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## The Elderly Friendly High-Rise Housing: A Comparison Study between Indonesia & Japan

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### Abstract

This study concerns to the life of the elderly who live in the high-rise housing in urban areas. The aim of this study is to discover a conceptual model of high-rise housing which is capable to accommodate the activities of the elderly by conducting a comparative study between Indonesia and Japan. Qualitative method is used because it has explorative nature. Providing attention toward how to create a safe, comfortable, healthy, economical, self-reliant living environment, and how to encourage creation of social cohesion, are necessary for the life of the elderly who live in high-rise housing in urban areas.

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### 1. Introduction

Indonesian population has been categorized as aging society since 2010<sup>1</sup>. The elderly prefer to live at home in their twilight days rather than staying in a nursing home, or aging at home<sup>2</sup>. The Indonesian government began to encourage the development of high-rise housings in many cities in order to meet the housing needs. Adaptation is still needed for the people to live in high-rise housing, especially for the elderly. Facilities that support the elderly's daily activities are also necessary to be provided in high-rise housing. Therefore, consideration on how to create a suitable high-rise housing for the elderly is needed. In relation with this condition, Japan as a country with high

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population of the elderly has implement concepts for the elderly in high-rise housing. Thus conducting a comparative study in Japan is necessary. The aim of this study is to discover a conceptual model of high-rise housing which is capable of accommodating the activities of the elderly by conducting a comparative study between Indonesia and Japan.

Qualitative method is used because this study has the nature of exploration. The data of housings design and its facilities, the elderly activities and their opinions about their housing environments, are collected through field observation, interview with the residents and key persons, literary study and institutional survey. The collected data are analysed through describing regularities, discovering patterns of activities and its properties, advantage and disadvantage of the existing condition, and then interpreted qualitatively to conclude the conceptual model of the elderly friendly high-rise housing. Validity of analysis is made through triangulation between interview with the elderly, interview with key persons, and photographs or other evidences. Field survey conducted in high-rise public housing of: Pekunden and Kaligawe in Semarang, Indonesia (Fig. 1 and 2 ); Menanggal and Sombo in Surabaya, Indonesia (Fig. 3 and 4); Kobe Municipal Government and Hyogo Prefectural Government in HAT Kobe area, Japan (Fig. 5, 6, and 7).



Fig. 1 Pekunden housing in Semarang, Indonesia.  
Source : field survey, 2012



Fig. 2 Kaligawe housing in Semarang, Indonesia.  
Source : field survey, 2012



Fig. 3 Menanggal housing in Surabaya, Indonesia.  
Source : field survey, 2012



Fig. 4 Sombo housing in Surabaya, Indonesia.  
Source : field survey, 2012



Fig. 5 Kobe municipal housing in HAT Kobe area, Kobe, Japan.  
Source : field survey, 2012



Fig. 6 Hyogo prefectural housing in HAT Kobe area, Kobe, Japan.  
Source : field survey, 2012



Fig. 7 Akashi municipal housing in Uozumikita, Akashi, Japan.  
Source : field survey, 2012

## 2. The elderly activities and their physical environment

Based on the field observations, activities conducted by the elderly can be grouped into: physical exercises, such as walking exercise and gymnastic; social activities, such as gathering and chatting; religious activities, such as praying and reading Koran together; health care activities, such as monthly health check; leisure activities, such as doing karaoke, playing games, and gardening; and economic activities; such as selling goods and foods, and providing services. These activities are conducted individually as well as in a group.

Based on the case studies in Indonesia, the elderly activities which are conducted daily, are housekeeping for female and working for male (Fig. 8). Although there are also cases where elderly female also work as an effort for earning additional income for their family (Fig. 9). There are elderly who live with their children and grandchildren. This condition mostly can be met in high-rise housing occupied by lower income people and working in informal sector. On the other hand, most of the elderly who live in the high-rise housing which is intended for the government official are conducting housekeeping and other activities to fill in their vacant time daily, because they received income from monthly pension. About activities which are conducted by the elderly in a group in Indonesia, there are similar activities since these activities are organized by community organization in housing neighbourhood. One of the organizations is the *Pemberdayaan dan Kesejahteraan Keluarga* (PKK) or community organization on family welfare and empowerment. This community organization mostly organized by female inhabitant, and various activities were organized, such as sports, gathering, *Pos Pelayanan Terpadu untuk Lanjut Usia* (Posyandu Lansia) or Integrated Care Centre for the Elderly, and praying together especially for the moslem. There are elderly who cannot joint these group activities because of their limited physical and health conditions, and also because it is not convenient for them to access the facilities in the building where the activities conducted.



Fig. 8 Elderly in Pekunden is taking a rest in front of their unit after conducting daily activity.  
Source : field survey, 2012



Fig. 9 Elderly in Sombo is selling food and drinks in front of her unit.  
Source : field survey, 2012

In Japan, the individual activities conducted by the elderly is mostly daily activities according to their needs, such as housekeeping as well as activities which is supporting them to survive (Fig. 10 and 11). The activities are walking around their neighbourhood, visiting and reading in nearby library, and become a member of social organization outside of their neighbourhood. Therefore they can live healthy with self-reliantly condition. These individual activities are conducted routinely. In the neighbourhood which has Silver Housing concept, community wellness centre is provided, and supported with Life Support Assistance (LSA). The LSA supports the common facility which is provided in Silver Housing for the elderly who live in the neighbourhood. They provide activities such as simple gymnastic, karaoke, games, making origami, and playing music, as well as supervision toward the elderly condition. In this facility, the elderly create companionship between each other. These activities are not an obligation to be followed by the elderly who live in the neighbourhood, rather than they are provided for them who want and need activities which have been programmed by the LSA. The elderly who still in healthy condition and active are self-reliant and they create their own activities based on their need and hobbies.



Fig. 10 The elderly in Japan is doing her daily activities such as washing, cooking with modern equipments.  
Source : field survey, 2012



Fig. 11 Schedule of elderly activities in Japan attached on the wall, an easy way to check and memorize.  
Source : field survey, 2012



Fig. 12. The existence of connecting corridors in Pekunden and Kaligawe make the elderly can conduct their activities and create social contact with other who live in other blocks easily.  
Source : Field survey, 2012

In relation to the elderly surrounding environment, both physical forms as well as the provided facilities for the elderly are different in each of high-rise housing. The number of floors, the unit arrangement form, the circulations and the provided facilities to support the elderly activities are various. There are variations on the layout of the high-rise housing blocks and circulation system which is connecting those blocks In Indonesian high-rise housing. As can be seen in Pekunden Housing and Kaligawe Housing, each block is connected with connecting corridor (Fig. 12). This condition gives an opportunity for the inhabitant to interact each other, especially for those who live in the same floor. The elderly can also do walking exercise around the corridor which is connected between blocks. Similar condition can be met in the Silver Housing in HAT Kobe and Akashi, Japan. The difference is in accessibility between each floor. There is no elevator provided in the Indonesian case studies, while in Japan the high-rise housings are equipped with elevator (Fig. 13 and 14). The absence of elevator will affect the number of high-rise housing floor because the inhabitants have to access their units on foot. In this condition, it also affects the live of the elderly especially for those who live in the upper floor. With their limited physical ability, it is not easy and convenient for the elderly to go up and down the building. They go down and up mostly only to look for their daily needs and conduct health check activity which is held in the Posyandu Lansia. For the elderly who already cannot conduct mobile activities, the officer in Posyandu Lansia will visit their units to check their health. For Sombo Housing and Menanggal Housing in Indonesia, and Hyogo Prefectural Housing in Japan, there are no connecting corridors between block, therefore the activities of the inhabitant are limited within their own block. Therefore the existence of connecting corridor between blocks is important for the elderly especially for them who live in high-rise housing which have no elevator.



Fig. 13 The absence of elevators makes the elderly who live in the upper floor have to find the common facilities in the ground floor by stairs. Source : field survey, 2012



Fig. 14 The existence of connecting corridors and both stairs and elevators in HAT Kobe and Uozumikita make the elderly can conduct their activities easily, make social contact with other who live in other blocks, and serve the elderly an comfortable access to utilize facilities in their neighborhood. Source : field survey, 2012

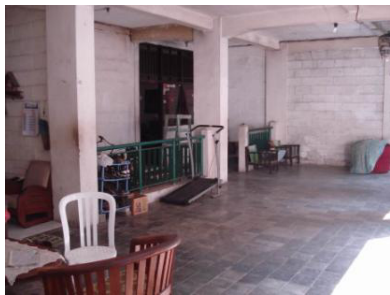


Fig. 15 Hall in each floor in Indonesian housing such as in Pekunden is a facility provided to support social activities for the inhabitant. Source : field survey, 2012



Fig. 16 A common space provided in every three levels in Collective Housing of HAT Kobe for the inhabitant to conduct common activities such as gathering, chatting, etc. Source : field survey, 2012

Related to the facilities in the case studies, basically it can be categorized into two groups: spaces which are developed or designed by the designer of the building, and spaces which are developed according to or initiated by the community who conduct activities in the neighborhood<sup>3</sup>. The first group has the form of common or public spaces, whether in the form of special places which are intended to accommodate the inhabitant activities or through circulation space as a place which could be utilized by the inhabitant (Fig. 15). There is a concept of Collective Housing in the Hyogo Prefectural high-rise housing in HAT Kobe, Japan. In this housing there are special spaces or facilities provided for the inhabitant as a place to conduct common activities such as gathering, chatting, and conducting other daily activities together (Fig. 16). The second group is facilities or spaces which are developed or

initiated by the community. These are spaces to conduct common activities which are managed by certain community organization as well as the one which are not organized by certain community organization (Fig. 17). The location could take place in building spaces which are intended for the community's common activities and also in other spaces such as circulation spaces and open spaces. The implementation of these kinds of spaces could have a nature of temporary or only provided whenever it is necessary until the spaces which have more permanent in nature (Fig. 18).



Fig. 17. A space created by the inhabitant for gathering in Sombo.  
Source : field survey, 2012



Fig. 18 A space in Sombo where the elderly held Posyandu Lansia activities temporarily every month.  
Source : field survey, 2012

### 3. Friendly high-rise housing for the elderly

There are things that can be noted related with friendly high-rise housing for the elderly based on the case studies of both in Indonesia and Japan. In Indonesia, the elderly activities have been developed either individually or communally, and in some cases the occupants adjust the physical form of their neighbourhood as they wish and need. In Japan, there are various concepts developed as attention to the life of the elderly in the high-rise housings, such as Silver Housing, Collective Housing, and Life Support Assistance. These concepts are supported by the availability of well-planned facilities with control systems. By these provisions, the elderly will have a variety of activities, become more independent, and have a good social cohesion. It takes time to create community togetherness in a neighborhood<sup>4</sup>.

The responses of the elderly about the high-rise housings where they live and the facilities are good and sufficient to accommodate their activities, although some of the facilities are not in good condition. There are well designed facilities which are intended for certain activities but they are not optimally or effectively used or utilized by the community. That makes the cost of the construction seems useless resulting the increase of the expense as well as in the maintenance. On the other hand, there are second types of spaces which are implemented by the community. These kinds of spaces appropriate for the community who utilize them, because these spaces are shaped from the community, by the community, and for the community according to the resources that they have. The thing that needs to be concerned with in this second group is that sometimes the implemented spaces have a potential to become a burden by wider community. Therefore providing guidance and regulation are needed to support the potentials owned by the community.

The above conditions could have a meaning that good and complete facilities are supportive, but they are not the primary need or always necessary. In relation to the provision of facilities, one consideration that needs to be concerned with is related with type and intensity of the activities which is conducted by the elderly in a certain place. Basically a flexible multipurpose room or space is needed and appropriate. More intensely conducted activities should have a closer distance facility or in mezzo scale, such as provided in each floor or in certain floor. While activities which are conducted less intensely could be provided in longer distance or in macro scale, such as provided in each block or in housing neighbourhood, which is still within a range that could be reached by the elderly conveniently, especially on foot.

In Indonesian situation, a routine social gathering which is held by community organization becomes an activity that have an impact in the provision of public facilities in high-rise housing. There is a kind of common spaces or rooms in each floor of Pekunden, Kaligawe, and Sombo Housing for the inhabitant to conduct such kind of activity. In the case of Menanggal Housing this kind of space is developed by the community using spaces between two blocks on the ground floor (Fig. 19). Sometimes the gathering activity also conducted in each unit of the inhabitant. In this case, they also use the circulation corridor as an extended space because of limitation of space they have in each unit to accommodate the community member participated in the gathering activity. Based on the case studies of high-rise housing in Japan, the activity of community gathering which is held by a certain community organization could not be met. But in the case of Collective Housing of the Hyogo Prefectural housing in HAT Kobe, the elderly become more intense in meeting or seeing each other because there are common rooms provided in certain floor. On the other hand, in the Silver Housing, the LSA provide the opportunity for the elderly to meet each other and get therapy to maintain their health, through planning and conducting activities such as making origami, karaoke, playing games, and playing traditional music instruments in the facility center. In Indonesia there is an activity and facility which is similar with the LSA in Japan called *Pos Pelayanan Terpadu untuk Lanjut Usia* (Posyandu Lansia) or Integrated Care Center for the Elderly. This facility usually utilizes multi-purpose room provided in the neighborhood. Activities in Posyandu Lansia conducted once a month in a limited time, such as gymnastic for the elderly, health counseling, and health checkup. Whenever the elderly need more intensive care, they will be referenced to the nearby health care institution.



Fig. 19 Meeting space developed by the inhabitant in Menanggal using space between blocks.  
Source : field survey, 2012



Fig. 20 An accessible and comfortable living environment in HAT Kobe area support the elderly to live healthy and self-reliantly.  
Source : field survey, 2012

The other facilities provided for the elderly and inhabitant in high-rise housing are sports field, religious facility especially for the muslim such as mosque or musholla, and daily needs facility such as shops and market which can be met in Pekunden housing. These facilities mostly located in the ground floor. Therefore it needs an effort from the elderly to access these facilities since there is only stairs provided for vertical access. In Japan, especially in HAT Kobe area, shopping and the other public facilities are located in the other block of surrounding neighborhood, but it does not give burden for the elderly because the accessibility of the surrounding neighborhood is convenient and safe for them. Neighborhood with safe and convenient access for the elderly is needed because it encourages the elderly to become self-reliant, and they can also take care for their health through walking exercise in their surrounding neighborhood (Fig. 20).

There is another important thing that needs to be concerned with in the high-rise housing. Based on field observation, corridor and circulation area is an important space which could be optimizes to support the creation of the elderly friendly high-rise housing. In this space, the inhabitant, especially the elderly could utilize it not only as a circulation area, but there are other activities could be conducted individually as well as communally, such as

planting, chatting, and meeting each other (Fig. 21 and 22). This condition could give benefits in developing social cohesion, which in turn can give various benefits, such as creating companionship and passive supervision system for the elderly. Therefore the corridor could become an active space which is support the elderly live in high-rise housing.



Figure 21. Elderly using corridor in front of their unit to do meeting individually or organizzelly.  
Source : Field survey, 2012



Figure 22. The elderly and friends are chatting and caring baby in a corner of an alley in Sombo.  
Source : Field survey, 2012

#### 4. Conclusion

Based on the comparison study in Indonesian and Japan high-rise housing, it is necessary to give attention on creating a safe, comfortable, happy, healthy, economical, self-reliant living environment, and also how to encourage a creation of social cohesion, for the life of the elderly who live in the high-rise housing in urban areas. Through the creation of good social cohesion, there will be mutual activities and mutual aids among the inhabitant, especially for the elderly. This condition in turn can drive other various benefits, such as the creation of a passive supervision system, a healthy life system, companionship, and efficient system for the inhabitant as well as for the government. High-rise housing blocks which are connected and active corridor, equipped with mezzo scale and macro scale facilities, are some of the forms that can be implemented in order to support the creation of friendly spaces for the elderly, through giving consideration on the context that exist and owned by the community.

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