

## CHAPTER II

### REVIEW OF RELATED LITERATURE

#### 2.1 Definition and ranges of an elderly

An elderly person can be defined as:

- a. Based on the National regulation of Indonesia No. 13 of 1998, elder people can be defined as people who are aged 60 years or above.
- b. Based on the World Health Organization, the definition of an elder people can be explained as people with the age range from 60 to 74 years old.

WHO also divides elder people in 4 categories, such as:

- a. Middle age: people with the age range from 40-45 years old.
- b. Elderly: people with the age range from 60-74 years old.
- c. Old people with the age range from 75-90 years old.
- d. Very old people with the age above 90 years old.

#### 2.2 Definition of an elderly care home

The definition of a elderly care home according to the Big Indonesian Dictionary, the word nursing home is defined as a place to care for and accommodate nursing homes. And regional regulation No. 15 of 2002, concerning changes to regional regulation No. 15 of 2000, regarding regional services, the *Tresna Werdha* Social Institution changed its name to the *Tresna Werdha* Protection Center. A gathering place for elderly people who are either voluntarily or handed over by the family to take care of all their needs. According to the Social Department of Indonesia, *Tresna Werdha* Social Institution can be defined as a place to facilitate and take care of old and elder people in need.



*Figure 1 Care Home*

### **2.3 Care Home Purpose**

According to the Social Department of Indonesia, Tresna Werdha Social Institution has a purpose to make sure the old and elder people are feeling safe, secure, with no worries of getting older. Based on *carehome.co.uk*, The aim of a care home is to provide adequate care for individuals who are unable to live on their own but don't require medical attention, so they can continue to have fulfilling lives. The local authorities may offer financial support for residential care based on each person's situation.

### **2.4 Care Home Room Specification**

Based on the Northamptonshire County Council (NCC) Care Home Design Guide, there are few requirements needed to be fulfilled, such as;

- a) Space: sufficient living space in which to sit, eat, do hobbies and host guests. Older couples have a preference for accommodation with 2+ bedrooms.
- b) Location: safe, attractive area, with connection to wider community.
- c) Design: accessible, adaptable, comfortable, manageable with access to well-maintained outside space and welcoming communal areas. It is important it does not look or feel institutional.
- d) Services: tailored, personalized, flexible.

On their Care Home Design Guide, it was also stated that there are room qualifications that has to be available in a care home:

- a) General building
- b) Communal space
- c) Private accommodations
- d) Outdoor design
- e) Toilet and washing facilities
- f) 1 assisted bathroom and shower room per floor
- g) Medicines
- h) Clinical or treatment room
- i) Infection prevention and control
- j) Dirty utility

- k) Laundry
- l) Catering areas
- m) Storage
- n) Staff facilities

## **2.5 Design Principles of an Elderly Care Home**

In the article of "Pynos and Regnier" (1991) it is written about 12 kinds of principles that are applied to the environment in elderly facilities psychologically and physically.

In psychological aspect, there are 4 principles:

### **a) Safety and Security**

Creating a safe and secure facility for the elderly to minimize unwanted accidents since the elder people are more prone due to physical ability condition.

### **b) Signage**

Signage is a must in these facilities since some of the elder people are experiencing a decreasing memory function. These signages are needed to guide the elderly to get by and find their ways easily.

### **c) Accessibility**

Accessibility is one of the key and fundamental requirements on creating a functional environment for the elderly and their mobility around the facility.

### **d) Adaptability**

Adaptability is used on the environment, this facility has to be adaptable and universal for all kinds of users (the elder people). It has to be able to facilitate wheelchair users, and elder people with all their physical conditions.

In addition to the physical aspect, there are 8 principles correlating to the psychological aspect:

### **a) Privacy**

### **b) Social interaction**

Contradicting the privacy aspect, an elder people facility needs to have a space where the elderly can interact socially among themselves and with the people they love, this also focuses on battling the high loneliness level that most elder feel.

**c) Independency**

This aspect is a given opportunity for the elderly to do their own activities without help from the volunteers or workers. Independence can lead to a sense of satisfaction because the elderly can carry out daily activities without the help of others.

**d) Challenge**

Challenge is also needed in creating space for the elderly because they need to feel challenged and stimulated to be active, this aspect can be done in a space using pattern, colors, and building/interior shapes.

**e) Sensory aspect**

Sensory aspect has to be planted around the environment to stimulate all the sensory function (seeing, hearing, smelling, touching, tasting) in the elderly since some of them may experience a setback.

**f) Familiarity**

A sense of familiarity can make a known and familiar home for the elder people to find the place where they are living on easily. Familiar signs, flowers and plants can be benchmarks for them to acknowledge the field.

**g) Aesthetics**

An attractive looking environment. The whole appearance of the environment sends a certain symbolic or perceptual message to visitors, friends and family about the everyday life and conditions of the residents.

**h) Personalization**

This aspect creates opportunities to create private and personal spaces for the residents and feel it as their own. The environment should be able to provide opportunities for them to express themselves and their personal expression.

**2.6 Difference between care and nursing home**

	<b>Care Home</b>	<b>Nursing Home</b>
<b>Care needs</b>	Individuals in a residential care home need support with their personal care, and they might want a break from day-to-day	Residents in a nursing home will have a range of medical needs, with nurses to provide medical care 24 hours a day.

	tasks like cleaning and cooking.	
<b>Team training</b>	Care homes are providing support for the elderly from bathing and dressing to joining in with their activities. Most of staff are trained to get to know each elder so they can tailor their care to each resident's needs.	Nursing home are equipped with nurses who are highly skilled in a range of medical services and assessment.
<b>Cost</b>	Costs for care homes are lower than nursing homes since there are no medical assessment provided.	Nursing home costs are generally higher because residents require more specialised nursing support and facilities, depending on the needs of the elderly.

Table 1 Care Home and Nursing Home Comparison

## 2.7 Factors of The Elderly Living in The Care Home

According to Rohaedi (2016), there are three factors on why the elderly live in a care home,

a. Economical factor

Some of the elderly are no longer working or retired, with no source of income their quality of life decreases.

b. Social factor

Socially speaking, the elderly wishes not to be burden to their families, especially when most of their family members are busy, it results on higher loneliness level of the elderly.

c. Political factor

Stated on the National Regulation of Republic Indonesia No. 13 of 1998, the well-being of the elderly are the responsibility of the government, society, and their families.

## 2.8 Precedent Studies




Name	Location	Architect / Year of built	Documentation	Adaptation Points
Kaze no Machi Miyabira	Shobara Japan	Susumu Uno (2014)	<p>exterior</p>  <p><i>Figure 2 Kaze no Machi Miyabira Exterior</i></p> <p>interior</p>  <p><i>Figure 3 Kaze no Machi Miyabira Interior</i></p> <p>activity</p>  <p><i>Figure 4 Kaze no Machi Miyabira Activities</i></p>	<ul style="list-style-type: none"> <li>- Building circulation and movement</li> <li>- Harmony between scenery and building</li> <li>- Comfortable timber interiors</li> <li>- Layout plan</li> </ul>

Table 2 Precedent Study 1

Kaze no Machi Miyabira is a care home for older adults located in Shobara City, Hiroshima. The clients desire for the facility is to create a warm, wooden home that feels welcoming to both residents and visitors. The grounds feature multiple pathways, alleys, and gardens that are open to the public. The facility is comprised of seven separate buildings: five for special elderly nursing and short-term stays, two for day care, and one for administration.

The administration building is centrally located to facilitate staff movement between buildings. The buildings for special elderly nursing and short-term stays offer private rooms as well as open spaces that create a family-like atmosphere for both residents and their visitors. These open spaces can also function as gallery spaces, areas for entertaining guests, and serve as the entrance in traditional Japanese architecture. The overall design of the facility and the nursing services provided reflect the client's innovative approach to elderly care.



Figure 5 Site Plan

Source: Archdaily

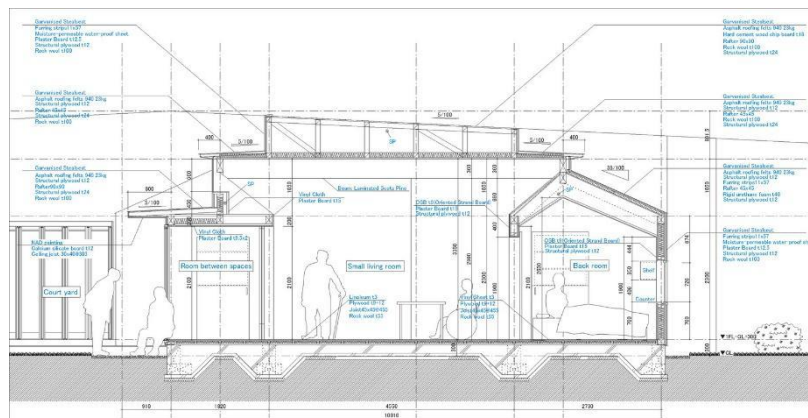


Figure 6 Section Plan

Source: Archdaily



Figure 7 Layout Plan

Source: Archdaily



Name	Location	Architect	Documentation	Adaptation Points
Eltheto Housing and Healthcare Complex	Rissen, the Netherlands	2 by 4 Architects (2015)	<p>exterior</p>  <p>Figure 8 Eltheto Housing and Healthcare Complex Exterior</p> <p>interior</p>  <p>Figure 9 Eltheto Housing and Healthcare</p>	<ul style="list-style-type: none"> <li>- Age-inclusive modern living for the elderly concept</li> <li>- Quality of life and social level control of the elderly</li> <li>- Building massing</li> <li>- Facilities</li> </ul>



Table 3 Precedent Study 2

The housing program operates similarly to a suburban housing program that consists of communal and accessible housing units that prioritize improving the residents' quality of life and maintaining a social community. The program is customized to accommodate the needs of less self-sufficient elder individuals while still emphasizing the importance of enhancing their overall life quality. Eltheto aims to ensure that the elderly population remains integrated into today's society by furnishing them with suitable healthcare and housing options that cater to their present requirements.



Figure 10 Site Plan Diagram

Source: Archdaily



Figure 11 Layout Diagram

Source: Archdaily

## 2.9 Definition and Criteria of Neo Vernacular Architecture

Pradnya Putra (2014) stated that neo vernacular is an implementation of architectural elements that already existed, both in physical (form, construction)

and non-physical (concept, philosophy, layout) with the aim of saving local elements that have been formed empirically by the locals.

Based on Arsimedia (2019), there are few criteria of neo vernacular architecture, such as:

- 1) Having forms and shapes that are influenced by local cultural and environmental aspects that are implemented on block plan, zoning, structure, and ornaments of the building.
- 2) Application of physical and non-physical elements such as local beliefs, culture, patterns, thought, layout in a more modern form.
- 3) Vernacular building principles are not applied purely but influenced with more technology and modern touch that will produce a new product with emphasis on the visual appearance.

## 2.10 Comparison between Vernacular, Neo Vernacular, and Traditional Architecture

Aspect	Vernacular	Neo Vernacular	Traditional
<b>Philosophy</b>	Formed by inherited tradition however there is an influence in physical as well as non-physical aspect. Is a development of traditional architecture.	The application of existing architectural elements that undergoes renewal design process towards a modern work.	Formed by inherited traditions based on local culture and conditions.
<b>Principle</b>	Develops according to the culture and environment that changes with the time	Continuation of vernacular architecture with a purpose of conservating local culture.	Does not change overtime, connected to one local culture, and has strong religious regulations and norms
<b>Design Idea</b>	Uses ornaments to	Modern approach of	Focuses on façade,

	complement, preserves local values and local activities.	design.	forms, ornaments as a requirement.	uses as a
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*Table 4 Vernacular, Neo Vernacular, and Traditional Architecture Comparison*

### **2.11 Exploration Methods on Neo Vernacular Architecture**

According to Deddy Erdiono in Sabua Journal Journal Vol.3, No.3:32-39, 2011 entitled 'Modern' (Neo) Vernacular Architecture in Indonesia', there are 4 (four) approach that needs to be considered in designing modern buildings that take both physical and non-physical elements from traditional buildings,

- The form and meaning are fixed.
- Fixed form with new meaning.
- A new form with a fixed meaning.
- New form and meaning.

Based on the four approach above, neo vernacular approach can be considered as approach number 3 that creates a new form with a fixed meaning. There might be a form transformation that is caused by adjustments and developments that are more modern and according to the current needs of people.

### **2.12 Neo Vernacular Architecture Design Principles**

Neo-Vernacular architecture has several principles design as follows:

- 1) Direct Relationship, relationship with local architecture which adjusted to the values or functions of the building now.
- 2) Abstract Relationship, including interpretation into the form of the building which can be used through analysis of cultural traditions and heritage architecture.
- 3) Landscape Relationship, is a relationship with the environment such as physical conditions including topography and climate.
- 4) Contemporary Relations, including the selection of the use of technology that suit current needs.
- 5) Future Relations, is a design that has sustainability or is sustainable in anticipation future conditions.



Figure 12 Bali International Airport

Source: Hotels.com

### 2.13 Sanga Mandala

According to Ramseyer and Tisna (2001), Sanga Mandala came from two words “Sanga” that means nine, and “Mandala” which means zone. These two words then become a traditional Balinese spatial concept that divides a space into 9 spaces that is a combination of two concepts, kaja (mountain)-kelod (sea) and kangin (east - sunrise) and kauh (west – sunset). These 9 spaces has the most sacred and least sacred area which can be seen in the diagram below.

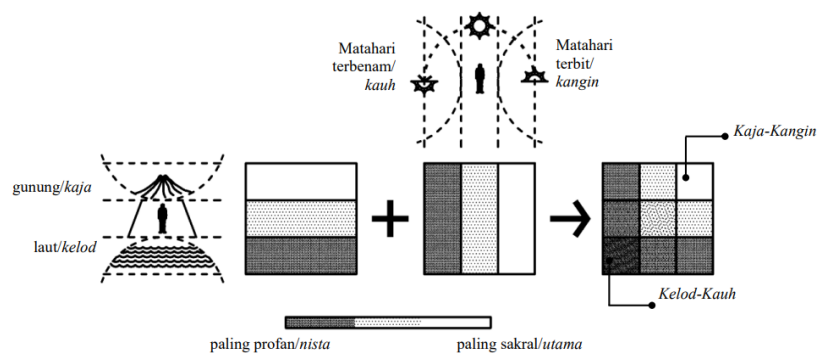


Figure 13 Sanga Mandala Concept

Source: Gelebet (2012)

The most to least sacred area can be listed as utama ning utama (UU), utama ning madya (UM), utama ning nista (UN), madya ning utama (MU), madya ning madya (MM), madya ning nista (MN), nista ning

utama (NU), nista ning madya (NM), nista ning nista (NN) which can be seen in fig. 14. With “utama” as the most sacred, “madya” as middle, and “nista” as the least sacred.

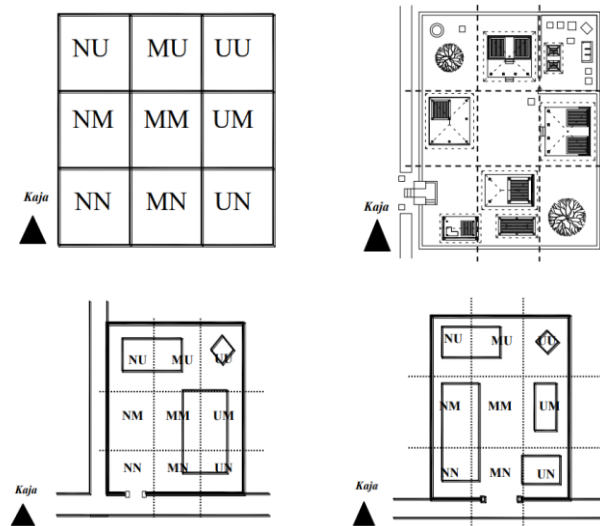
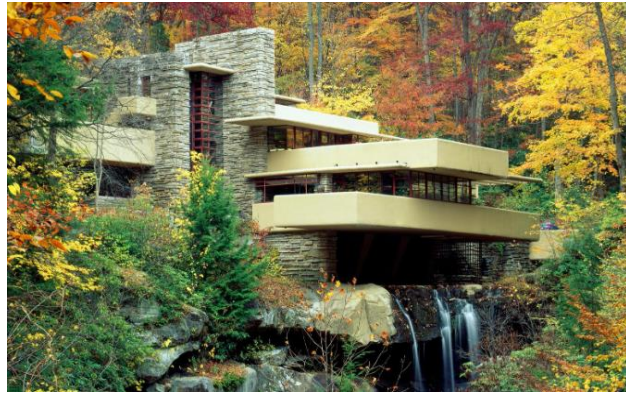


Figure 14 Sanga Mandala Implementation

Source: Suryada (2012)

## 2.14 Organic Architecture

Organic architecture was found by Frank Lloyd Wright (1867-1959), he also stated his vision that organic architecture was based on the idea that a building is the product of a place and time meant to integrate and contribute to the world around it. Rather than an imitation of the natural world or an outcome of an imposed style, a building should be a reinterpretation of the principles of nature, filtered through human intelligence to create forms that are perhaps more natural than nature itself. Organic architecture is also translated into the all-inclusive nature of Wright's design process.



*Figure 15 Falling Water by Frank Lloyd Wright*

*Source: House Digest*

According to David Pearson, there are rules regarding organic architecture and design that is known as the Gaia Charter, that consists:

- 1) be inspired by nature and be sustainable, healthy, conserving, and diverse.
- 2) follow the flows and be flexible and adaptable.
- 3) satisfy social, physical, and spiritual needs.
- 4) "grow out of the site" and be unique.