

2.1 Behavioral Errors in Residential Facilities for the Elderly with Dementia

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BACKGROUND AND OBJECTIVES

According to the national statistics, Japanese people are confronting the rise of the population rate of the late stage elderly, that means elderly aged over 75. Its peak estimation shall count as much as ¼ of the total population. Along with the increase of the late stage elderly, the number of the elderly in Japan with dementia certified as eligible for long term care:

- Currently calculated (in 2005) : 1.7 million ⇒ Grows up to 2.5 million by 2015.
(2006 statistics by Ministry of Health, Labour & Welfare; and by National Institute of Population & Social Security Research)

⇒ It is important to specify the physical settings that tend to trigger inappropriate behaviors of the elderly with dementia, and to improve environmental design of residential facilities for easy life of both the residents and staff.

⇒ Here, we hypothesize that these inappropriate behaviors are mostly construed as errors triggered by certain physical environment.

There have been a lot of E-B studies undertaken in residential facilities in Japan and other countries which suggest that certain environmental characteristics of the settings influence QOL of the elderly with dementia. For example:

- Private rooms are more appropriate than shared rooms. (Inoue, Toyama, et al., 1997, 1998)
- Small scale & homelike environment is desirable. (Cohen & Weisman, 1991; Nagahara, et al., 1998; Toyama, 2001; Ohara, 2004)
- And these are implemented into government policy. ⇒ Promotion of private rooms in NHs / Promotion of GHs, & smaller units for care in NHs

Also, in a previous paper, we suggested that the type of residential facility influence the occurrences of the types of behavioral errors in it (Yokoyama, et al., 2008). Even all these suggest environmental influences on behaviors of the elderly with dementia, there are only some anecdotal expressions on details but few substantial data especially in Japan.

⇒ In this study, we focus on inappropriate behaviors, let us call them behavioral errors, of the elderly with dementia and examine whether they are possibly triggered or caused by any environmental factors in order to find details of human-environment relationships in the case of demented elderly and their residential environment in Japan.

METHODS

PROCEDURE: Here, we take the case of nursing home K, where we interviewed the staff with the questions which covered 1) the nature of the behavioral errors they observed, 2) where the errors occurred, 3) attributes of the individuals who committed the errors, 4) any particular aspects of the environments they could remember, and so on. We also specified the places in the building the reported errors had occurred and took photographs of them.

ENVIRONMENT: The nursing home K accommodated 50 people, 25 for each of the 2 floor. Nursing home K was newly built, two years old at the time of the survey, and provided the residents with their own private rooms.

RESIDENTS: All the residents had dementia in varying degree ranging from mild to severe, but the majority was afflicted beyond the moderate stage. Most were in late old age, average was 83.8, and about 2/3 were women.

OBSERVED PHENOMENA: Here, we focus on the two categories of behavioral errors; ‘searching and wandering in the building’ and ‘excretion’. The former was the representative of the ones whose incidents were more reported in the nursing homes than in the group homes, and the latter was the one whose incidents were equally and frequently reported in both facility types (Yokoyama et al., 2008).

RESULTS

Fig 1 shows reported incidents of searching and wandering, with the attributes of corresponding residents and reported background of the behaviors.

- A concentration of the plotted behaviors of searching and wandering into others’ private rooms was seen in the south-west corner of the building. Almost all of the incidents were reported of the residents who lived in the south-west corner. Sometimes the residents seemed to be thoroughly lost and even crawled into others’ beds.
- Within those incidents reported of the south-west corner residents, there were interesting examples where they opened the doors and peeked in the rooms just around the corner where they turned left or right, i.e. room No.218, 219 and Doctors Office.
- Some residents preferred walking routine circular way through the floor, as were the case of No.205, 306 residents. Though, they occasionally happened to take the other way round and that seemed to cause disorientation.
- To find the correct door of the toilet was sometimes very difficult. It was shown in the case of the room 306 resident that he opened the entrance door on the right instead of opening the door of his water closet on the left, and strayed away to find a toilet.
- Toilet trouble was often related to disorientation and unexpected excretion sometimes happened at the end of the way to toilet that was difficult to find.

Table 1 shows the incidents of inappropriate selection of places for excretion.

- There seemed to be two reasons where the residents chose inappropriate places to excrete. One was the difficulty they occasionally found to see the way to a water closet, and the other seemed to be the distance to the nearest water closet.
- It was interesting to see how they were skillful to find the alternative settings to excrete. They found water tight containers convenient enough to get rid of the filth, and with suitable height. Some even afforded the wall to lean against and to support their weight.

DISCUSSION

- It was suggested that the corridors around pentagonal void caused much confusion in the orientation of the residents with moderate to severe dementia. Whether or not it is caused by the obtuse angle of the intersecting corridors is left for further examination.
- Also, we may say that right and left often seems to be difficult for some residents to remember. In one case, it was difficult to differentiate the door to the water closet and that to outside according to the information of which side is which. In another, it was difficult to find the correct intersection to turn right. It was also explained by Christine Boden in her outstanding book (Boden, 1997), where she wrote how she perceived the world with dementia and described that one morning in her early stage of Alzheimer’ s she found she could not find whether she should take right or left at a certain T intersection on her routine course to her office. From the viewpoint of interior design of the facilities, whether it could be more helpful for a person with dementia to find way when the world looks quite different, asymmetry, in one’ s right and left at a corner, might be a next question.
- Especially in residential facilities, to prevent disorientation seems important in order to prevent not only some frustration but also embarrassment caused by toilet troubles.
- Though, it is impressive to see how skillful the residents with dementia are to find out the affordances of physical environment for emergency excretion.

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Table 1 Examples of Reported Behavioral Errors Related to Excretion

92 M IIIb 4 Once and soon after he came here. He urinated at night into the trash can in front of the sink in the entrance room to the staff office.	92 M IIIb 4 He sometimes urinates into the wash basin.	86 M IV 2 years after he came in, he got some trouble walking. During the night, he seems to have trouble reaching a water closet in time. He occasionally use wash basin to urinate during the night.	92 M IIIb 4 It stopped when he became unable to walk. He used to go out of his room and, occasionally, defecate in front of the left wall before he turned left to find the nearest toilet door.	92 M IIIb 3 The height of the wash basin being suitable to urinate. From time to time, he leans against the front wall, and urinate into a certain wash basin in the corridor in front of his room.	86 M IV Constantly, since he came to live here. He urinates between the left wall and the toilet.

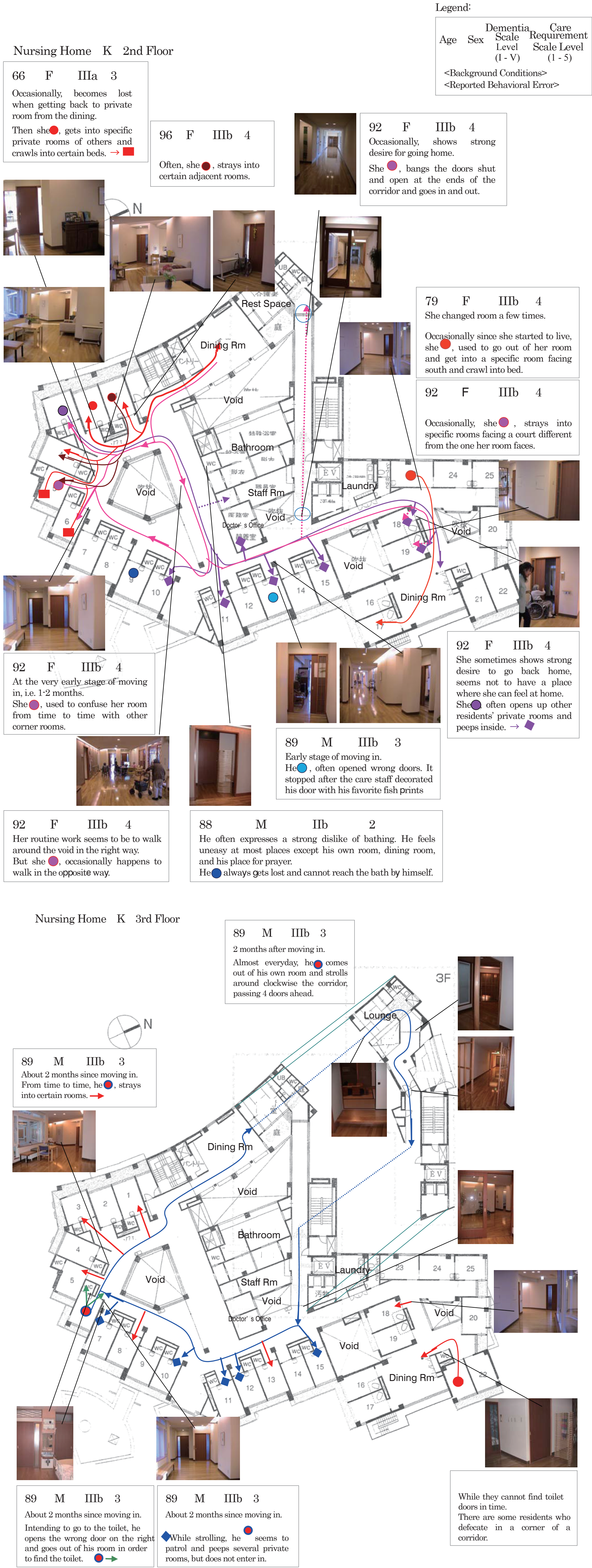


Fig. 1 Examples of Searching & Wandering Behaviors Reported in Nursing Home K