
Study on the Application of Healing Architecture in a Multi-Family Residential Building (Case Study: The Zora)

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Abstract

Architecture is not only about physical development but also about creating an environment that supports the well-being of its residents. The concept of Healing Architecture has become an increasingly popular topic in recent years, focusing on the design and organization of spaces to support the health and well-being of their occupants. The concept of Healing Architecture is the concept of how the physical environment significantly impacts the mental and physical health of its residents. Compound residential buildings, often residences for many individuals and families, have great potential to apply the principles of Healing Architecture. However, research on the application of Healing Architecture in compound residential buildings is still limited. Therefore, this study aims to fill this knowledge gap by conducting an in-depth study of the application of Healing Architecture in compound residential buildings. This research will use a qualitative descriptive approach to understand how the principles of Healing Architecture are applied in the context of compound residential buildings. This method allows the research to explore and describe this phenomenon in detail and understand the influences and impacts that may arise from applying Healing Architecture in this context. The purpose of this research is to provide new and practical insights into how Healing Architecture can be applied in the design of compound residential buildings to support the welfare of its residents. The application of healing architecture principles in The Zora Area can be seen in the use of environmentally friendly materials, sufficient natural lighting, green open spaces, designs that support social interaction, and architectural elements that calm and reduce stress.

Keywords: Architecture, Healing Architecture, Compound Housing, Principles



INTRODUCTION

In simple terms, healing architecture is a concept that allows architecture to help the human body repair/heal itself (Azhari & Rachmawati, 2017). Architecture that uses this concept is expected to create an environment that can positively affect the condition of its users. The concept of healing architecture was developed by Swedish architect Erik Asmussen. According to Susanne Siepl-Coates (1996), buildings can be maintained or healed through the feelings felt by the user.

According to Lawson (2002) and (Azizah & Anita, 2022), Healing architecture is adopted to create a sense of a continuous process in creating an appropriate physical and psychologically healthy environment. The concept of healing architecture describes physical rules that support patients and their families through psychological conditions such as stress that develop due to illness. Healing architecture can provide a healing environment that can help the healing process of patients, especially those with psychological conditions.

This architectural concept aims to create an environment to help its users recover

psychologically. This concept applies the principles of healing environment, healing therapeutic, and therapeutic media. According to Dijkstra (2009) (Sari 2023), the Healing environment is the physical environment of health care facilities with consideration of the psychological impact of the patient himself so that it can accelerate the process of patient adaptation from chronic and acute conditions and shorten the patient's recovery time. Healing therapeutic is an architectural concept that involves design as a medium to accelerate residents' healing and recovery process. Architectural design can support the healing process because it influences the psychological and physical aspects of residents, evokes a comfortable, calm atmosphere, and increases the spirit of life of residents (Schaller, 2012).

According to Nousiainen (2011) in (Hafiizh & Sari 2023) (Azizah & Anita, 2022), the principles of the healing environment include 9 (nine) elements, namely:

1. Healthy Lighting: Lighting Plays A Crucial Role In Healthcare, Improving The Patient Experience And Staff's Ability To Provide The Required Level Of Service.

Natural light helps regulate our circadian rhythms and plays a role in emotional health, heart function, body temperature, and other necessary healing functions. In Indonesia, morning sunlight, especially before 10.00 am, has many health benefits. When absorbed by the skin, ultraviolet rays in sunlight will stimulate the body to produce vitamin D. Vitamin D produced by the body from sunbathing in the sun has many health benefits (Lucas, 2018).

2. Nourishing All The Senses: The Healing Space Evokes A Sense Of Cohesion Mind, Body, And Spirit Supporting Healing Intentions And Fostering Healing Relationships.

When we connect with nature, our senses come alive and are reminded of our innate ability to heal. Sensory impressions are considered important for health in Ayurveda. Just as the food we eat creates our body tissues, our sensory impressions determine the quality of our thoughts and emotions. We can balance and heal ourselves by using sounds, feelings, sights, tastes, and smells. Touch is essential for health and well-being. When your skin is stimulated by touch or a loving massage, it releases many healing chemicals that improve immune function and circulation and make for a good night's sleep. Optimism, resilience, confidence, and a sense of control are associated with good health. A healing environment can be considered a "smart environment" designed to promote healing and well-being by meeting users' physical, psychological, and social needs.

3. Connection To Nature An Environment Connecting Humans With Nature Can Help Improve Well-Being And Facilitate Healing.

Integrating natural elements such as water, plants, and natural landscapes can help create a healing environment. Natural scenery, whether through windows or strategically placed artwork, can significantly impact patient well-being. Incorporating natural elements into the constructed space has become a powerful approach to healing architecture.

4. Colour Scheme: Colour Can Be Integral To Architectural Design And Structural Concepts That Can Aid Healing.

Color can affect a user's mood and personality by interacting with their senses and is a form of visual communication. Neutral and calm colors such as white and light brown can have a calming effect on hospital residents. Bright colors such as gold, orange, green, red, and Caribbean blue that were previously thought to be "too bright for a healthcare setting" are now considered important therapeutic tools that directly promote healing. Color can create different moods and influence the speed of a patient's recovery. The colors chosen should be adapted to the theme, room type, cultural influence, and other variables. Colors can be used to create a therapeutic space with a calming atmosphere.

5. Hygiene And Clean Air: Cleanliness And Air Quality In Buildings Are Very Important For The Health And Well-Being Of Residents.

A good ventilation system can help reduce the risk of infection and ensure healthy air circulation.

6. Comfortable Shape: The Shape Of The Building And Room Can Affect The Well-Being Of Residents And Facilitate The Healing Process.

The simple and easy-to-understand shape of the building can help reduce residents' stress and anxiety. The simple and minimalist shape of the building can help create a calm and comfortable environment. The ergonomic and easy-to-use shape of the building can help facilitate the healing process.

7. Changeable Layout And Social Support: A Changeable Layout Refers To A Building's Ability To Adapt To Its Users' Needs.

Social support refers to the social support provided by the surrounding environment. A comfortable and user-friendly waiting room design can also implement social support.

8. Natural Materials: Natural Materials Such As Wood, Stone, And Clay Can Help Create A Calm And Comfortable Environment.

In designing the learning and rehabilitation forum for women's works in Rawa Bebek, natural materials such as wood and Stone were used to create a calm and comfortable environment. The use of natural materials can also help improve indoor air quality. Using natural materials can also help reduce the environmental impact of buildings.

9. Accessible Environment: Healing Spaces Must Be Accessible To All Users, Including Those With Special Needs.

The learning and rehabilitation forum for women's works in Rawa Bebek applies the principle of accessible environment by ensuring the building's accessibility for all users. Technology such as elevators and ramps can improve building accessibility.

Purpose

The purpose of this study is to answer the question of how to apply the principles of healing architecture in The Zora Area so that users get their comfort and welfare.

RESEARCH METHOD

In essence, a qualitative approach will begin with two research approaches, qualitative and quantitative, meaning a description with words in a sentence order that expresses the premise, hypothesis, and background of a research. Likewise, the method of measurement and testing, the results of hypothesis tests, data analysis and tables or schemes, and other statistical data must always be clearly described through words. A qualitative approach is characterized by research objectives seeking to understand symptoms that do not require quantification or cannot be measured accurately (Abdussamad, 2021).

In collecting the primary and secondary data needed by the author in this study, the author would like to describe several ways, namely:

- a) Literature study: this is carried out by indirect observation of the precedent study building that will be researched by the author using literature study data that obtains detailed information in this study. This observation was made so that the author could imagine how the precedent study would be in place.
- b) Residential Study: this is done by means of observation through information. By reading from reading books, journals, and research that has been carried out for this research in the form of interviews and field observations. This goal is to get the data for this research so that it can add support information. This residential area in North Bandung is a pioneer in combining residential areas, recreational places, and cultural facilities. More than just a premium home design, eco-tropical landscaping offers a very rich and unique atmosphere.

RESULT AND DISCUSSION

Overview



Picture 1. The Zora Area

Source: Personal Documentation (2024)

1. Building Description

Building Name: The Zora

Location: Lengkong Kulon, Pagedangan, Tangerang Regency, Banten 15331.

Land Area: 190,000 m²

2. Mass Shapes and Compositions

The Zora applies the concept of Japanese architecture by combining neutral colors and natural materials that make the residence seem modern.

3. Spatial Planning and Circulation

The spatial layout and circulation in The Zora apply a mixed-space pattern that combines several patterns. It has a fairly large footprint area, and there are also gardens that residents and visitors can use.

Discussion

Zora BSD presents the best choice of authentic Japanese-style residences that are both romantic and sturdy. This cluster of houses in BSD is built with design and quality intended for a family of 3 generations. Located in a super strategic area, you and your family can easily meet your daily needs. Zora BSD is a modern residential area developed by one of the largest developers in Indonesia.

The application of healing architectural principles to Arandra Residence can be seen in various aspects based on Nousiainen (2011) in (Hafiizh & Sari 2023) (Azizah & Anita, 2022):

1. Healthy Lighting

Lighting in the Zora Area using LED street lights with color temperatures of 3000K and 5000K has several influences, including visibility, object color, safety and energy efficiency.

Regarding visibility, lights with color temperatures of 3000K and 5000K tend to provide brighter and clearer light, improving visibility on the highway at night.

In terms of object color, light with a color temperature of 3000K and 5000K can provide a more realistic and natural color representation, thus helping drivers and pedestrians see objects better.



Figure 2. Street lights at The Zora Residence

Source: Personal Documentation (2024)

In terms of safety, good street lighting with a color temperature between 3000K and 5000K can improve traffic safety and reduce the risk of accidents at night.

The energy efficiency of LED lights with 3000K and 5000K color temperatures generally has lower energy consumption than conventional lights, so they can help reduce operational costs and carbon emissions.



Figure 3. Street lights on The Zora Residence

Source: Personal Documentation (2024)

Using lights with color temperatures of 3000K and 5000K can also affect the surrounding environment, especially if it is not properly regulated. Light that is too bright or sharp can cause pollution that disturbs the environment and living things around it.

2. Nourishing All The Sense

The concept of nourishing all the senses in healing architecture aims to create a physical environment that supports overall health and well-being by paying attention to the positive influence on all five human senses. Applying this principle in the concept of healing

architecture in The Zora Residence BSD area can involve several elements: visual, auditory, olfactory, tactile, and tasteful.

Visually, building and spatial design that pays attention to natural lighting, soothing scenery, and calming colors can provide positive visual stimulation for residents.

Good acoustic design reduces external and internal noise and creates a quiet and peaceful environment for residents.

By smell, the use of aromatherapy or the setting of fresh and clean air can provide positive stimulation for the smell of residents.

In terms of tactile sense, the use of natural materials, attractive textures, and comfortable temperature settings can provide a pleasant tactile experience for residents.



Figure 4. Sketch of The Zora thematic park

Source: Personal Documentation (2024)

Applying the farm-to-table concept in the kitchen or restaurant design at Samasana Club House can provide a healthy-tasting experience by providing organic and fresh food.



Picture 5. Samasana Club House The Zora

Source: Personal Documentation (2024)

By paying attention to all five senses in the design and arrangement of The Zora Residence BSD area, the concept of healing architecture can provide a holistic experience for its residents, support physical and mental health, and create an environment that supports overall well-being, which is fulfilled through public facilities.

3. Connection To Nature

The application of connection to nature in the concept of healing architecture in The Zora Residence BSD area can include various elements that support the health and well-being of its residents. Some of the ideas applied to the concept include:

1. Eco-Friendly Landscape Design: Expand green open spaces, parks, and recreation areas with attractive trees and plants to create a calming and refreshing environment (figure 4)
2. Natural Lighting: Maximizing natural lighting with a building design that allows sunlight to enter the room, as well as the use of large windows to allow residents to enjoy the surrounding natural scenery (picture 3 and picture 5)
3. Integration of Water and Natural Sounds: Include water elements such as fountains or small pools, as well as pay attention to acoustic designs that allow natural sounds to enter the residential environment.
4. Eco-Friendly Materials: Using eco-friendly and natural building materials such as wood, stone, and recycled materials to create a healthy and sustainable environment.
5. Open Space and Access to Nature: Providing easy access for residents to interact with nature through the design of open spaces, parks, and recreational areas that are integrated with the surrounding environment.



**Figure 6. Sketch of Samasana Club fish pond
House The Zora**

Source: Personal Documentation (2024)

4. Color Scheme

The application of the color scheme principle in the concept of healing architecture in The Zora Residence BSD Area can help create an environment that supports the health and well-being of its residents. Some of the principles of the color scheme applied are:

1. Calming colors: The use of colors such as soft green, light blue, and natural colors such as beige or brown can create a calming atmosphere and stimulate a sense of well-being. These colors are often associated with nature and tranquility, and can help to create a calming environment.
2. Soft contrast: Combining softly contrasting colors, such as light blue with gray or beige, can create a calming yet still visually appealing impression.
3. Supportive lighting: Pay attention to natural and artificial lighting to ensure that the chosen color scheme remains optimal and provides the desired effect in the spaces at The Zora Residence.
4. Consistency and harmony: Ensuring the consistency of the color scheme throughout the residential area to create a sense of unity and harmony that can provide a sense of comfort and tranquility for its residents.



Figure 7. Sketch of the color scheme on The Zora
Source: Personal Documentation (2024)

By applying these color scheme principles, The Zora Residence BSD can create a residential environment that supports the health and well-being of its residents through the use of carefully selected colors to create a calming and comfortable atmosphere.

5. Hygiene and clean air

The application of the principles of cleanliness and clean air in the concept of healing architecture in The Zora Residence BSD area can be an important factor in creating an environment that supports the health and well-being of its residents.

A good ventilation system in an apartment is equipped to ensure healthy and clean air circulation in the room (figure 3 and Figure 7). Choose building materials and furniture that are environmentally friendly and easy to clean to reduce the accumulation of dust and dirt that can affect indoor air quality. Pay attention to the design of open spaces or gardens around the apartment to improve access to fresh air and sunlight, which can contribute to the health and well-being of its residents. Install an effective air filtration system to clean the air from pollutants and allergens that can affect indoor air quality. Regular cleanliness and maintenance ensure that the apartment is properly maintained and regularly cleaned to reduce the risk of dirt and bacteria buildup that can affect the health of its residents.

By applying these principles of cleanliness and clean air, The Zora Residence BSD can create a residential environment that supports the health and well-being of its residents through attention to air quality and cleanliness of the space within the apartment.

6. Comfortable shape

The application of comfortable forms in the concept of healing architecture in The Zora Residence BSD area can include several design strategies that aim to create an environment that supports overall health and well-being.

The use of organic and natural forms in the design of buildings and gardens, such as soft arches, natural flows, and the use of natural elements such as water and plants to create a calming environment.

The use of large and open spaces, either in the form of parks, yards, or recreational areas, to give residents a sense of spaciousness and comfort and allow interaction with nature (figure 4 and figure 6).

The placement of spaces and building structures that pay attention to airflow, natural lighting, and space circulation provides a sense of comfort and coolness for residents.

The use of environmentally friendly building materials, such as wood, natural stone, and recycled materials, to create soothing textures and colors and give a natural and comfortable impression.

The design pays attention to the balance between architectural elements, such as harmonious proportions, eye-pleasing symmetry, and the use of forms that invite a sense of comfort and peace (figure 7).

By paying attention to the application of comfortable forms in the design of The Zora Residence BSD, the concept of healing architecture can create an environment that supports physical and mental health, as well as provide a comfortable living experience for its residents.

7. Changeable layout and social support

Layout changes can be made inside the unit because of the use of wall separator material that is easy to disassemble so that if you want to change the layout of the unit, it can be done easily.

The Zora is an elite housing that provides 5 thematic parks, kids playground, basketball court, Samasana Club House complete with Japanese aquamassage, onsen pool, swimming pool, and coffee lounge. The large selection of facilities can lead to the ability of buildings to adapt to the needs of their users. Social support refers to the social support provided by the environment (figure 5).

8. Natural materials

The application of the use of natural materials in the concept of healing architecture in The Zora Residence BSD area can provide significant benefits for its residents. Healing architecture aims to create an environment that supports physical and mental health and well-being. Some of the applications of natural materials considered include the use of wood, stone, plants, and water.

1. The use of natural wood in interior and exterior design can create a warm and comfortable atmosphere. Wood also has properties that can reduce stress and improve visual comfort.
2. Natural stone can be used to create soothing architectural elements. The use of natural stones in gardens or open areas can also provide a soothing touch of nature.
3. The integration of plants in the design, whether in the form of vertical gardens, rooftop gardens, or indoor plants, can help improve air quality and provide a calming and refreshing effect.
4. The use of water elements, such as fountains or pools, can create a calming atmosphere and provide positive effects on mental health.

In addition, natural lighting, good air circulation, and integration with the environment are also important factors in the application of the concept of healing architecture. By considering the application of natural materials and healing architecture principles, The Zora Residence BSD area can become an environment that supports health and well-being for its residents.

9. Accessible environment

The application of the principle of accessible environment in the concept of healing architecture in The Zora Residence BSD area will ensure that the environment can be accessed and enjoyed by everyone, including those with physical limitations. Some of the applications of accessible environment principles considered in the concept of healing architecture include:

- a. **Accessibility:** Ensure that all public areas and facilities in The Zora Residence BSD area are accessible to people with various types of physical limitations, such as wheelchair access, increased accessibility for people with mobility impairments, and the placement of public facilities that are easily accessible.



Figure 8. Sketch of The Zora Pedestrian

Source: Personal Documentation (2024)

- b. Universal Design: Integrates universal design principles in every aspect of the environment, such as the design of buildings, parks, and public facilities, so that it can be used comfortably by everyone regardless of age, ability, or physical condition.
- c. Lighting and Contrast: Ensures adequate lighting and sufficient contrast throughout the area, making it easier for people with visual impairments to move around safely.
- d. Health Facilities: Provide disability-friendly health facilities, including adequate accessibility and comfortable waiting rooms for people with disabilities.



**Figure 9. Sketch of the Lobby of Samasana Club House
The Zora**

Source: Personal Documentation (2024)

CONCLUSION

The application of *healing architecture* in The Zora Residence area involves the design and arrangement of spaces and areas that aim to create an environment that supports physical and mental health for residents. The application of *healing architecture principles* can be seen in the use of environmentally friendly materials, sufficient natural lighting, green open spaces, designs that support social interaction, and the use of architectural elements that calm and reduce stress. In addition, the application of *healing architecture* in The Zora Residence area includes the provision of adequate public and recreational facilities (Samasana Club House) to meet the needs of residents holistically. Thus, the application of this concept is expected to create an environment that supports the health and well-being of all residents.

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