Aging is just Another Word of Living
Redesign for Overt and Covert Behavior at Pojok Indah Elderly Home

Yusuf Ariyanto

Architecture, School of Creative Industry, Universitas Ciputra Surabaya
yusuf.ariyanto@ciputra.ac.id

Nailah Hasnah Mariono

Architecture, School of Creative Industry, Universitas Ciputra Surabaya
nmariono@student.ciputra.ac.id

ABSTRACT

Old age comes with declining health, limitations in daily activities, and feelings of loneliness and depression. Presumptions of "aging in place"; the understanding that they can live in homes not primarily built as architectural designs for the elderly sometimes worsen their physical and psychological health conditions. The relationship between elderly needs and their living space is closely related to conducting a behavioral architecture. This study aims to redesign elderly homes existing through a behavioral architecture approach, analysis of overt-covert behavior, and elderly-friendly design visualization. Aging is another word of living, which is presented in this design to realize an elderly-friendly home where the elderly have physical and psychological health and good quality of life.

Keywords: Behavioral Architecture, Elderly-friendly Design, physical and psychological health

INTRODUCTION

Entering old age, the elderly need support in various aspects of life, including social and economic factors. The elderly have a variety of psychological experience (Heine and Browning, 2004) and physical, including problems with physical activity, navigation, and spatial orientation (Haanes et al., 2014); deterioration in conditions and abilities that are influenced by age factors decrease makes the ability of the elderly tend to depend on the others to carry out their daily activities. Therefore, social and economic support from families, communities, and the government is needed to improve the welfare and quality of life of the elderly. Presumptions of "aging in place"; the understanding that they can live in homes not primarily built as architectural designs for the elderly sometimes worsen their physical and mental health conditions. Moreover, the elderly have significant behavior that affects their physical and psychological responses.

Current design practices do not fully support the potential of elderly home for building up physical and psychological for their social interaction, inclusion, and care. Aging is just Another Word of Living, in which the quality of life of the elderly residents will be considered and supported by social interaction, inclusion, and care design. This

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study aims to redesign elderly home existing through a behavioral architecture approach, analysis of overt-covert behavior, and try to visualization for new elderly home becomes a place to live with special attention, that has two crucial aspects that are very close to the feeling of security and comfort of an older person, namely an elderly-friendly designs.

LITERATURE REVIEW
Behavioral Architecture Approach
The relationship between elderly needs and their living space is closely related to conducting a behavioral architecture. Furthermore, the behavior itself refers to any action an organism uses to adjust to the environment, and there are two types mainly factors to knowing about behavioral architecture: overt and covert behavior.

Table 1 Overt and Covert Behavior. (Source: Shrestha, 2017)

	Overt Behavior	Covert Behavior
Meaning	It can be defined as observable behavior or responses, whether that performance is visible and audible.	It can be defined as unobservable behavior which leads to specific actions or performance that is mental, invisible, cognitive, etc.
Behavioral Activities	Behaviors such as speaking, walking, running, working, etc.	Behaviors such as thinking, dreaming, reasoning, etc.
Cause and Effect	Observable behaviors are caused by the unobservable mental process that takes place in the brain.	Unobservable behaviors are mental processes that create a response.
Example	When a man is walking, it can be observed.	when we try to understand the purpose of walking.

In particular, the overt and covert behavior influenced by the environment presented on the presentation side, which communicates the visible aspects and the representational side to communicate with facility users to understand. As for the meaning of responsive, acting for leading to action, such as affective feelings, when it was first visited, evaluative, which communicates a level of preference, and prescriptive, which directs the user to act (Atthawuttikul, 2016). That architecture is a behavioral subsystem that involves presentational values, such as façade, color, shape, etc. In its course a subsystem is responded to by the user through needs, wants, and demands of course with a specific time vulnerability obtained by in-depth study, resulting in a response that has an impact on the architecture itself, for example, the user's color preferences to be applied, building materials that must be replaced, etc. By exploring similar building**,** we can learn about how behavioral subsystem works or not and moreover, we can explore through the behavioral schemata.

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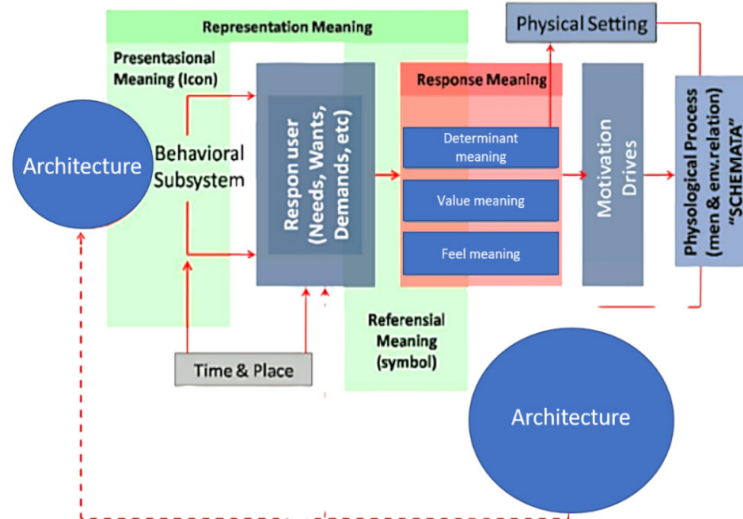*Yusuf Ariyanto, Nailah Hasnah Mariono*

Image 1 Schemata of the behavioral subsystem. (Source: Author, 2022)

Elderly-friendly

Old age comes with declining health, limitations in daily activities, and feelings of loneliness and depression. Psychologically, it is the average family background and economic conditions that differentiate the case personally. We found that the absence of a partner, presence, and role of children became unmet emotional needs. More frequent interactions with close and like-minded people make it possible to suppress unmet emotional needs (Savu, 2016). Elderly-friendly design means a design that is modified and designed to be comfortable and suitable to be applied to an elderly (Pandelaki, 2014). There are several aspects of design criteria to be called an elderly-friendly design, including apply some details such as anti-slip floor materials, railings and grab bars, accessible storage, adjustable and rounded furniture, sliding doors, and contrast color between furniture, and other surfaces. Including quantity and distribution of daylight and comparing additional artificial lighting from ceilings (horizontal lighting) and walls (vertical lighting), found that vertical lighting was more advantageous in terms of uniformity and energy efficiency for creating a safely lighting for elderly visual comfort (Yaodong, 2021).

METHODOLOGY

The applied research method used is primarily the stage of exploration that gives an evaluation of the elderly home existing, analysis, and visualization as design solutions (Ariyanto, 2019) through behavioral architecture. These methods used at each stage are reviewed by overt and covert behavior needed as a control value.

Evaluation

The data collection process is carried out by coming to the site location directly to meet the existing conditions, end-user, and ambiance in the area. Bag (2012) described that the walkway method seems to be the most fundamental aspect of the architectural space, not only to investigate the movement in the building but also to explore, discover, and generally learn about architectural settings; that is the point of view of the spatial programming.

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Analysis

Armed with a literature review and based on the distinction between overt and covert behavior, an intense discussion was carried out, connecting physical data with overt behavior and psychological needs with covert behavior. We are mapping the problem of the product forms and visual elements in the field. This stage is carried out by studying more deeply the character and potential of the study object as parameters.

Visualization

Proposed ideas and realize them into the form of a design so that they can represent the results of the analysis that has been carried out.
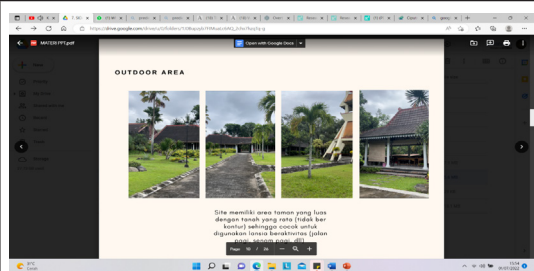
RESULT & DISCUSSION

Aging is another word for living, inspires a discussion of the psychological and physical needs of the elderly by considering the assessment in the behavior architecture (overt and covert behavior). This assessment is translated into a retreat design project that will be converted into an elderly home in an area that has the highest level of care for the elderly.

Evaluation

An observations process began to review existing buildings of elderly homes as overt behavior representation through the end-user physical response. Likewise, covert behavior is carried out by direct interviews with end-users as a form of psychological overflow that they feel and its impact. Then the determination of the area that becomes the context to be evaluated will be adjusted to the urgency of fulfilling the elderly psychological and physical, among which the highlights are the public space, private space, and the garden area as a support for the living environment (Saenko, 2022).

Table 2 Site Existing overt and Covert Behavior. (Source: Author, 2022)

	Overt Behavior (Observation)	Covert Behavior (Interview)
 Landscape	It looks pretty secure for the elderly to walk, because the contours of the land are relatively flat.	It has no specific purpose, and doesn't have the influence to support mental satisfaction, especially for healing.

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Public Facilities (Dining Room)	The furniture setting and selection do not pay attention to the end-user.	unfriendly for the elderly, uncomfortable, narrowly distance, and harmful furniture.
Private Room	Rooms are wide but have poor indoor air quality, dimly lit, and uncomforted for circulation.	feels insecure, dimly lit, and does not bring tranquility.

Analysis

From those observations (overt behavior) and interviews (covert behavior), the elderly tend to be uncomfortable with the physical conditions and atmosphere of elderly homes existing. The following analysis is to compare it with the physical and psychological needs of the elderly according to the literature (elderly-friendly).

Table 3 Analyzing Elderly Home Through Overt and Covert Behavior. (Source: Author, 2022)

	Overt Behavior (Observation)	Covert Behavior (Interview)
Landscape	• anti-slip floor materials, • railings & grab bars for pathway, • contrast color for pathway surfaces	• Adding pines tree around the site • Reflexology walk stone • fountain • eucalyptus beside pathway (aromatic treatment)
Public Facilities (Dining Room)	• anti-slip floor materials, • railings & grab bars for pathway, • contrast color surfaces, • adjustable & rounded furniture, • sliding doors	• warm and calm color ambiance, but have one side for accent • simple ornament ceiling, furniture's etc.
Private Room	• anti-slip floor materials, • railings & grab bars for pathway, • contrast color surfaces, • adjustable & rounded furniture, • sliding doors	• calm color ambiance • need natural ambiance • simple ornament ceiling, furniture's. • no direct lamp for minimizing glare

Visualization

In the elaboration of proposed ideas in the evaluation and analysis stages, a design proposal is obtained as a three-dimensional image representing overt and covert behavior in the three selected areas.

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Image 2 Landscape Design. (Source: Author, 2022)

Image 3 Public Facility (Dining Room) Design. (Source: Author, 2022)

Image 4 Private Room (Bedroom) Design. (Source: Author, 2022)

CONCLUSION

Aging is another word of living, presented in this design to realize an elderly-friendly home where the elderly feel safe and comfortable and have a good Quality of Life. The behavioral architecture approach has evaluated overt and covert behavior for the elderly activities and answered problems from highlights are the shared space (social interaction), private space (privacy), and the garden area (landscape) as living environment support. From the evaluation stage, data were collected through observation to respond to overt behavior and interviews to respond to covert behavior. It is elaborated by considering the elderly physical and psychological needs, including the elderly-friendly, so that detailed needs are obtained for each discussion area. In the final stage, a three-dimensional display can represent the needs of the elderly in the field with behavioral architecture as an approach.

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