

SALLY SEPTANIA NAPITUPULU  
(Design of a cancer shelter with  
a healing environment  
approach)

*by* Library Referensi

---

**Submission date:** 20-May-2024 09:32AM (UTC+0700)

**Submission ID:** 2383595403

**File name:** sign\_of\_a\_cancer\_shelter\_with\_a\_healing\_environment\_approach.pdf (936.66K)

**Word count:** 2534

**Character count:** 13546

PAPER · OPEN ACCESS

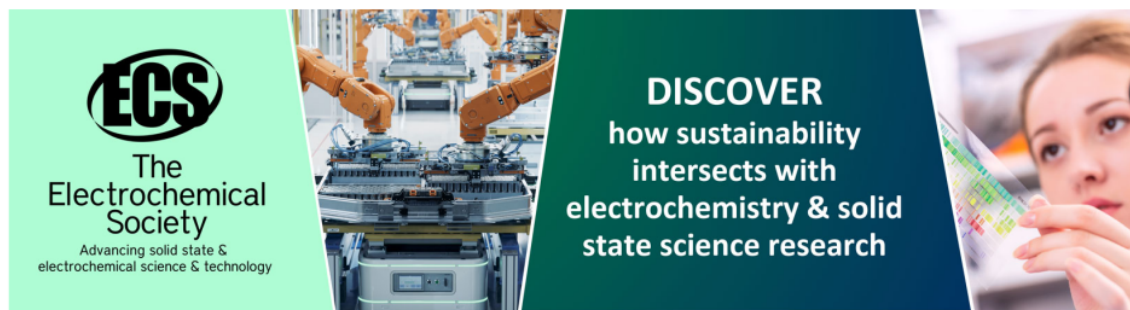
7  
**Design of a cancer shelter with a healing  
environment approach**

To cite this article: E U M Tumip *et al* 2021 *IOP Conf. Ser.: Earth Environ. Sci.* **878** 012025

View the [article online](#) for updates and enhancements.

You may also like

- 8  
- [The study of the application of crystalline  
silicone solar cell type for a temporary  
flood camp](#)  
R. Hendarti, W. Katarina and W.  
Wangidjaja
- 5  
- [Assessing the effectiveness and pathways  
of planned shelters in protecting mental  
health of flood victims in China](#)  
Shuang Zhong, Minghui Pang, Hung Chak  
Ho et al.
- 4  
- [Range, capacity, and closest evacuation  
route analysis to tsunami evacuation  
shelter in Pandeglang Regency Banten  
Indonesia](#)  
Y Veronica, Sutoyo, M I Rau et al.



**ECS**  
The  
Electrochemical  
Society  
Advancing solid state &  
electrochemical science & technology

**DISCOVER**  
how sustainability  
intersects with  
electrochemistry & solid  
state science research

## 7 Design of a cancer shelter with a healing environment approach

E U M Turnip\*, S P Eni, B Erwin and S S Napitupulu

Department Architecture of Universitas Kristen Indonesia, Jakarta, Indonesia

\*erisauli1704@gmail.com

**Abstract.** Indonesia, in an increasingly modern era of globalization, is also increasingly changing people's lifestyles into entirely instant. The pattern of consuming fast food due to dense activities without considering the effects caused by these foods is one kind of modern lifestyle in Indonesia. Cancer is a disease that is quite malignant and feared by many people. In Jakarta, the prevalence is moderate for cancer, which is 1.9%, with the number of hospitals in West Jakarta, namely the hospital. Dharmais hospital, which is a national cancer centre in Jakarta. Therefore, due to limited hospital facilities and to help people living with cancer at the same time help provide temporary shelter while waiting for a therapeutic schedule at the hospital and also help cure cancer patients by applying the healing environment situation through this thesis entitled Planning a Cancer Shelter with Healing Approach Environment in the Dharmais hospital area, West Jakarta.

### 1. Introduction

Indonesia currently has developments that lead to modernity which also changes people's lifestyles to become instantaneous. Consuming fast food is one of the lifestyle changes that many people make, especially people who live in big cities like Jakarta. The process of consuming these foods can cause a reduced level of freshness in the body so that the immune system or immune system decreases. This change has resulted in many serious diseases infecting Indonesian citizens.

Cancer is a disease that is quite malignant and is feared by many people. Dominantly, people living with cancer are difficult to cure and have claimed many lives. Cancer cases also attack not only adults but also children with a high enough risk level. In Indonesia, about 2% to 4% of all types of cancer have attacked children and accounted for 10% of deaths in children. According to statistical data from the International Agency for Research on Cancer, out of 600 children before the age of 16 have cancer, while according to Global Action Against Cancer, based on the incidence of cancer, 6.7 million people died, 10.9 million sufferers with new cases. Moreover, 24.6 million people living with cancer. Cancer cases that usually occur in children are more significant than in adults. However, it is also possible that cancer can be fatal, especially in adults due to unhealthy eating patterns and lack of exercise.

According to the Indonesian Cancer Foundation, there are many types of cancer, namely: blood cancer or leukaemia, liver cancer, breast cancer, skin cancer, stomach cancer, tongue cancer, oral cancer, eye cancer, brain cancer, thyroid cancer, cervical cancer, and lung cancer. -Lungs. Of the many types of cancer, it is also understandable that cancer can affect everyone, in any part of the body, and all age groups, but more often occurs in people aged 40 years. Moreover, every cancer that, there are also different ways of handling and healing in several ways, namely by chemotherapy, with radiation, or by



3  
Content from this work may be used under the terms of the Creative Commons Attribution 3.0 licence. Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.

other methods found in every hospital in Jakarta. According to government data, in Indonesia, there are only 14 hospitals that have become cancer referral centres, out of a total of 2.813 hospitals. Based on these data, only 1% of the number of hospitals in Jakarta. Moreover, one of the hospitals in West Jakarta is RS. Cipto Mangunkusumo, where this hospital is the national cancer centre hospital, especially in the Jakarta area.

Apart from spending a long time during the healing process, cancer also requires much money to handle. Waiting time is also a problem and leaves patients stranded on the terraces of the hospital. The impact during the treatment process is also sufficient to make the patient depressed, both in permanent and temporary physical changes which, as a whole also affects the patient's psychological and social. Therefore, each hospital needs a facility that can be used by patients, one of which is a shelter. Temporary shelters function as a place to wait for patients when meeting therapy schedules at the hospital. The shelter also provides psychological guidance facilities for all cancer patients. Besides, open houses can also reduce lodging costs while waiting for cancer treatment at the hospital.

Based on the existing problems, designing a shelter for cancer patients must be able to meet the patient's needs, significantly calm, which has a positive influence on the patient's psyche. The healing environment approach is the basic concept of shelter for cancer patients. The main reason this approach is considered appropriate is that it offers a design that is complemented by nature (water, wind and plants). With the existence of problems and the determination of the basic concept, a problem arises, namely the building and landscape design pattern that implements a healing environment in the shelter for cancer patients. This study aims to create the potential for providing shelter for cancer patients that focuses on using the basic concept of healing the environment.

## 2. Methods

This research uses three methods, namely, descriptive, documentative, and comparative. The method uses a system of collecting, presenting, compiling, and analyzing data. In data collection, descriptive uses of literature, data from related agencies, interviews, and field observations. Documentative use of documenting data through visual data collection in the form of field photos. The comparative method uses a comparative study of several existing cancer shelter buildings.

## 3. Results and discussions

There is a belief that the environment can both enhance and inhibit healing. One of the expected effects of healing is the reduction of stress and anxiety, which has a positive impact on the body which can harmonize the body, mind and spirit. In general, the healing environment is an environment for healing the mind, body, and spirit, where respect and dignity become one [1,2].

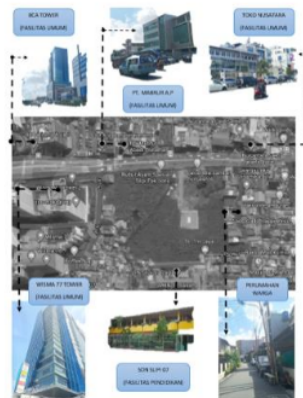
According to J. Malkin, the factors that influence the creation of a healing environment are air quality, sound control, room temperature, privacy, lighting, view of nature, visual serenity, and visual stimulation [3]. Meanwhile, according to Malone, architects can interpret the factors that support the formation of the healing environment as an effort to minimize stress levels and create a healing quality of space [4,5]. Furthermore, according to Malone, there are six principles in forming a quality space that supports the formation of a healing environment, namely: creating an environment that is patient and family-care oriented, improving the quality and safety of a health facility, supporting whole-person care with an approach to nature and positive distraction (something that distracts the patient's mind towards a more positive direction), creates a positive work environment, designing for possible future growth and change, and designing quality and comfortable patient room.

Alignment of design factors and objects will show an embodiment that can accommodate the user or patient with an environment that is capable of healing without reducing the necessary needs [6]. Based on this, in the design, there will be several components or elements that appear in the design as seen from nature, senses, and psychologically. Nature as a healing concept can take five forms, namely contemplative garden, restorative garden, healing garden, enabling garden, therapeutic garden. Contemplative, restorative, healing and therapeutic gardens have the same function, namely as a unique garden for sick people, while the enabling garden has a function that can be used by everyone. In terms

of facilities, parks that have facilities that focus on healing are healing gardens and therapeutic gardens. Meanwhile, a garden that focuses on its function as a tranquillity provider is contemplative and restorative.

The senses concerning healing are divided into four, namely hearing, sight, taste, and touch. Hearing can provide calm when listening to music, water fountains, and natural sounds such as rain, wind, and bird sounds. Vision provides calm when the eyes see natural landscapes such as light, trees, and water. Besides, vision can also provide calm when the eyes see works of art and colours. Taste can provide calm when the tongue feels warm food and touch can provide calm when the body gets a warm and soft touch, either from objects such as blankets or hugs from humans. Based on psychology, humans can feel calm when they get affection, good responses, coordination, information, physical comfort, emotional support, and family involvement.

The planning location for a shelter for cancer patients is on Brigjen Katamso Street, Slipi, West Jakarta. The location is a vacant lot behind the Dharmais cancer hospital. The private sector built this halfway house to fulfil the need for space in the form of shelter for cancer patients. Accessibility is the main reason this land was chosen as the design area. Access which is directly connected to S. Parman Main Street and from the Dharmais cancer hospital makes it easy for patients to take medication. See figure 1 below.



**Figure 1.** Research area.

### 3.1. The Implementation of healing environment in design

The design pattern has an outline that focuses on a cancer shelter by having an activity function, a space function, a treatment function and a trauma healing function with the Healing Environment approach. Based on the function, the design will consist of three parts, namely primary function, support function, service function. The primary function of this building is a residential unit which consists of two types of rooms. The first type of room is the active room type (specifically for end-stage cancer patients and chemotherapy patients) and the general room type (for cancer patients under stage 4). The number of active rooms with a capacity of 3 people is 48 units, while ordinary bedrooms with a capacity of 2 people are 48 units. Besides, on each floor, the function of the residential unit has a common room which functions as a communal space.

The supporting function contains rooms that function as centres of care and healing. The rooms in this supporting section are emergency rooms, therapy rooms, medical rooms, workrooms, sports rooms, multipurpose rooms, check-up rooms, consultation rooms, and chemotherapy rooms. In contrast, the service function contains supporting rooms for the primary and supporting functions. Given the division of functions, the implementation of the basic concept of a healing environment will depend on spatial functions. See figure 2 below.



**Figure 2.** Site plan.

The implementation of the concept based on function consists of several things, namely: the overall layout of the space-related to functions that have an arrangement in such a way as to be easily accessed by patients, the use of colours and floor patterns that provide coolness and tranquillity, simple ceiling shapes, and comfort—Thermal and privacy in each patient's living unit [7]. Besides, in the landscape section, the application of healing can be seen in planting flowers, trees, creating a pond in the garden area as a healing area, and procuring natural sounds such as the sound of birds and water. See figure 3-5 below.



**Figure 3.** The outdoor space has a walkway, flower gardens, shade trees.



**Figure 4.** Stone therapy, foot reflexology, physical motor therapy, provide healing for patients who can already walk.



**Figure 5.** The design of the pool, amphitheatre, plaza, as a relaxed meeting area between patients.

### 3.2. Results

By describing the factors and patterns of implementing the healing environment in the design, the characteristics can be read from the exterior and interior. On the exterior, the healing environment can be seen from the provision of a bridge as a link that facilitates accessibility, a garden as a healing area, a plaza as a gathering and healing area, and easy-to-access parking. In the interior, the healing atmosphere is in the form of colours and placement of plants. See figure 6-11 below.



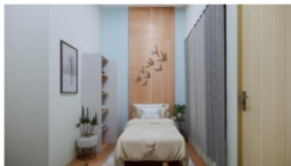
**Figure 6.** The bridge connects the open house building for the accessibility of residents.



**Figure 7.** Use of the landscape on the site as a healing garden.



**Figure 8.** Plaza on floors 2, 3 and 5 connect residential units.



**Figure 9.** Examination room interior.



**Figure 10.** The interior of the common room.



**Figure 11.** Physiotherapy room interior.

#### 4. Conclusion

The building of a halfway house with the concept of Healing Environment has the aim of making cancer patients feel calm and comfortable. In the residential building of the halfway house, there is a pedestrian in the form of a connecting building plaza between one halfway house to another. The plaza, which is located at several connecting houses to open houses, has the aim of facilitating the accessibility of cancer patients.

#### References

- [1] Huelat B J 2007 *Healing Environment, What's The Proof?* (Virginia: Medezyn)
- [2] Jones K and Creedy D 2012 *Health and Human Behaviour* (London: Oxford University Press)
- [3] Malkin J 1992 *Hospital Interior Architecture: Creating Healing Environment For Special Patient Populations* (New York: J. Wiley & Sons) p 10
- [4] Malone K 2001 Children, Youth, and Sustainable Cities *Local Environment* **6**(1) 5-12
- [5] Lidyasa V, Alhamdani M R, and Pebriano V 2012 3 Konsep dan Aplikasi Healing Environment Dalam Fasilitas Rumah Sakit *Jurnal Teknik Sipil Universitas Tanjungpura* **13**(2) 417-428
- [6] Putri A, Rinanda V, and Chaidir E 2020 Hubungan Self-Efficacy Dengan Kualitas Hidup Pasien Kanker Kolorektal di RSUD Dr. Achmad Mochtar Bukittinggi Tahun 2019
- [7] Wulandari S F 2014 *Arsitektur Interior Rumah Sakit Berdasarkan Evidence-Based Design Yang Mendukung Healing Environment* (Depok: Universitas Indonesia)

# SALLY SEPTANIA NAPITUPULU (Design of a cancer shelter with a healing environment approach)

## ORIGINALITY REPORT

16%

SIMILARITY INDEX

14%

INTERNET SOURCES

13%

PUBLICATIONS

8%

STUDENT PAPERS

## PRIMARY SOURCES

1	<a href="https://repository.umj.ac.id">repository.umj.ac.id</a> Internet Source	3%
2	R J E Zebua, S P Eni, G Widati, G P Dianty. "Ecological architecture approach to the conservation of the Ria Rio reservoir water area", IOP Conference Series: Earth and Environmental Science, 2021 Publication	3%
3	<a href="https://cyberleninka.org">cyberleninka.org</a> Internet Source	2%
4	E Maftuah, A Fahmi, A Susilawati. "Effect of shelter and fertilization on shallot yield, peat properties, and CO2 fluxes in peatlands", IOP Conference Series: Earth and Environmental Science, 2022 Publication	1%
5	Y Maryunianta, S I Kesuma. "Factors related to decisions of farmers victims of the eruption choosing temporary work as an effort for sustainability of livelihoods in	1%



refugee locations (case: refugee farmers  
victim of the Mount Sinabung eruption from  
Guru Kinayan, Gamber, Kuta Tonggal and  
Beras Tepu Village, Karo Regency)", IOP  
Conference Series: Earth and Environmental  
Science, 2022

Publication

---

6	<a href="http://media.neliti.com">media.neliti.com</a> Internet Source	1 %
7	<a href="http://www.sciencegate.app">www.sciencegate.app</a> Internet Source	1 %
8	<a href="http://china.iopscience.iop.org">china.iopscience.iop.org</a> Internet Source	1 %
9	Submitted to Universitas Borneo Tarakan Student Paper	1 %
10	Submitted to University of Sydney Student Paper	1 %

---

Exclude quotes  On

Exclude matches  < 1%

Exclude bibliography  On