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NURSING HOME AND ELDERLY CARE CENTER IN PURWOKERTO CITY WITH HEALING ARCHITECTURE AS DESIGN APPROACH

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Abstract. The increasing elderly population in Purwokerto highlights the need for residential and care facilities that address their physical, psychological, and social needs. This design of an Elderly Home and Care Center adopts a Healing Architecture approach to create an environment that supports recovery and enhances quality of life. An analysis of elderly needs, including behavior patterns, health challenges, and social aspects, serves as the basis for determining the design concept, spatial layout, and architectural elements. The result is an integrated, adaptive, and humane facility that functions not only as a residence but also as a comprehensive elderly care center.

Keywords: elderly, elderly home, care center, healing architecture, quality of life, Purwokerto

INTRODUCTION

The COVID-19 pandemic in 2020 significantly impacted the global population, with older adults identified as a high-risk group due to age-related physiological changes and underlying health conditions. In Indonesia, the mortality rate among elderly COVID-19 patients reached 38.6%, highlighting the need for targeted health precautions and supportive care systems (Girsang et al., 2021). The transition to a new normal changed daily routines and limited physical interactions for the elderly, leading to social isolation, emotional distress, and reduced access to healthcare services. These changes emphasized the critical role of the built environment in shaping the quality of life for aging individuals. Environments that are inaccessible or unsupportive can increase the risk of loneliness, physical decline, and mental health deterioration (WHO, 1995).

Indonesia is currently entering an ageing population phase, with projections estimating that by 2045, nearly 19.9% of its population will be aged 60 and above (Girsang et al., 2021). Despite this trend, elderly care remains underdeveloped, often complicated by the limited time,

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knowledge, and support systems available to younger generations. According to BPS (2022), 2.32% of Indonesian elderly still avoid healthcare facilities, pointing to a persistent gap in healthcare access and awareness. In Banyumas Regency, where Purwokerto serves as the capital, the elderly population continues to grow while younger residents face increasing constraints in providing adequate intergenerational care (Idrus et al., 2020).

Social and cultural norms in Indonesia still place high value on family-based care, often creating a negative stigma around elderly homes (*panti wredha*). However, these facilities can play a critical role when designed to address not only the physical, but also the psychological and social needs of the elderly. The Healing Architecture approach offers a promising solution, emphasizing spatial elements that foster well-being such as natural light, cross-ventilation, visual connections with nature, and calming color palettes. Research has shown that such features contribute positively to physical, mental, and emotional health in long-term elderly care environments (Yigit & Yildirim, 2022; Kim & Lee, 2013).

In this context, the design of a *panti wredha* and elderly care center in Purwokerto, using the principles of healing architecture, becomes not only relevant but necessary. This study aims to explore how architectural design can respond to the needs of elderly individuals in urban Indonesia specially Purwokerto City, providing a humane, inclusive, and sustainable living environment that enhances their overall quality of life.

METHODS

This Final Project Report uses a descriptive method by describing, explaining, and illustrating various requirements and design provisions related to the planning and design of the *Nursing Home and Elderly Care Center in Purwokerto City with Healing Architecture as Design Approach*. Based on these requirements and provisions, relevant data are collected to support the planning and design process. The collected data are then analyzed, and conclusions are drawn to form the basis of the design. The data used in the planning and design of the *Nursing Home and Elderly Care Center in Purwokerto City with Healing Architecture as Design Approach* are categorized into two groups:

- Primary Data: Obtained through field observations, interviews with caregivers and elderly individuals, site surveys, and direct studies of the physical and social conditions of the location.
- Secondary Data: Sourced from literature studies, government regulations, statistical data from BPS, WHO guidelines, academic journals, and references related to healing architecture and elderly care facilities.

These data are processed and analyzed to produce design criteria that align with the needs of elderly users and the application of healing architecture principles in the context of Purwokerto City.

SITE LOCATION

Site Data

Site Location	:	Jl. Sunan Giri No.465, Kalibakal, Berkoh,, Kecamatan Purwokerto Selatan
Extensive	:	15.077 m²
Designatiom	:	*Resort* Hotel
KDB	:	80% (12.061,6 m²)
KLB	:	4 Floor (Maximum 25 m)
KDH	:	Minimum 20% (3.015,4 m²)
GSB	:	5 meters
Site Boundary		
North	:	Plantation
South	:	Plantation
East	:	Residents Settlements
West	:	Plantation and Residents Settlements

Figure 1 Site

CONTEXTUAL ASPECT APPROACH

The chosen site for the design of the *Nursing Home and Elderly Care Center* is located within an urban area of Purwokerto City that holds strong potential for the development of an elderly care facility. This location was selected based on several contextual considerations, including accessibility, proximity to health services, the surrounding residential environment, and the potential for integration with the local community.

The site's position within a growing residential area supports the aim of creating a care facility that is both inclusive and well-integrated with its surroundings. It allows for ease of access by family members, caregivers, and medical personnel, while also providing a familiar and non-isolating environment for the elderly. These contextual advantages are aligned with the principles of Healing Architecture, which emphasize the importance of environmental comfort, connection with nature, and psychological well-being in the design of healthcare and residential spaces.

Sun Direction

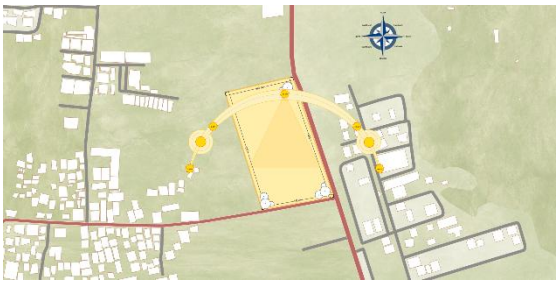

Figure 2 Sun Direction Analysis

The movement of sunlight from east to west significantly influences the building's façade exposure throughout the day. During midday, the sun reaches its highest position, increasing solar heat gain and potentially causing thermal discomfort. Additionally, the presence of tall trees or surrounding buildings creates shifting shadows that frequently fall onto the building's façade, impacting both lighting and thermal conditions.

To respond to these conditions, the design incorporates several passive strategies, including the use of green vegetation along the site, strategic placement of shade-providing plants, and shading devices on building façades. Green roofs and canopies are applied in key areas to reduce heat absorption, while water elements are utilized to enhance cooling and improve the microclimate around the nursing home.

Wind Direction

Figure 3 Wind Direction Analysis

The site is located in a rural area with abundant vegetation, resulting in relatively clean and fresh air quality. This favorable condition allows for the optimization of natural ventilation within the building. The building massing is designed to support effective airflow, enhancing indoor thermal comfort and reducing the need for mechanical cooling systems.

To prevent disturbances from external elements such as dust and noise, parking areas are placed in zones with higher exposure to these factors. This zoning strategy helps protect the main building from environmental disruptions, ensuring that indoor spaces remain calm, clean, and well-ventilated.

Noise

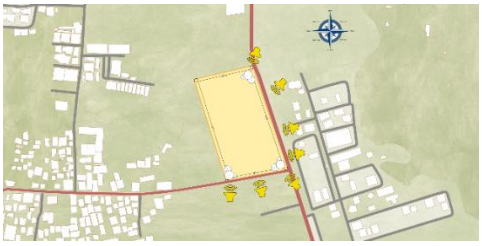

Figure 4 Noise Analysis

Noise sources around the site primarily originate from the main road and nearby residential areas. These sound disturbances have the potential to affect the comfort and tranquility of elderly residents within the care facility.

To mitigate noise impact, the building is set back from the main road, creating a buffer zone that reduces direct exposure. Additionally, the use of sound-insulating materials in the building envelope, such as double-glazed windows, dense wall construction, and acoustic panels is incorporated to enhance indoor acoustic comfort. These strategies ensure that the indoor environment remains quiet and conducive to rest, healing, and social interaction for the elderly.

Topography

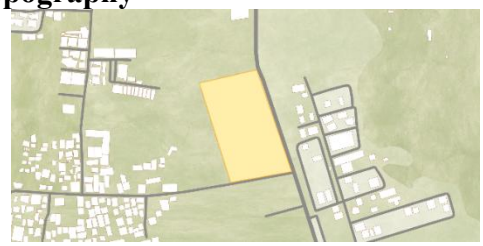

Figure 5 Topography Analysis

The site is characterized by relatively flat topography, which provides several advantages in the planning and construction process. A level contour enhances the efficiency of utility distribution, improves structural stability, and simplifies construction planning. This condition allows for easier site development, minimizes the need for extensive land modification, and supports cost-effective and time-efficient implementation of the design.

Accessibility

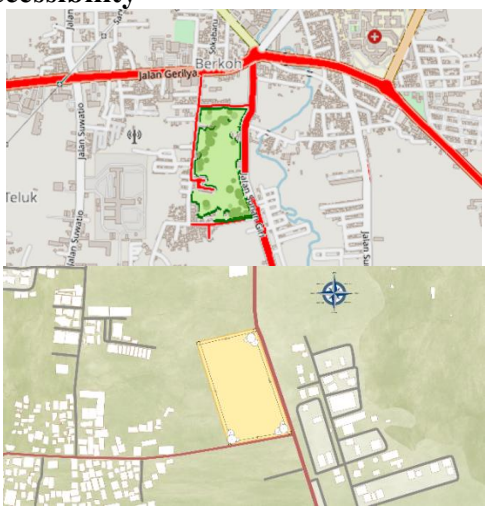

Figure 6 Accessibility Analysis

The site is directly accessible from the east side via Jalan Sunan Giri No. 465, Kalibakal, Berkoh, Purwokerto Selatan District. This primary road serves as the main point of entry for both visitors and service vehicles, ensuring convenient access to the facility. Its location along a public road enhances site visibility and allows for smooth circulation of residents, staff, and emergency services.

The eastern access orientation also supports optimal site layout planning, enabling a clear separation between public, semi-public, and private zones. This arrangement improves both functional circulation and safety, particularly for elderly users with limited mobility. The flat topography further complements accessible pathway design, allowing for barrier-free movement throughout the site.

RESULT DESIGN

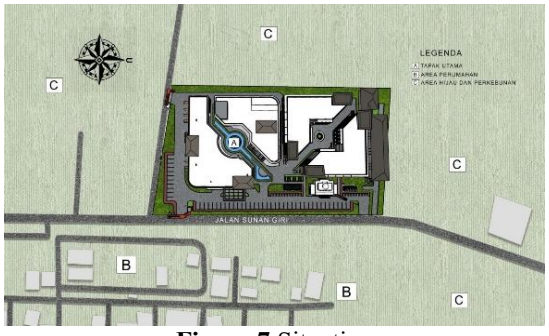

Figure 7 Situation

The site is located on Jalan Sunan Giri No. 465, Kalibakal, Berkoh, Purwokerto Selatan District, Banyumas Regency. Positioned within a developing residential area, the site offers convenient access and a calm, supportive environment suitable for elderly care. Its proximity to local public facilities and community infrastructure makes it strategically appropriate for the development of a *Nursing Home and Elderly Care Center*. The surrounding greenery and relatively quiet atmosphere further support the implementation of healing architecture principles that prioritize comfort, natural connection, and psychological well-being.

Figure 8 Siteplan

The site is a flat land that offers advantages in site development by allowing for efficient zoning, simplified utility planning, and enhanced structural stability. This condition also supports the creation of an elderly-friendly environment, ensuring smooth circulation, easy access, and greater construction efficiency throughout the *Nursing Home and Elderly Care Center* facility.

Floorplan

The *Nursing Home and Elderly Care Center* complex is composed of six primary building masses, each serving a specific function to support the overall care system. These include: a clinic building that provides basic health services and medical supervision; an elderly activity center that facilitates social, physical, and recreational programs tailored to elderly needs; two residential buildings designed as comfortable living spaces for the elderly, emphasizing accessibility and privacy; a staff dormitory to accommodate caregivers and operational personnel on-site; and a service building that houses supporting facilities such as kitchens, storage, and mechanical rooms.

The distribution and orientation of these building masses are arranged to promote smooth circulation, clear zoning between public and private areas, and to maximize the application of *Healing Architecture* principles across the entire facility.

Figure 9 1st Floor Plan Clinic building and Elderly activity center

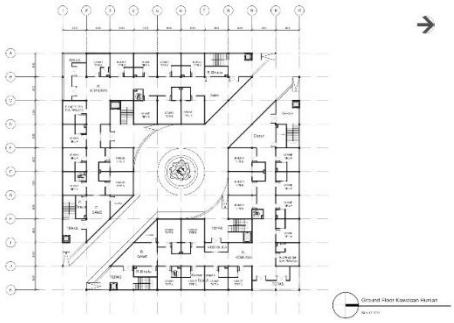

Figure 10 1st Floor Plan Elderly residential building

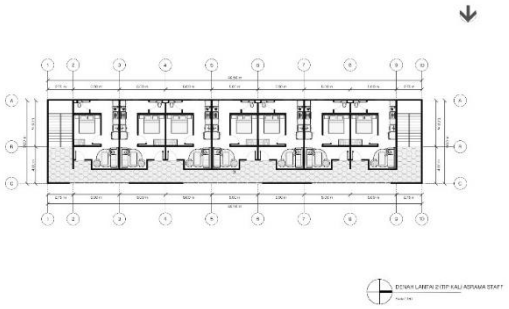

Figure 11 1st Floor Plan Staff dormitory

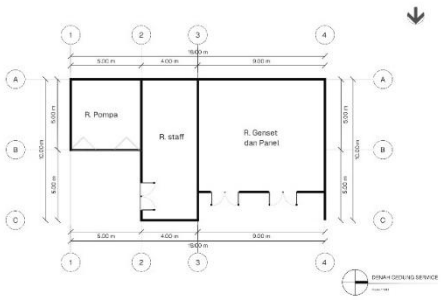

Figure 12 Floor Plan Service building

Elevation

Figure 13 Front Elevation of Clinic Building

Figure 14 Front Elevation of Elderly Activity Center

Figure 15 Front Elevation of Elderly residential building

Section

Figure 16 A-A Section Of Clinic Building

Figure 17 A-A Section Of Elderly Activity Center

Figure 18 A-A Section Of Elderly residential building

Exterior View

Figure 19 Exterior View

Interior View

Figure 20 Interior View

CONCLUSION

The design of the *Nursing Home and Elderly Care Center in Purwokerto City* with a Healing Architecture approach aims to create a care environment that supports the physical, psychological, and social well-being of the elderly while maintaining comfort, safety, and dignity.

By considering the specific needs of aging users, the design integrates healing elements such as natural lighting, greenery, therapeutic spaces, and barrier-free accessibility. These features are arranged within a spatial layout that promotes calmness, interaction, and emotional support, while also respecting the surrounding residential context.

Through this approach, the facility not only serves as a functional care center but also as a livable and meaningful space that encourages recovery, independence, and quality of life for the elderly.

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