any country. The same applies to the adjacent territories, which allow to completely solve the issue of comfortable stay of sick people and their visitors on the territory of medical or preventive facilities. In this context, one of the directions for solving the above-mentioned tasks is design based on the principles of safety, comfort and aesthetic harmony, which in the design of the architectural and landscape environment make it possible to ensure the preservation of natural components in unity and harmony with the environment and people. So, the problems of our research are related to the definition of the main issues related to the formation of a safe design of the architectural and landscape environment of the territory of medical institutions, the disclosure of the compositional and planning principles of their solution. The reason for choosing these questions is that in today's conditions, a person is constantly under the influence of stressful circumstances, which contribute to the formation of constant tension, the development of a depressive or aggressive state, which also leads to other psychological and physical diseases. Meanwhile, the influence of the natural environment is very effective. If the patient is in the natural environment for a certain day, it significantly reduces the symptoms of irritability, anxiety and fatigue. The interaction with natural elements, the availability of the compositional and planning solution of the territory of the medical institution, the comfortable and expressive design of the rest areas – have a great impact on the psycho-emotional state of a person and contribute to his faster recovery. Thus, if you pay attention to solving the issues of shaping the design of the territory of medical institutions with the help of natural elements and additional objects of small architectural form – all this will help to improve recreation and improve the health of people.

Key words: territory, medical and preventive institution, design of architectural and landscape environment, principles, natural elements.

Кривуц Світлана, Мрує Фатмі Алі. ОСНОВНІ АСПЕКТИ ЛЮДИНОЦЕНТРИЧНОГО ПІДХОДУ ДЛЯ ФОРМУВАННЯ ДИЗАЙНУ АРХІТЕКТУРНО-ЛАНДШАФТНОГО СЕРЕДОВИЩА ТЕРИТОРІЇ ЛІКАРЕНЬ

У статті визначено основні акценти для формування дизайну архітектурно-ландшафтного середовища території лікарень. Проблеми дизайну закладів охорони здоров'я є вкрай важливими для забезпечення якості життєдіяльності громадян будь-якої країни. Так само це стосується і прилеглих територій,

що дозволяють повністю вирішити питання комфортного перебування хворих людей та їх відвідувачів на території медичних або профілактичних об'єктів. У такому контексті одним з напрямів вирішення зазначених вище завдань є дизайн, що базується на принципах безпеки, комфортності та естетичної гармонійності, які у проектуванні архітектурно-ландшафтного середовища дозволяють забезпечити можливості для збереження природних компонентів в єдності та гармонії з навколишнім середовищем та людиною. Отже, проблематика нашого дослідження пов'язана з визначенням головних питань, що стосуються формування безпечного дизайну архітектурно-ландшафтного середовища території медичних закладів, розкриття композиційно-планувальних принципів їх вирішення. Причиною обрання зазначених питань є те, що в умовах сьогодення людина перебуває під безперервним впливом стресових обставин, які сприяють формуванню постійної напруги, розвитку депресивного або агресивного стану, що також призводить до інших психологічних та фізичних захворювань. Навпаки, вплив природного оточення є дуже ефективним. Якщо пацієнт протягом певної доби перебуває в природному оточенні, це значно зменшує симптоми дратівливості, тривожності і втоми. Взаємодія з природними елементами, доступність композиційно-планувального рішення території медичного закладу, комфортний та виразний дизайн зон відпочинку має великий вплив на психоемоційний стан людини та сприяє її скорішому оздоровленню. Таким чином, якщо приділити увагу вирішенню питань формування дизайну території медичних закладів за допомогою природних елементів та додаткових об'єктів малої архітектурної форми, все це допоможе вдосконаленню відпочинку та оздоровленню людей.

Ключові слова: територія, медично-профілактичний заклад, дизайн архітектурно-ландшафтного середовища, принципи, природні елементи.

Introduction. Creating a design of an architectural and landscape environment is an urgent problem today, which is based on taking into account many tasks of a functional, psychological and aesthetic nature. A high-quality solution to the above tasks leads to the successful implementation of social requirements of any country and to taking into account the problems of people with disabilities based on the principles of universal design. The formation of the unique structure of the territory of medical and preventive institutions allows to determine the most modern accents of the human-centered approach, the main ones worth mentioning are: 1) defining the tasks of forming functional zoning; 2) solving problematic issues based on the principles of safety, environmental friendliness, comfort and aesthetic harmony; 3) focusing attention on factors that reflect the solution of social issues. In addition, all significant tasks systematized in this study can be used in the training of design students of the second level of education.

Materials and methods. To solve these tasks, a systematic approach was applied, which led to the examination of the territories of medical institutions in the complex of their multifaceted components, their coordinated interaction. At various stages, general scientific methods (method of visual observation, method of analogies) and special methods of scientific research (methods of functional, constructive-

technological, ergonomic, figurative-stylistic and artistic-compositional analysis) were used.

Discussion. Medical centers are multifunctional complexes in which young specialists are trained, patients are rehabilitated and treated in multidisciplinary areas, scientific research is conducted, and development projects of the country are developed. Modern world architectural opinion emphasizes the extremely limited number of studies aimed at the scientific justification of architectural and design decisions of medical institutions [1]. Regarding conceptual issues, the problem of psychological adaptation of a person to the conditions of existence in the physical environment attracts the most attention. According to modern ideas, if the physical environment does not correspond to the usual psychological attitudes of a person, conflict, misunderstanding, stress and adverse mental states arise: confusion, disappointment, anger, aggression [1]. Scientists have clearly formulated the need for personalization of personal space and the need to create a positive atmosphere due to the professional implementation of the design of the architectural and landscape environment [4]. Therefore, the analysis and systematization of the main aspects based on the principles of safety, environmental friendliness, comfort and aesthetic harmony is an urgent issue for the practical solution of the design of the territory of medical facilities on the basis of scientifically

based conclusions. We will analyze the main tasks, relying on the professional practice of architectural studios and design concepts.

Defining the tasks of forming functional zoning involves a holistic approach and coordination of all proposed elements, where a planning solution for the territory of medical and preventive facilities is professionally developed, the main functional zones are selected, an information message system is decided, and compositional accents in the form of small architectural forms, lighting systems and landscaping elements are proposed. According to the research of T. Pashintseva, the main problems in the process of projecting and

designing the territory of a medical institution are the definition of general compositional schemes in the planning decision, the selection of the most optimal volume-spatial solution of space, the design of small architectural forms, compliance with technological requirements [6].

As evidenced by the visual material of the study, the spatial composition of the design of the territory, in this case, can differ in the variety of methods of its construction, among which the following should be mentioned:

– *the adoption of symmetrical balance*, which allows to create a soothing and comfortable environment in the territory of hospitals;

– *the adoption of asymmetric balance*, which helps to reveal the quality of the formation of the design of the functional zones of the territory due to the different sizes of the proposed elements and forms, but with an emphasis on their mutual coordination and subordination.

Design-organization of the territory of hospitals in accordance with the *provision of psychological comfort* is based on the use of the *principles of safety, environmental friendliness and comfort* (Figure 1).

The first principle (safety) takes into account ergonomic standards, the requirements of people with disabilities and provides free access to the necessary areas in the hospital. In addition, the above-mentioned tasks when planning the territory of a medical institution should take into account its features and emphasize the clear distribution of the territory with the formation of functional zones isolated from each other. For each of these zones, the requirements for landscaping and landscaping are applied not only in accordance with the *principle of safety*, but also in accordance with the *principle of comfort*.

In turn, the *principle of environmental friendliness* is

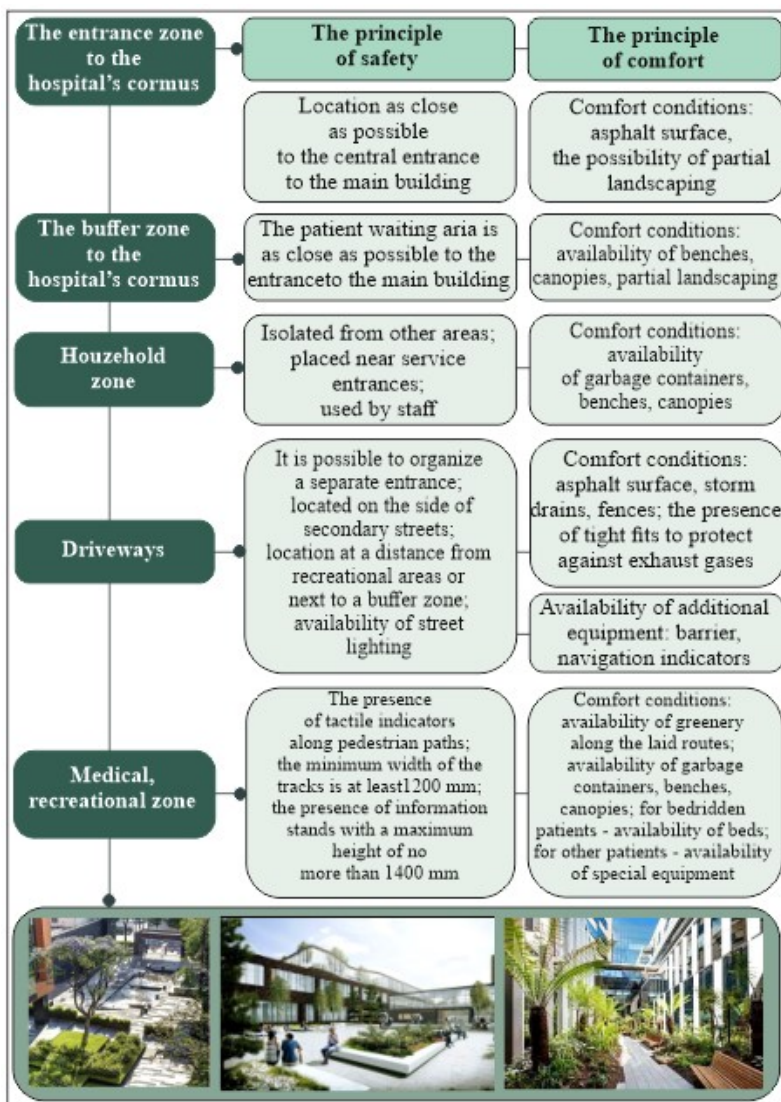


Fig. 1. Formation of the territory of medical institutions based on the principles of safety and comfort

<https://worldlandscapearchitect.com/bendigo-hospital-bendigo-australia-oculus/>
<https://www.cfmoller.com/>

extremely important for the formation of the design of the territory of medical institutions from the point of view of psycho-emotional perception of it by patients and hospital visitors. Designing the territory, thus, requires taking into account both the properties of the architectural and landscape environment, as well as changes in the development of its functional zones, the preservation of existing natural elements and the creation of design elements and forms that significantly improve the aesthetic characteristics of the external space of hospitals and contribute to the faster recovery of patients. Among the main *compositional and planning principles* that help to improve the solution of the territory based on the general principle of environmental sustainability, the following should be mentioned:

- *the principle of interconnection* of small architectural forms and landscape elements;

- *the principle of consistency* of vertical and horizontal elements and forms in the design of the architectural and landscape environment of hospitals;

- *the principle of spatiality*, which creates opportunities for the visual disclosure of all components of the natural environment in the planning solution of space due to their multi-layeredness (enclosing natural covering, lawns, vertical plantings, etc.) and the variety of functions (*Figure 2*). The results of many studies conducted on several groups of individuals indicate that even short-term visual encounters with real or simulated natural conditions can cause significant psychophysiological recovery within 3–5 minutes [2].

It is worth noting that therapeutic gardens are no less popular in developed countries, which are also becoming a professional example of

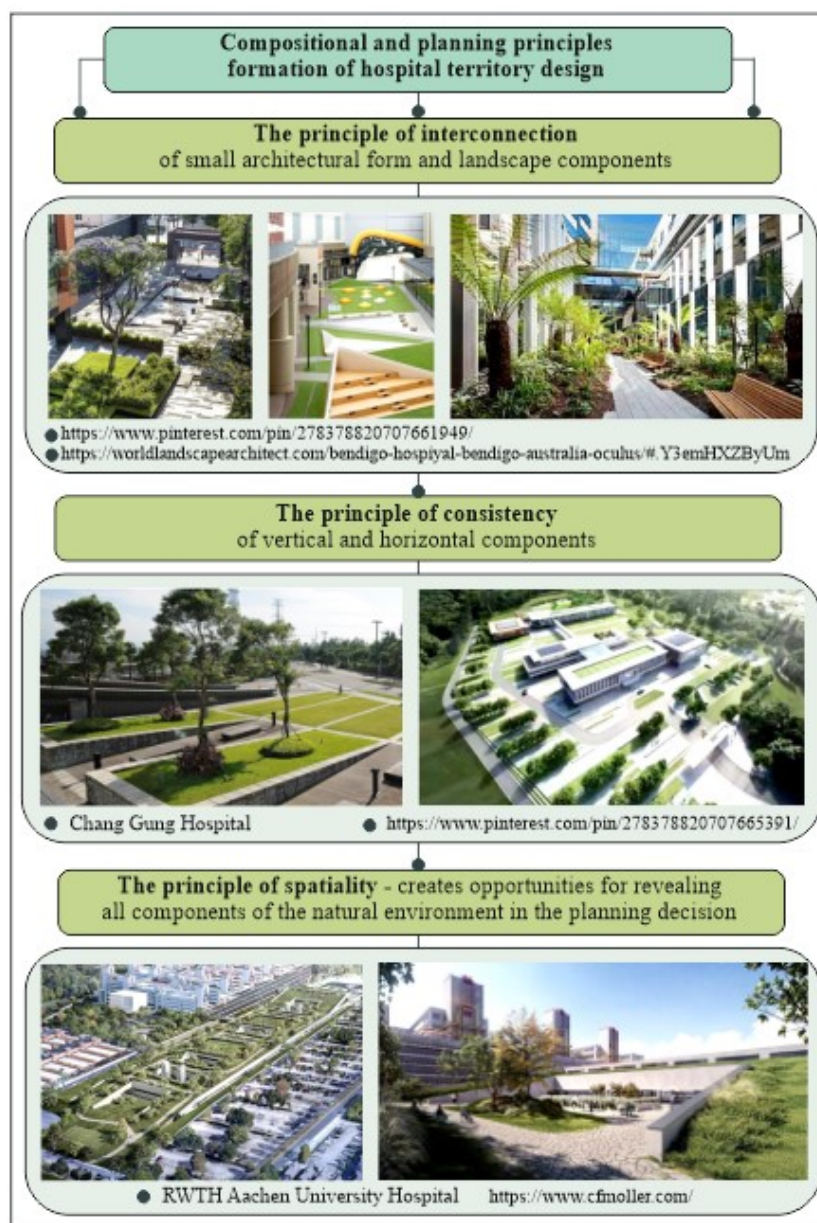


Fig. 2. Formation of the territory of hospitals on the basis of compositional and planning principles

landscaping the territory of medical facilities. In addition to gardens, designers offer courtyards, atriums, terraced gardens, meditation areas, and ponds to improve design based on the *principle of environmental*. All the measures mentioned above are designed to speed up the recovery of patients and ensure comfort in the hospital environment. The next important aspect when deciding the design of the territory of hospitals is the disclosure of factors related to taking into account the *principle of aesthetic harmonization* in the creation of the design of the architectural and landscape environment of medical facilities, which allows you to focus on various methods of

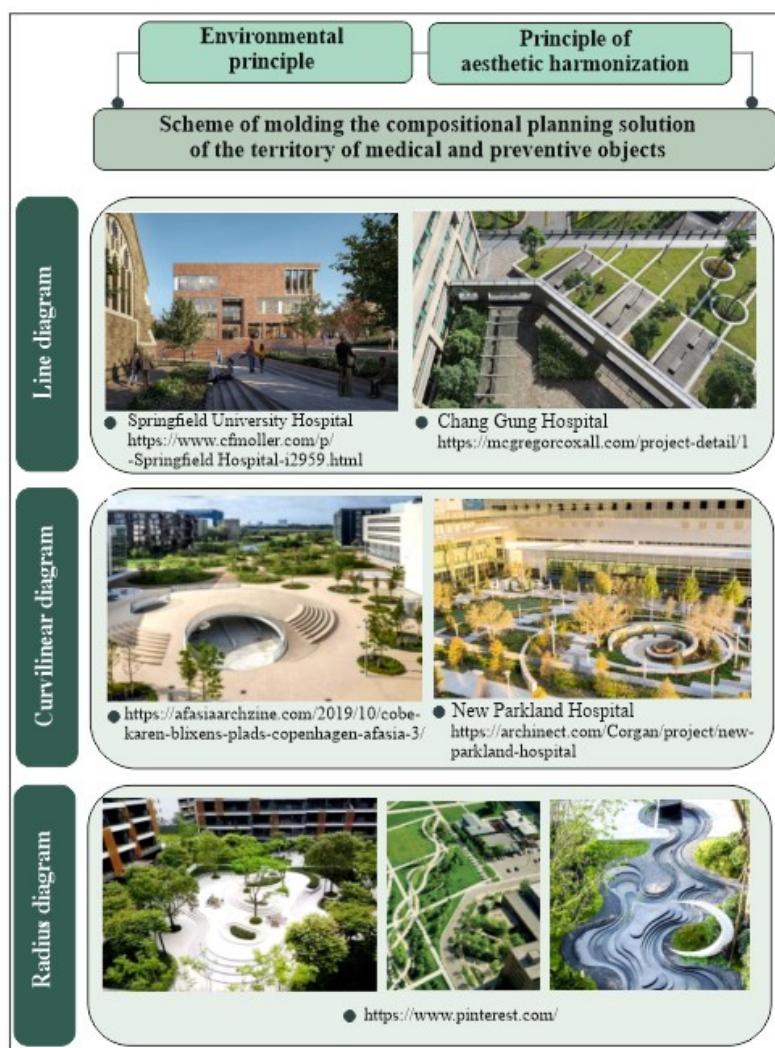


Fig. 3. Formation of the territory of medical institutions based on the principles of environmental and aesthetic harmonization

compositional and planning solutions, namely:

- *acceptance of the proximity* of the location of natural elements from each other;

- *accepting the dependence of the axes* on the visual perception of the overall composition of the landscape;

- *acceptance of closure* in the design of functional zones of the general composition of the territory of hospitals;

- *acceptance of color ratio* (natural forms, small architectural forms and covering and paving materials). In this context, the main possibilities of landscape design in the sense of determining the principles of environmental friendliness and aesthetic harmonization in the formation of the territory of hospitals are connected with the proposals of various covering materials, which are used taking into account the following

schemes: 1) on the basis of a *linear scheme* of construction of elements of characteristic geometric shapes (such as a strip of lawn or the border between a lawn and a hard surface); 2) on the basis of the *curvilinear scheme* of the formation of a certain compositional system; 3) on the basis of the *radius scheme* of solving a graphic pattern, which contributes to the recognition of a place on the basis of a certain visual code;

- *Adopting the ratio of forms* in the design of the architectural and landscape environment according to their position in space based on three types of compositional and planning solutions (frontal, three-dimensional and depth-spatial). *The frontal construction* of the overall composition of the space allows people in wheelchairs to fully perceive the wide area without unnecessary accent elements. *Volumetric composition* in the design of functional areas of the territory of hospitals allows you to focus on compositional accents, which can be both natural and artificially created, but harmoniously combined with each other and created in three

dimensions. Deep perspectives can be offered by designers due to the *depth-spatial composition* of different areas of the hospital territory. In this case, the *principle of aesthetic harmonization* is revealed through the perception of linear and aerial perspective;

- *acceptance of opposition* of small architectural forms and natural elements (contrast forms, structures, etc.);

- *symmetry – asymmetry techniques*, thanks to which it is possible to create a feeling of calmness, relaxation or, for the time being, to solve problems with depressive moods thanks to the activation of the overall composition of the surrounding space based on dynamic elements and forms.

Results. The analysis and systematization of the main tasks of solving the design of the architectural

and landscape environment of medical facilities made it possible to determine the main principles that help to significantly accelerate the recovery of patients in a harmonious natural space. The classification of the visual material of the best examples of the creation of the design of the territory of the hospitals contributed to the disclosure of the design potential, which indicates the diversity of the author's concepts, based on several basic modern

techniques. The obtained results of the theoretical substantiation of the research material made it possible to reveal the relationship between natural components and elements of small architectural forms; to analyze the compositional schemes of solving the space of the territory of hospitals and to point out the importance of natural elements and forms for improving the psycho-emotional atmosphere of the people who are there.

Bibliography:

1. Golembiewski J.A. The Handbook of Salutogenesis. Chapter 26. Salutogenic Architecture in Healthcare Settings. 2017. URL: <https://www.ncbi.nlm.nih.gov/books/NBK435851/>.
2. Hartig T., Book A., Garvill J., Olsson T. and Garling T. Environmental Influences on Psychological Restoration. *Scandinavian Journal of Psychology*. 1995. Vol. 37. No. 4. P. 378–393.
3. Максименко Н.В. Організація управління в екологічній діяльності : підручник для студентів екологічних спеціальностей вищих навчальних закладів / Н.В. Максименко, В.В. Задніпровський, Р.О. Квартенко; вид. 3-тє, перероб. і доп. Харків : ХНУ імені В.Н. Каразіна, 2011. 282 с.
4. Mittelmark M.B., Sagy S., Eriksson M., et al., editors. Cham (CH): Springer The Handbook of Salutogenesis. URL: <https://pubmed.ncbi.nlm.nih.gov/28590610/>.
5. Oleg Krasylnykov, Viktor Proskuriakov, Hayane Akopyan. Search of futuristic principles for the concept of the medical center for young people. TEKA Commission of Architecture, Urban planning and Landscape Studies. Lublin, 2018. Volume XIV/2, P. 38–42.
6. Пашинцева Т. Архітектура медичних установ: від поліклінік до спеціалізованих центрів. *Архітектурний Вісник*. 2007. № 5 (98). С. 14–17.

References:

1. Golembiewski, J.A., (2017). The Handbook of Salutogenesis. Chapter 26. Salutogenic Architecture in Healthcare Settings Retrieved from: <https://www.ncbi.nlm.nih.gov/books/NBK435851/> [in English].
2. Hartig, T., Book, A., Garvill, J., Olsson, T. and Garling, T. (1995). Environmental Influences on Psychological Restoration. *Scandinavian Journal of Psychology*. Vol. 37. No. 4. P. 378–393 [in English].
3. Maksymenko, N.V. (2011). Orhanizatsiia upravlinnia v ekolohichnii diialnosti: pidruchnyk dlia studentiv ekolohichnykh spetsialnostei vyshchych navchalnykh zakladiv / N.V. Maksymenko, V.V. Zadniprovskiy, R.O. Kvartenko; vyd. 3-tie, pererob. i dop. Kharkiv: KhNU imeni V. N.Karazina. 282 p. [in Ukrainian].
4. Mittelmark, M.B., Sagy, S., Eriksson, M., et al. (editors). Cham (CH): Springer The Handbook of Salutogenesis. Retrieved from: <https://pubmed.ncbi.nlm.nih.gov/28590610/> [in English].
5. Oleg Krasylnykov, Viktor Proskuriakov, Hayane Akopyan (2018). Search of futuristic principles for the concept of the medical center for young people. TEKA Commission of Architecture, Urban planning and Landscape Studies. Lublin, Volume XIV/2, P. 38–42 [in English].
6. Pashintseva, T. (2007). Architecture of medical institutions: from polyclinics to specialized centers. *Architectural Bulletin*. No. 5 (98). P. 14–17 [in Ukrainian].