

THE IMPLEMENTATION OF ACCESSIBILITY FACILITIES TO ELDERLY ACTIVITIES IN HARGO DEDALI NURSING HOME, SURABAYA

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ABSTRACT

According to the Central Statistics Agency, the rapid increase in the number of elderly people in Indonesia every year makes the percentage of the elderly continue to increase to 16.5% in 2035. To anticipate the increase in the number of elderly people every year, one effort is needed such as paying attention to the provision of decent werdha homes for the elderly. The main factor in the provision of werdha parlors occurs due to safety concerns. Because the elderly experience physical and psychosocial changes, an important aspect of the change is the risk of falls that can occur and endanger the elderly themselves. The risk of falls in the elderly is influenced by intrinsic factors, extrinsic factors, and situational factors. From this problem, werdha orphanage facilities are needed that are designed in accordance with the needs of the elderly. In this design, knowledge of the characteristics of the elderly is needed and special attention is also needed in terms of the arrangement of furniture layout, furniture shape, and other interior elements as a support for the design and form of safety and comfort of residents, especially the elderly. General concepts used by maximizing the use of interior elements that prioritize safety and security factors, such as signage, handrails and the application of materials that have special criteria for the elderly. The final design/implementation that will be applied is a werdha home that provides facilities designed in accordance with the needs of werdha home residents, especially for the elderly. It is expected that the results of the design can improve the standard of living of the elderly in Nursing Home Hargo Dedali, Surabaya, Indonesia.

Keywords: Design, elderly, facilities, interior, nursing home, security, safety

1. PREFACE

[1] According to the Central Statistics Agency, the elderly population in 2020 amounted to 25.64 million people. See that the elderly population, which is 9.6% of Indonesia's total population, is aging. [2] Meanwhile, population complaint information service data in East Java amounted to 192,877 (7.7%) and [3] Dispendukcapil 2010 amounted to 287,154 (11.04%). [4] In addition, according to data from the Central Statistics Agency (BPS) in 2013, the percentage of elderly in Surabaya increased from 6.81% to 7.25% in 2014, showing that the elderly population continues to increase every year.

The impact of increasing the number of elderly people every year leads to limited availability of facilities in the form of social services and care for the elderly, namely Nursing Home. In Indonesia itself must pay attention to the provision and feasibility of a Nursing Home to be in accordance with a decent standard of living, especially for the elderly.

Nursing Home is a residence intended for the elderly. Generally Nursing Home serve as a place or residence that provides care for elderly people. [5] Elderly people who have limited movement and activity. In addition to being intended for the elderly who have physical limitations, usually also for those who experience psychological illness, mental setbacks and problems in socializing life. Therefore, a safe, comfortable and conducive place or residence is needed for the elderly in their activities. [6] The name Nursing Home itself is generally negative in the eyes of Indonesians.

This negative view is compounded by the current condition of nursing homes, where many people still stand without regard to the comfort and safety of their residents. While older people tend to decline physically and improve emotionally, they are physically certainly different from younger humans.

Judging from the physical decline that occurs among the elderly, important things in the design of housing that is friendly to the elderly architecturally include comfort and safety for the elderly themselves. While in some werdha homes still have common problems, one of which is accessibility facilities that are still inadequate, so there are still cases of elderly people having small accidents or the risk of falling while on the move.

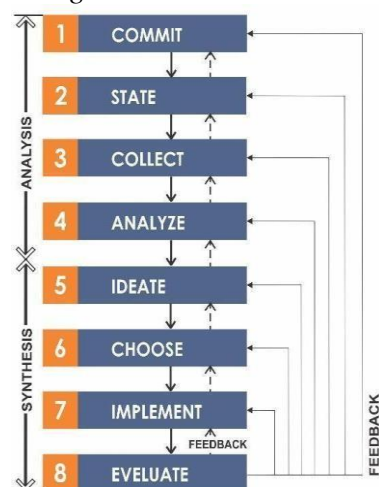
Recognizing the importance of this, there is a need to provide a safe and comfortable dwelling for elderly people. The basis of this desire also affects the application of accessibility facilities that aim as one of the safety efforts in the interior of the residence. From these functions can be known whether a Nursing Home can be said to function properly or not.

2. RESEARCH METHODS

[7] The design process used is the design process put forward by Rosemary Kilmer. In general, the design process consists of two stages, namely the analysis stage and the synthesis stage. These two stages can then be broken down into 8 steps that are: Commit, State, Collect, Analyze, Ideate, Choose, Implement, and Evaluate.

Figure 1

Design Mindset Chart



Source: Designing Interiors, Rosemary Kilmer, 1992

The data collection methods used in this design are as follows:

Literature Studies

The library method is a method of collecting data obtained from various sources of literature (books, journals, other people's thesis, etc.) to be a source of reading and reference related to the issues / objects discussed.

Field Studies

The research was conducted by direct observation of the subjects studied to obtain primary data. Observations are made online, via Whatsapp Video Call.

Online Observations

Online observation method is a method of systematically observing and recording important points about an object and collecting data by systematically observing problems that exist online through Whatsapp video messages. The goal is to make sure the data I get from other sources is as correct as the condition data in the field.

Online Interviews

The interview method was conducted online through Whastapp messaging media involving Hargo Dedali Nursing Home, Surabaya (Student Division). From the interview generated information related to the data of the home.

Documentation

The purpose of using this method is to make it possible to document objects (visual data in the form of photos) in addition to data obtained through observation and interview methods.

The image capture of objects is done using through the camera. One of the administrators at Nursing Home Hargo Dedali Surabaya sent them via Whatsapp message.

Here is attached to a table of design parameters used.

Table 1
Design Parameters

NO	PARAMETER	PURPOSE
1	Pay attention to the use of furniture with a sharp angle.	Minimize the danger of injury that can occur in the elderly.
2	The use of floor materials that are not slippery / rough textured and avoid the use of leveling on the floor.	Minimize the risk of falling on the elderly, because the elderly have difficulty distinguishing the circulation of the road
3	Minimize the use of many lines applied to interior elements (walls, ceilings, floors).	Minimize confusion that can cause the risk of falls in the elderly.
4	The provision of space instruction accessibility facilities	So that the elderly who generally experience dementia / senile can recognize the space and environment around
5	The provision of handrail accessibility facilities in each space / corridor area	So that the elderly can use these facilities to make it easier for them to support their path.
6	Use of the concept of Modern Natural theme.	The concept of the theme is tailored to the psychological needs of the elderly who need adequate atmosphere and vegetation.
7	Use of the color concept "Earthy Tone". Blends bright colors and contrast.	The concept of color is adjusted to the physical needs (decreased vision in the surrounding environment) and the psyche of the elderly
8	Circulation arrangements, furniture layouts, etc. are designed based on standard provisions / in accordance with anthropometry and ergonomics of the elderly.	In order to fulfill adequate accessibility facilities for the elderly.

Source: Zulfa Ayu Fadilah, 2021

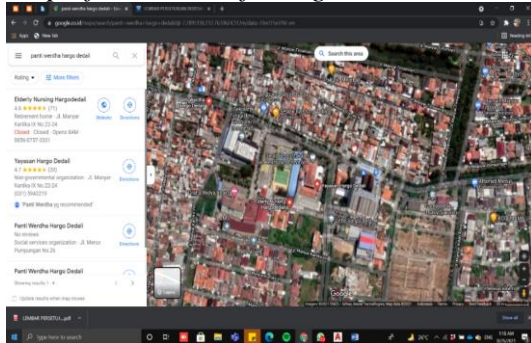
3. RESULT AND DISCUSSION

Field Data

The location of Hargo Dedali Nursing Home is in Surabaya, precisely on Jalan Manyar Kartika IX/22-24, Surabaya - 60118.

Figure 2

Map of Location of Hargo Dedali Nursing Home, Surabaya



Source: [googlemaps.com](https://www.google.com/maps)

Figure 3

Hargo Dedali Nursing Home, Surabaya



Source: Zulfa Ayu Fadilah, 2021

Figure 4

Documentation of Existing Waiting Room



Source: Zulfa Ayu Fadilah, 2021

Figure 5

Documentation of Existing Hall



Source: Zulfa Ayu Fadilah, 2021

Figure 6

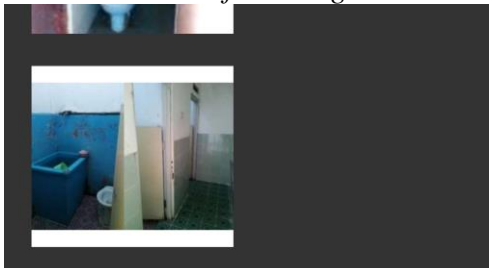
Documentation of Existing Bedrooms



Source: Zulfa Ayu Fadilah, 2021

Figure 7

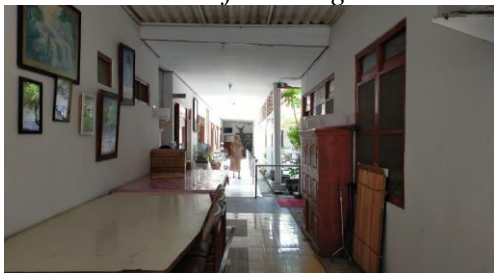
Documentation of Existing Bathroom



Source: Zulfa Ayu Fadilah, 2021

Figure 8

Documentation of Existing Corridors



Source: Zulfa Ayu Fadilah, 2021

The scope of interior planning design of Hargo Dedali Nursing Home is focused on the application of accessibility facilities intended for the elderly, especially for elderly people with disabilities. Accessibility facilities in question are standard circulation, signage and handrailing provision.

Design Issues

The design at Nursing Home Hargo Dedali has been based on problems and obstacles on the ground. Generally, the elderly experience physical and psychological decline that requires providing adequate accessibility facilities. The problems on the ground are focused on accessibility facilities that are still inadequate. As for the solution to answer the existing problems, namely by applying/providing maximum accessibility facilities in the design of Werdha Hargo Dedali Surabaya As an effort to prevent the risk of falling on the elderly in activities.

Design Concepts

The design concept used in the application of accessibility facilities focuses on the goal of preventing the risk of falling to the elderly who generally experience physical and psychological decline.

The description for design parameters contained in Table 1 is as follows:

- a) The concept of the theme taken is tailored to the psychological needs of the users and facilities of werdha parlors that require adequate atmosphere and vegetation;
- b) The concept of modern natural style is a concept that combines natural materials and simple compositions. Choose materials that feel natural, such as wood, rattan, bamboo or natural stone;
- c) Use of roughly textured anti-slip/material. This material is applied to the floor;
- d) The use of simple furniture and paying attention to sharp angles, this can prevent excessive impact on the elderly;
- e) Use of natural colors and the addition of contrasting colors. Both types of colors can help the elderly to recognize the surrounding environment. Examples of applications for signage & handrail;
- f) Avoid the use of floor leveling that can harm the elderly because it is difficult to distinguish the circulation of the road;
- g) Circulation arrangements, furniture layouts, etc. are designed based on standard provisions / in accordance with elderly anthropometry. This is important, in order to fulfill adequate accessibility facilities for the elderly.

Design Results

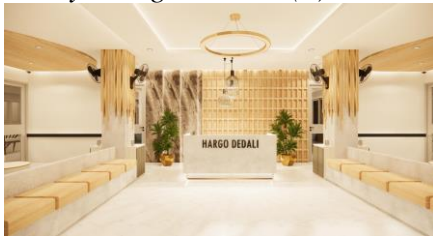
The design results have been adjusted to the design parameters.

Receptionist Lobby

Area lobby reception is designed for a seating capacity of 40 people. The circulation system has been adjusted by elderly anthropometric standards. In this area also equipped with wall handrail and signaged space name. This area is facilitated by the storage of books/magazines and others as a medium of entertainment visitors. In this area the dominant use of natural materials, such as wood. Not only that, in the reception lobby area also minimizes the use of line elements.

Figure 9

Lobby Design Results (1)



Source: Zulfa Ayu Fadilah, 2021

Figure 10

Lobby Design Results (2)



Source: Zulfa Ayu Fadilah, 2021

Hall

The hall area is designed for a maximum capacity of 30 people. The circulation system is also friendly for elderly people with disabilities/using walkers. The area is also equipped with a handrail.

Not only that, this hall is facilitated by a large cabinet that can be used as a storage place for elderly works as well as reading materials such as books, magazines and others.

Figure 11

Hall Design Results (1)



Source: Zulfa Ayu Fadilah, 2021

Figure 12

Hall Design Results (2)



Source: Zulfa Ayu Fadilah, 2021

Bedroom

The bedroom area is divided into 2 types based on user capacity. This type consists of: (a) Room Type 1: Capacity of 3 people; and (b) Room Type 2: Capacity of 1 person.

In the bedroom area, each elderly has private facilities in the form of a bed, nightstand and wardrobe.

The layout of furniture and circulation patterns have been adjusted to anthropometric and ergonomic standards of the elderly. The application of contrast colors is also used in these 2 types of bedrooms, the goal is to make it easier for the elderly to recognize the surrounding environment.

Figure 13

The Design of a Type 1 Bedroom



Source: Zulfa Ayu Fadilah, 2021

Figure 14

The Design of Type 2 Bedrooms



Source: Zulfa Ayu Fadilah, 2021

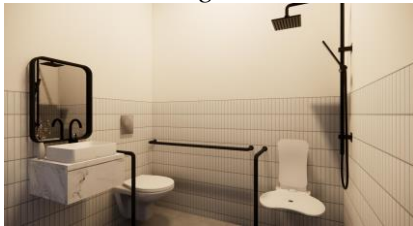
Bathroom

In the bathroom area maximized the use of handrails that have an important purpose as a support tool/walking aid and contrast color selection. Contrast color used aims so that the elderly can recognize objects in it.

In addition, the bathroom is designed to have no difference in floor height to avoid the risk of elderly falls in the circulation of the road. The bathroom does not have too much space. So, the wall design is designed as simple as possible and also sufficient lighting in it. This is to avoid harmful things that can happen to the elderly.

Figure 15

Bathroom Design Results



Source: Zulfa Ayu Fadilah, 2021

Corridor

Corridors are the main access of the elderly to other spaces. The provision of accessibility facilities is implemented to the maximum in this area. Accessibility facilities are in the form of signage on the walls (the name of each space) and on the floor (road limits), and maximize the existence of handrails. The use of contrast colors is very important in this corridor area, because it can help the elderly and other users recognize each space that is distinguished by several contrast colors.

Figure 16

Corridor Design Results



Source: Zulfa Ayu Fadilah, 2021

4. CONCLUSIONS AND RECOMMENDATIONS

In designing accessibility facilities by adjusting the activities carried out by the elderly is an effort to prevent unwanted things such as the risk of falls/injuries to the elderly. This generally occurs due to lack of inadequate accessibility facilities.

From the results of the design of accessibility facilities design at Hargo Dedali Nursing Home can be concluded to have maximized the application of accessibility facilities needed, such as signage, handrail, furniture layout, circulation system, elderly anthropometry, elderly ergonomics and material & color implementation.

From the beginning to the end of the research process, the authors stated that this journal still has many shortcomings. Therefore, constructive advices and criticism are very helpful for future evaluation. Therefore, the authors suggest doing further research and paying attention to the validity of data retrieval on the internet. This prevents the author from using data that is doubting its validity / invalidity.

Acknowledgement

Researchers thanked participants who had provided the necessary data in the study.

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