

LIVING ENVIRONMENT NEEDS OF THE ELDERLY IN WELFARE FACILITIES BASED ON PAST RESIDENTIAL EXPERIENCE

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Abstract

As of October 1st, 2016, Japan's total population was 126.93 million. The aging rate currently exceeds 27%, and is expected to reach 38.4% in 2065. The elderly population is growing bigger, and it is therefore becoming increasingly important to create a comfortable living environment for the elderly. We conducted a field survey and an interview survey of 15 elderly individuals living at five welfare facilities. We created floor plans of the bedrooms that they had lived in, are currently living in, and want to live in in the future. We analyzed the results of the field survey and the interview survey in order to understand what study participants wanted in their bedroom and why. The results of this research will assist in the creation of more comfortable living environments for the elderly.

1. Introduction

According to the Japanese Cabinet Office's "White Paper on the Aged Society of Heisei 29th," the total population of Japan was 126.93 million on October 1st, 2016. The aging rate currently exceeds 27%, and is expected to reach 38.4% in 2065. Aged person welfare facilities are places in which the elderly can be well cared for. These professional facilities and staff provide the elderly the best environment in which to live. Although a bedroom's main function is for sleeping, the bedrooms at aged person welfare facilities are also the private living spaces of the elderly residents. The bedroom is where these individuals spend the beginning and end of their days. Because of their significant influence on the daily lives of the elderly, we decided to focus our research on the bedrooms of aged person welfare facilities.

The aim of this research is to identify the key components needed for the creation of a comfortable living environment for the elderly. The past residential experience of elderly individuals affects their needs in the environment in which they live. Here, we investigated the residential experience of elderly individuals living in aged person welfare facilities. We analyzed the factors that affect the living environment needs of the elderly that were identified during the interview survey and the field survey.

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2. Study Outline

2.1. Study participants

The survey target facilities were five aged person welfare facilities in Osaka Prefecture and Nara Prefecture (Table 1). The study participants were 15 elderly individuals from these five aged person welfare facilities. An outline of the study participants is presented in Table 2. The study participants included three tenants at a special nursing home, one tenant at a private residential home, and eleven tenants at a long-term care health facility. There were three male study participants and twelve females. Their age ranged from 73 to 93 years old. Two study participants were under 80 years old, ten were between 80 and 89 years old, and three were over 90 years old.

Table 1. Outline of survey target facilities

	Type of facility	Location	Number of floors	Age of the building	Structure	Tenancy period
A	Intensive care home for the elderly	Osaka Prefecture	4 floors	5 years	RC	Long-term
B	Private residential home	Osaka Prefecture	6 floors	10 years	RC	Long-term
C	Long-term care health facility	Nara Prefecture	3 floors	7 years	RC	Short-term
D	Long-term care health facility	Osaka Prefecture	5 floors	10 years	RC	Short-term
E	Long-term care health facility	Osaka Prefecture	6 floors	18 years	RC	Short-term

Table 2. Outline of study participants

	Age	Sex	Room	Wheelchair
A1	93	Female	Unit care type, Private room	○
A2	86	Female	Unit care type, Private room	
A3	86	Female	Unit care type, Private room	○
B1	83	Female	Private room	
C1	85	Male	Unit care type, Private room	
C2	87	Male	Unit care type, Room for 2 people	○
C3	81	Male	Unit care type, Room for 2 people	
C4	89	Female	Unit care type, Room for 4 people	○
C5	89	Female	Unit care type, Private room	○
D1	77	Female	Unit care type, Room for 4 people	○
D2	92	Female	Unit care type, Room for 4 people	○
D3	80	Female	Unit care type, Private room	
D4	90	Female	Unit care type, Room for 4 people	
E1	82	Female	Unit care type, Room for 4 people	○
E2	73	Female	Unit care type, Room for 4 people	○

(○: wheelchair user)

2.2. Methods

A field survey and an interview survey were conducted. In the field survey, we measured the study participants' bedrooms and took photographs of their rooms. After the field survey, we conducted an interview survey on the participants' past and future bedrooms. We created floor plans of the bedrooms in which study participants had lived in, were currently living in,

and wanted to live in in the future. We then analyzed the results of the field survey and the interview survey.

2.2.1. Field survey

In order to grasp the current condition of the study participants' bedrooms, we conducted a field survey. We measured the bedrooms of the study participants and took photographs. We then created floor plans of the bedrooms that they were currently living in.

2.2.2. Interview survey

In order to analyze factors related to the experiences of study participants that affected their needs in future bedrooms, we interviewed the study participants on the bedrooms that they lived in and the needs and requests of the bedroom that they wanted to live in. An outline of the interview survey is presented in Table 3.

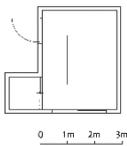
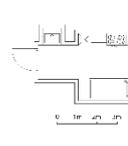
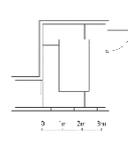
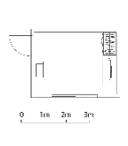
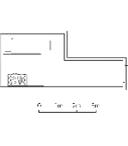
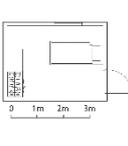
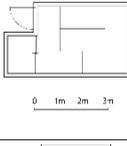
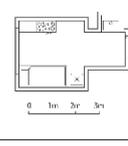
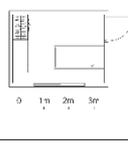
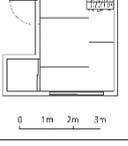
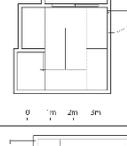
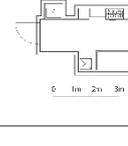
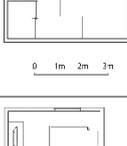
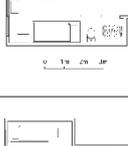
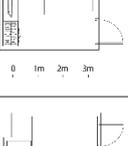
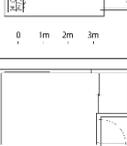
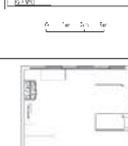
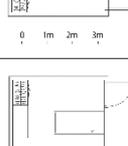
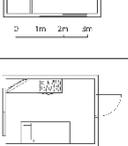
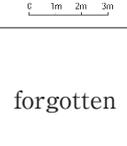
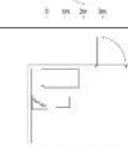
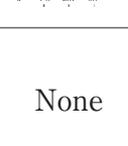
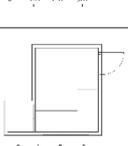
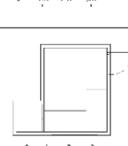
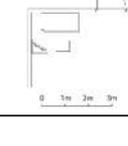
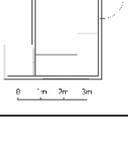
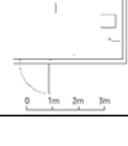
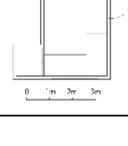
Table 3. Interview survey questions

Q1	When did you move into this facility?
Q2	How many times did you move houses before you moved into this facility?
Q3	How long did you lived in the houses where you lived?
Q4	Which house was your favorite?
Q5	Can you describe that house for me?
Q6	Can you describe the bedroom of that house?
Q7	What parts of the bedroom do you like? What parts do you not like?
Q8	What parts do you like about the bedroom in which you are currently living? What parts do you not like?
Q9	What kind of bedroom do you want to live in in the future? Why?

2.2.3. Bedroom floor plan

The elderly are sometimes unable to remember the bedrooms in which they lived in in the past. In order to help them retrieve these memories, we conducted an interview while creating a floor plan of their past bedrooms. In this way, we created data sheets containing information on the bedrooms in which they have lived in, currently live in, and want to live in in the future (Table 4).

Table 4. Bedroom floor plans

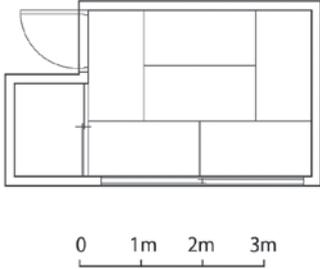
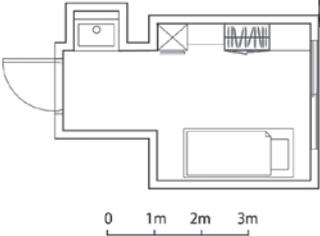
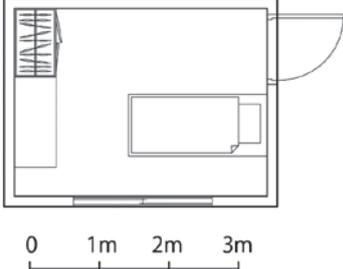
	Past	Now	Future		Past	Now	Future
A1				C5			
A2				D1		could not measure	None
A3				D2	forgotten	could not measure	None
B1			None	D3		could not measure	
C1				D4		could not measure	None
C2/3				E1			
C4	forgotten		None	E2			

3. Results and Analysis

3.1 Results

The results are presented in Table 5. For each study participant, we drew one floor plan for the bedroom they lived in in the past, one for the bedroom they currently live in, and one for the bedroom they want to live in in the future. “Forgotten” in the data sheet indicates when a study participant was unable to remember a bedroom of the past. “None” in the data sheet indicates that a study participant did not want a new bedroom in the future. “None” in the data sheet indicates that we did not receive permission to measure the bedroom of the study participant. In the interview of study participants C1, D3, E1, and E2, the floor plan of the past and the floor plan of the future were the same. Study participants D3 and E2 would choose to return to their former homes. Study participant C1 only wanted a new air-conditioner in his bedroom. Study participant E1 liked her former bedroom but wanted to make her house barrier-free. C1 and E1 are not included in Tables 4 and 5.

Table 5. Data sheet for study participant A2

Research people	A2	Age	86	Sex	Female
times of moved house	1				
years of lived in the houses	about30, about50				
the favorite house	the 30 years one				
type of house	single house				
location of bedroom the first floor	2 floors				
yard	exist				
	like				
	nothing in particular				
	do not like				
	nothing in particular				
Past					
					
Now					
A	floors	4			
	live in 4th floor				
	type of bedroom				
	Unit care type, Private room				
	location of washstand				
	in private room				
	location of toilet				
	unit space				
	like				
	nothing in particular				
	do not like				
	nothing in particular				
					
i					
					
	western style room				
	cause: the physical function deteriorate, and the Western-style room is easier to live				
	area: 6mat				
	the size of window: the largest				
	cause: make it to be a light room				
	furniture: nothing else but a big bureau				
	cause: I liked beautiful clothes at the young age, and there were so many clothes. I do not have much clothes now, but I still want big bureau.				
	My husband was died. My children do not come often. Now, there is myself only. I do not need anything else.				

3.2 Analysis

The results reveal that there are seven factors affecting future bedroom needs. These factors are “Physical function deterioration,” “Private space,” “Connection with the outside,” “Hospital-like feeling,” “Past time,” “Loneliness,” and “Negative outlook on life.”

3.2.1. Physical function deterioration

Nine of the study participants use wheelchairs. In terms of the type of future bedroom, eight study participants chose Western-style rooms. As physical functioning deteriorates, Western-style rooms were considered easier to live in than Japanese-style rooms. Japanese-style rooms were sometimes chosen because they are accustomed to live in. Study participant C2 and C3’s favorite part of their home is that it is barrier-free. Future bedrooms for the elderly need to be barrier-free for ease of living.

3.2.2. Private space

Study participants living in aged person welfare facilities tended to want private rooms. Six study participants (40%) lived in private rooms (Table 2). Out of six study participants living in rooms with four people, five of them wanted a private room (Table 6). The reasons that they cited included “affected by other people,” “affected other people,” and “inconvenient.” Study participant C1 wanted to live in a room with four people, however, and stated that he always felt lonely when living alone. Study participant A1 enjoyed calligraphy, and wanted a big table in her future bedroom. Study participant C4 wanted a private room because she was affected by other people in the room for four people. For example, when she wanted to watch TV, she had to use headphones.

Table 6. Study participants' (currently living in rooms for 4 people) desire for private rooms

C4	Want to live in a private room
D1	Want to live in a private room
D2	Do not want to live in a private room
D3	Want to live in a private room
D4	Want to live in a private room
E2	Want to live in a private room

3.2.3. Connection with the outside

All study participants' bedrooms had balconies. For safety reasons, however, none of the balconies were accessible, except for study participant B1's. Facility staff report that the windows to the balconies are locked for safety reasons because many elderly individuals have dementia. Study participant B1's favorite part of his bedroom is the balcony because he can breathe fresh air there.

3.2.4. Hospital-like feeling

Study participants reported that they wanted bedrooms that feel like theirs home. Study participant A3's favorite part of her current bedroom was the color and pattern of the walls and ceiling that made her feel at home. Study participant C5 did not like the fluorescent tube lighting as it makes her feel like she lives in a hospital.

3.2.5. Past time

Study participant A2 is divided on whether past bedrooms affect future bedroom selection. Study participant A3's favorite part of her bedroom was the big bureau. In her future bedroom, she did not want any furniture other than a big bureau. She liked beautiful clothes when she was young and had many clothes. Although she has few clothes now, she still wants a large bureau.

3.2.6. Loneliness

The elderly have lived a long time, and their mates have often predeceased them. Study participants C2 and C3 are the only couple in this study. Elderly individuals who enter aged person welfare facilities often have children who are in the workforce and cannot visit often. As a result, residents are often lonely. Study participant C1 always feels lonely. His wife predeceased him, and his children do not visit regularly. As a result of his loneliness, he wants

to live in a room for four people. It is of note that C1 was the only person who wants a room for four people instead of a private room among the 15 study participants. Study participant A3 would like a TV in her future bedroom. Although she may not understand what is being shown, she enjoys the sound of it and does not like her room kept quiet.

3.2.7. Negative outlook on life

In the interview, we asked, “What part do you like, and what part do you want to improve?” in regard to the bedroom they were currently living in. Eight study participants answered one question, and three answered neither.

Study participants A2, C3, B1, D1, D2, and D4 expressed a negative outlook. Study participants B1, C3, D1, D2, and D4 were asked about their future bedroom in the interview, but responded that they absolutely did not need a new one. When interviewing study participant A2, we asked, “What kind of furniture would you like in a future bedroom?” Her response was, “My husband has gone, my children do not come often, now I am alone, so I do not need anything else.” The question make study participant A2 feel sad. Study participants A2, B1, D1, D2, and D4 appear to have a somewhat negative outlook on life and do not care much about future bedrooms.

4. Conclusions

Seven factors were identified to affect the needs of the living environment for the elderly individuals in this study. These factors were “Physical function deterioration,” “Private space,” “Connection with the outside,” “Hospital-like feeling,” “Past time,” “Loneliness,” and “Negative outlook on life.”

These seven factors can be divided into two groups. The first is composed of “Physical function deterioration” and “Hospital-like feeling.” These factors can be improved through architectural design. In the design stage, architects can create barrier-free bedrooms that make it easier for the elderly to live in them. Aged person welfare facilities can make their interiors feel like home by using furniture that is normally used in the home.

The second group is composed of “Private space,” “Connection with the outside,” “Past time,” “Loneliness,” and “Negative outlook on life.” These factors can be improved by the staff of aged person welfare facilities listening to the demands of the elderly, offering more outdoor activities, and recruiting more volunteers to connect with the residents.