

# Wandering Behavior in Elderly People with Alzheimer's Disease

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## Abstract

This study investigated the relationship between feelings and opinions, non-wandering patterns, and types of wandering in wanderers with Alzheimer's Disease, with the ultimate aim of exploring methods of nursing care appropriate to their feelings while wandering.

There were basically two types of wandering, purposeful and non-purposeful. The former could be categorized into four types, work, going home, interaction, and physiological. Regardless of the degree of impaired cognitive function, two or more wandering types were exhibited by all participants, and the combination of types differed from individual to individual.

Feelings were broadly classified into positive and negative in investigating the relationship between feelings during wandering and types of wandering. In three purposeful types of wandering (except for going home) - work, interaction, physiological - feelings were positive in the case of accomplishing their purposes but negative in the reverse case, and were also negative in the non-purposeful type.

Four patterns in the non-wandering situations - concentrating, peace of mind, relating to others, and physiological needs - were identified. The best pattern for discontinuing wandering was peace of mind, which was effective for all five wandering types. In particular, for the going home wandering type, this was the only way to discontinue wandering. On the other hand, work and physiological types were available in all four patterns as an effective way to discontinue wandering.

**Key words** : Wandering, Elderly People with Alzheimer's Disease, Behavioral and Psychological Symptoms of Dementia

## 1 Introduction

Wandering is acknowledged as one of the Behavioral and Psychological Symptoms of Dementia (BPSD). Atrophy and infarction of the frontal lobe and of the parietal lobe are pathological features of organic brain lesions in wandering people. Personal factors such as previous personality, occupation, and intelligence and surrounding factors such as family, staff, and residence also affect wandering. It is necessary for caregivers to take into account the medical, social and environmental backgrounds of elderly wanderers to create appropriate living conditions for them.

Previous research has classified types of wandering behavior by categorizing it from the perspectives of psychiatric medicine<sup>1)</sup>, behavioral science<sup>2)</sup>, and nursing care.<sup>3)</sup> In the field of nursing care, investigations of wandering behavior based on wandering types have been carried out<sup>4)</sup><sup>5)</sup>. Very few studies have so far been carried out that investigate the relationship between the feelings and opinions of elderly people themselves, non-wandering patterns, and types of wandering.

We therefore interviewed elderly people with dementia immediately after wandering about their purposes, reasons, and feelings with regard to wandering. We also observed non-wandering situations, and from the results, we aimed to explore appropriate nursing care based on the feelings of wanderers. We believe that this will facilitate more effective nursing care of wandering.

### 1.1 Definitions of Wandering

The term wandering has been interpreted in both narrow and broad senses. As an example of the former, Dawson and Reid<sup>6)</sup> view wandering behaviors as purposeless and aimless. On the other hand, the latter broader view regards excessive behaviors as purposeful and with reason. As an illustration Snyder et al.<sup>7)</sup> treats wandering as unclear purposeful behavior (based on their purposeful view of wandering). However, although there is some disagreement about interpretation, a working definition of wandering has been proposed by Algase<sup>8)</sup> who described the movement of people with dementia, and defined it as wandering behavior if it matches two or more items from the following list:

- 1) moving around frequently
- 2) overactivity or continuation of a particular activity
- 3) acting differently to the daily routine and time-keeping of the nursing home
- 4) leaving or attempting to do so repeatedly
- 5) entering the private areas of other residents or of the nursing home in general
- 6) following other residents or staff

Although this description of wandering may leave some ambiguities, having consulted the professional staff cooperating in our research, we adopted Algase's definition.

## 2 Method

### 2.1 Participants

Since our research involved conducting interviews, we selected as participants ten elderly residents with Alzheimer's disease living in nursing homes whose age was over sixty-five and who could communicate with others verbally and express their opinions. Cerebrovascular dementia was excluded from this study, because it lacks the uniformity which characterizes the Alzheimer type of dementia. Therefore, only Alzheimer's disease was covered. Residents in wheelchairs were included in addition to residents who could walk on their own. Furthermore, to avoid factors involving maladjustment, residents living less than a month in the home were excluded from the study.

### 2.2 Research Location

Data collection was carried out in two different prefectures in Japan at two nursing homes with floors dedicated to residents with dementia. Both homes had doors with automatic locks in order to prevent residents' coming and going. Similarly, elevator buttons were covered for the same preventative reasons. There were sofas, tables and chairs on the floors, and there residents watched TV, participated in recreational activities, and so on.

In both homes the basic daily schedule was as follows. Residents had breakfast in the morning, were given drinks between breakfast and lunch, and received toilet care at mid-morning and before and after lunch. In the afternoon they participated in recreational activities and had a snack and a drink. In addition to this, they were given bathing care twice a week in the morning or afternoon.

### 2.3 Procedure

At the start of the research, staff at both homes informed us when wandering occurred. The research was conducted from August 21, 2001 to May 19, 2005. The period of time was from 8:20 to 16:30 in one home, and from 9:30 to 15:00 in the other home. Each resident was studied using participant observation for two to four days. Purposes and reasons, feelings, responses, facial expression, and situations in wandering behaviors were investigated and written down in field notebooks. Further, their destinations, non-wandering situations, interrupted wandering, non-stop wandering, and responses to wanderers by staff and researchers

were also noted. The basic interview questions were as follows.

- 1) What are you doing?
- 2) Where are you going?
- 3) Why do you intend to go there?
- 4) How do you feel?

Additionally, data about age, sex, degree of impaired cognitive function, family organization, employment record, and premorbid character were collected from medical records. Hasegawa Dementia Scale Revised (HDS-R) and Nishimura Mental State Assessment Scale for the Elderly (NM scale) were applied as measures to determine the degree of impaired cognitive function, and Mini-Mental State Examination (MMSE) and results from CT or MRI were used for reference.

#### 2.4 Data Analysis

A qualitative approach to data analysis was used in this research. Each participant's dialogue was documented and studied using a common analytical grid covering purposes, reasons and feelings with regard to wandering and non-wandering situations. This enabled commonalities among the ten wanderers to become clearly apparent. With regard to procedures of data analysis, first opinions about purposes and reasons for wandering were elicited. Second, on the basis of the results from the first analysis, the relationship between feelings with regard to wandering expressed by wanderers and types of purposes was analyzed. Finally, the relationship between non-wandering types and types of purposes was analyzed.

#### 2.5 Ethical Considerations

Both the participants themselves and their families as guardians gave consent to participation in this study. The chief of nursing or head nurse explained this research to them along with documents for signature when residents were admitted to the nursing homes. It was clearly explained that they had a right to refuse to participate and such a refusal would not put them at any kind of disadvantage. The names of the individual participants and the nursing homes concerned have been withheld.

### 3 Results

#### 3.1 Overview of Participants

The ages of participants were from seventy-three to eighty-five years old, and the average age was 79.6 years. There were three males and seven females. All participants were diagnosed before the age of 65 as suffering from Alzheimer's disease. The diagnosis was made by doctors using computed tomography or magnetic resonance imaging. As a measure to determine the degree of impaired cognitive function, we mainly used HDS-R because of disagreement and disproportion between scores on HDS-R and NM, and because of absence of MMSE data from participants D, G, H, and I. Classification of degree in this study was carried out using examples from Yamaguchi<sup>9)</sup>. Diagnostic criteria for HDS-R in this research were as follows: mild (score 18-25), moderate (8-17), severe (0-7). The results indicated no mild participants, 4 moderate (participants A to D) and 6 severe (participants E to J). Table 1 shows an overview of the participants.

**Table 1.** Overview of participants

participants	age	sex	Score			occupation	premorbid character	cardinal symptom	ambulatory condition
			MMSE	HDS-R	NM				
A	73	female	-	13	14	clerical job, general assistant	sunny	wandering	wheelchair
B	73	female	11	9	19	farmer, salesclerk	gentle	wandering, collecting, violence	ambulatory
C	80	female	-	9	29	unclear	clean	wandering	ambulatory
D	85	female	-	8	21	tobacconist's clerk, dressmaker	mild, talkative	anxiety, restlessness	ambulation buggy
E	78	male	8	6	19	joinery	punctilious, stubborn	agitation	ambulatory
F	76	male	9	5	30	unclear	proud	wandering, dirtiness	ambulatory
G	80	female	-	3	30	store owner, homemaker	gentle, strong sense of responsibility	wandering	wheelchair
H	83	male	1	0	12	unclear	unclear	wandering, awaking at night	ambulatory
I	85	female	9	0	30	unclear	proud	wandering, collector	ambulatory
J	83	female	-	0	17	unclear	mild	wandering	wheelchair

Note. Hyphen denotes 'not measured.'

### 3.2 Types of Wandering Based on Purposes or Reasons Indicated by Language and Behavior

Table 2 indicates the types of wandering based on purposes or reasons indicated by language and behavior. Purpose is taken to mean that which is hoped to be achieved by wandering and reason expresses other rationales offered by participants to explain their wandering. Systematizing the data, nine patterns of situations (middle column in Table 2) categorized by purposes or reasons could be detected, and five general types of wandering behavior (left-hand column in Table 2) could be abstracted from these nine patterns. These types were desire to work, desire to go home, desire for human interaction, and physiologic factors, as well as a type of wandering to which no purpose could be ascribed. We broadly classified these five types into purposeful for the first four types and non purpose for the last one.

In the work type, wanderers were attempting some sort of occupation, such as domestic chores, child-care, or going to a job. Going home-type wandering was based on a desire to go home. Wanderers in the interaction type

approached other people such as family members, staff, researchers, and other residents in the desire to have a relationship with other people. The physiological type was based on physiological factors such as needs for excretion, eating and drinking, emotional expression, and avoidance of discomfort. In the non purpose type, participants replied that they did not know the meaning of their walking around by themselves, and no reason could be detected.

Table 3 indicates individual types of wandering. Regardless of degree of impaired cognitive function, all participants exhibited two or more types of wandering behaviors. Participants A and D, with moderately impaired cognitive function, exhibited three types, and B and C exhibited four types. Participant B exhibited all types other than going home, and participant C also exhibited all types other than physiological and showed a variety of situations. Severe wanderers exhibited two to five types (E, F, and H exhibited two, G exhibited three, and J exhibited four types). In particular, Participant I showed all five types and a variety of situations. Moreover, each combination of types was different.

**Table 2.** Types of Wandering Based on Purposes or Reasons Indicated by Language and Behavior

Types	Situation	Language and behavior of participants
work	<ul style="list-style-type: none"> <li>• doing task</li> </ul>	<ul style="list-style-type: none"> <li>• performing work : housework (C,D), childcare (B,J), employment(E), making the rounds of rooms (B) , writing (B)</li> <li>• going to a job (C,E,G,I)</li> </ul>
going home	<ul style="list-style-type: none"> <li>• attempts to return home</li> </ul>	<ul style="list-style-type: none"> <li>• going home (A,C,D,G,H,I,J)</li> <li>• looking for belongings (C,G,J)</li> </ul>
interaction	<ul style="list-style-type: none"> <li>• meeting persons</li> <li>• relating to others</li> </ul>	<ul style="list-style-type: none"> <li>• meeting family members (C,I,J) , and others (B,J)</li> <li>• being in someone's light (B) • seeing off others (B,D)</li> </ul>
physiological	<ul style="list-style-type: none"> <li>• excretion</li> <li>• physical incident</li> <li>• appetite for drinking and eating</li> <li>• expression of emotion</li> </ul>	<ul style="list-style-type: none"> <li>• going to restroom (A,G,J)</li> <li>• not knowing how to deal with incontinence (F)</li> <li>• searching for relief from itching back (F)</li> <li>• wanting to eat (B,H,I), and drink (B) something</li> <li>• doing a bad job (I), and causing difficulties (I)</li> <li>• getting angry at researcher (B)</li> </ul>
non purpose	<ul style="list-style-type: none"> <li>• unexplained</li> </ul>	<ul style="list-style-type: none"> <li>• not going anywhere (A,B) , and not doing anything (B)</li> <li>• incomprehensible (C,E,F,I) • no reaction (A,E,I)</li> </ul>

**Table 3.** Individual Wandering Types

Wandering Type	A	B	C	D	E	F	G	H	I	J
work	-	○	○	○	○	-	○	-	○	○
going home	○	-	○	○	-	-	○	○	○	○
interaction	-	○	○	○	-	-	-	-	○	○
physiological	○	○	-	-	-	○	○	○	○	○
non purpose	○	○	○	-	○	○	-	-	○	-

*Note.* Circle denotes ‘applicable wandering type’. Hyphen denotes ‘not applicable wandering type’.

Irrespective of degree of impaired cognitive function, all wanderers, except for participants A, F, and H, exhibited the work type. The content of this type of wandering took the form of housework (C, D) and child-care (B, J) in most females and vocation-related work in the male (participant E). In the case of wandering with the purpose of looking for a job to do, all the residents to whom this applied were observed to walk around, but residents who did housework, folding towels (C) and making tables (E), did the tasks while seated and moved their arms only after reaching their destination point.

All participants other than B, E, and F, regardless of degree of impaired cognitive function, fell into the going home type. With regard to the interaction type, five residents exhibited this type of wandering. Moderate B, C, and D and severe I and J showed the impulse to meet people. The situation of relating to others applied only to moderately impaired participants, B and D.

The physiological type exhibited in situations such as the need to excrete, appetite for drinking and eating, and expression of emotion was found in all wanderers except for participants C, D, and E, independent of degree of impaired cognitive function. However, situations involving physical incidents were peculiar to one resident with a severe impairment, participant F. Finally, the non purpose type was observed in three out of four of the moderately impaired participants and in half of the wanderers with severe cognitive impairment.

### 3.3 Relationship between Feelings during Wandering and Types of Wandering

Table 4 shows the relationship between feelings during wandering and types of wandering. Our data is obviously not complete in the sense of documenting all the feelings for every episode of wandering, but as a whole, feelings can be broadly classified into positive and negative. In the

three purposeful types of wandering, except for going home - work, interaction, physiological - feelings were positive in the case of accomplishing their purposes and negative in the reverse case. Participants indicated negative feelings such as discomfort in the purposeless type of wandering.

It was found from the data for the work type that participant B had feelings of indifference and performed work in an assiduous manner. Participants D and E expressed eagerness, D and G showed restless feelings, with the former viewing work as a serious challenge while the latter's feeling was a response to having no job to do. Participant C was highly motivated toward work and described good feelings on finding a job and doing it, whilst on the contrary she was restless in a situation of having no job. In each case, they perceived hard work positively or neutrally and jibbed at situations in which they could not reach their goals.

It was impossible for wanderers in the going home type to make their wish reality. Their feelings were emotional distress and tiredness (participant I), wanting to die (C), glowering face (G), and anger (D). In the interaction type, participant B felt good while going to meet someone, in other words while directed towards reaching a goal. Conversely wanderers had feelings of loneliness (B) in unattainable situations.

Data from the physiological type indicated feelings of discomfort related to physical problems such as incontinence (A) and itching of the back (F), and mental discomfort and anger in going to a researcher (B). However, after attaining goals, such as completion of going to the restroom (G), changing a child's clothes (J), and doing a job (I), wanderers felt good or lucid.

In the non purpose type, without any purpose or reason, participants B, F, I did not feel any special mood. However, the severely impaired participant F felt a sense of eagerness toward what he should do although he had no

way of understanding what to do or where to go. Participant A felt a sense of restlessness without any purpose in the non purpose type and felt anger about imagined

damage caused by other residents along the path of his wandering.

**Table 4.** Relationship between Feelings during Wandering and Types of Wandering

Types	Situation	Feeling
<work>	<ul style="list-style-type: none"> <li>• while reaching their goal</li> <li>• interference with the realization of goals or absence of goals</li> </ul>	<ul style="list-style-type: none"> <li>→ eagerness (D,E) , assiduity (B), comfort (C)</li> <li>→ restlessness (C,D,G)</li> </ul>
<going home>	<ul style="list-style-type: none"> <li>• unaccomplished objective</li> </ul>	<ul style="list-style-type: none"> <li>→ feeling of wanting to die (C), tiredness (I), glowering face (G) , anger (D)</li> </ul>
<interaction>	<ul style="list-style-type: none"> <li>• reaching their goal</li> <li>• unaccomplished objective</li> </ul>	<ul style="list-style-type: none"> <li>→ comfort (B)</li> <li>→ loneliness (B)</li> </ul>
<physiological>	<ul style="list-style-type: none"> <li>• reaching their goal</li> <li>• feeling of unpleasantness physically and mentally</li> </ul>	<ul style="list-style-type: none"> <li>→ comfort (G,J), feeling good (I)</li> <li>→ unpleasantness(F), anger (A,B)</li> </ul>
<non purpose>	<ul style="list-style-type: none"> <li>• absence of purpose or reason</li> <li>• not knowing what to do</li> </ul>	<ul style="list-style-type: none"> <li>→ incomprehension (F,I), not having any special feeling (B)</li> <li>→ restlessness (A), eagerness (F)</li> </ul>

3.4 Relationship between Non-Wandering Patterns and Types of Wandering

In order to explore effective nursing care for wandering, observations were made of situations of discontinued wandering and non-occurrence of wandering. The patterns in non-wandering settings including situations of discontinued wandering and non-occurrence of wandering are shown in Table 5. Thirteen settings and four patterns were extracted. The four patterns were concentrating, peace of mind, relating to others, and physiological needs.

In the concentrating pattern, we observed discontinued wandering of the physiological and work type. Participants came to a stand-still position or had a seat while watching TV (A and J), reading a magazine (A), reading a newspaper (A and H), reading a diary (A), listening to music (B), looking at a tree (C), or looking at a flower (D). All the moderately impaired participants showed this setting, but it was shown in just two out of six of the severely impaired participants. In participating in recreation and activities, all par-

ticipants but G showed a non-wandering situation. Owing to this, data with regard to participation in recreation and activities was not collected for her. With respect to working at their seat, after wandering and arriving at their destinations, participants did jobs while remaining seated. This was observed characteristically in participants C, E, and J.

In the pattern of peace of mind, all five wandering types were observed. A familiar home area existed for more than half of the participants, and those who had identified such a place were seen to have a rest naturally when passing it (A,B,D, and F). In addition, wanderers stayed calm as long as they were sitting in the familiar home area (A, E, F, and J). On reaching their goal, participants C and D took a rest autonomously after completing their work. Also, D stopped wandering and took a seat after accomplishing an objective when encouraged by staff or researchers to have a rest. Accepting an explanation and being relieved to hear it was typically a setting where rationalization by staff or researchers was clear and discontinued wandering occurred.

B, C, D, F, and G responded by stopping wandering autonomously or when given direction about what to do next by staff or researchers.

In the pattern of relating to others, all types of wandering except for the going home type were observed in non-wandering settings. Although the reasons given by staff or researchers were unclear to them, wanderers accepted the suggestion to sit down. Five wanderers, B, C, D, H, and I - regardless of degree of impaired cognitive function - were observed in this setting. In the setting of being cared for, non-wandering was observed in A and B for temperature check, C for medication, I for having a bath, and J for excretion. In the setting of talking to others, non-wandering

was observed in almost half of participants, and all except D and H talked to staff or researchers while sitting in a seat. E and G were fully engaged in talking to staff on the path of their wandering, while G offered a crying neighbor comfort. Participant H returned to the lobby happily upon hearing from staff that other residents were waiting for him.

In the pattern of physiological needs, three types of wandering - work, interaction, and physiological - were observed. Moderate participants C and D took a seat saying they had got tired from wandering or from the movement involved in doing a job. In the setting of sleeping, all participants (except for C and G), regardless of degree of impaired cognitive function, showed non-wandering behav-

**Table 5.** Relationship between Non-Wandering Patterns and Types of Wandering

Patterns	Wandering Type	Non-Wandering Setting
<concentrating>	<b>non-wandering</b>  <b>physiological non-wandering</b>  <b>work</b>	<ul style="list-style-type: none"> <li>enjoying watching, reading, listening, and looking : TV (A,J), newspaper (H), music (B), flowers (D), and trees (C)</li> <li>; TV (A), newspaper (A), magazine (A), and diary (A)</li> <li>participation in recreation and activities: playing quoits (A), playing balloon, (A,D), playing ball (B,H), exercising (C,E,J), singing songs (C,D,E,F,H,J), dressing therapy (C,J)</li> <li>working while sitting: folding towels (C), polishing tables (C), making tables (E), looking after a doll (J)</li> </ul>
<peace of mind>	<b>non-wandering non purpose</b>  <b>work interaction work</b>  <b>interaction</b>  <b>physiological interaction going home</b>	<ul style="list-style-type: none"> <li>sitting in a familiar home position (A,E,F,J)</li> <li>passing through familiar home area (a sofa or chair in the lobby) (A,B,D,F)</li> <li>reaching their goal : having a rest after work (C,D)</li> <li>; having a rest after seeing relatives off (D)</li> <li>; accepting the suggestion to have a seat by staff/researcher after finishing work (D)</li> <li>; accepting the suggestion to have a seat by staff/researcher after seeing relatives off (D)</li> <li>accepting an explanation and being relieved to hear it: getting information that a nurse will attend (F)</li> <li>; knowing staff will do their duty (B,C)</li> <li>; experiencing a feeling of relief about desire to go home, 1) being able to communicate in words, calling for family members (C), 2) being brought to departure of family members (D), 3) understanding family members are going home (G), and 4) being informed that staff are safe-keeping belongings (G)</li> </ul>
<relating to others>	<b>interaction non purpose</b> <b>physiological non-wandering</b>  <b>non-wandering</b>  <b>work type</b> <b>physiological non-wandering</b> <b>interaction</b>	<ul style="list-style-type: none"> <li>being talked to while having a seat (B,D) and (C,I)</li> <li>; being encouraged to have a seat by leading with the hand (H)</li> <li>being cared for by staff: temperature check (A,B), medication (C), taking a bath (I), excretion (J)</li> <li>talking to others: talking to a researcher, staff, and other residents while seated (A,B,C,E,F,G,I,J)</li> <li>; standing and chatting with staff (E) and (G)</li> <li>; offering a crying neighbor comfort (E)</li> <li>knowing other residents were waiting for him (H)</li> </ul>
<physiological needs>	<b>interaction work</b> <b>non-wandering non-wandering</b> <b>physiological interaction</b>	<ul style="list-style-type: none"> <li>tired after movement (C,D) and (D)</li> <li>sleeping (A,B,D,E,F,H,I,J)</li> <li>drinking and eating (A,B,C,D,E,F,G,H,I,J), (B) and (D)</li> </ul>

ior. In this situation, A, B, D, E, F, H, and I were sleeping in their seats and J fell asleep after a long time wandering. In the setting of drinking and eating, no one walked around, regardless of degree of impaired cognitive function.

## 4 Discussion

We were able to identify clearly four types of purposeful and one purposeless type of wandering behavior by categorizing purposes and reasons based on the language and behaviors of wanderers. All five types are not radically different from wandering types described in previous studies, although the names of the types are different to some degree. Nevertheless it is interesting that our types do not correspond exactly to all the types clarified by previous studies. From a psychiatric viewpoint, Murobush<sup>10)</sup> identified six types, reactivity (frustration), misconception, disorientation, instinctual drive (brain factor), delirium, and agnosia of space. Ozawa<sup>11)</sup> also identified five types, lost, reactivity (frustration), going home, delirium, and brain factor type. Our wandering types are quite similar to Koizumi's<sup>3)</sup> types. She classified wandering behaviors into work, searching (including desire to go home), unspecified purpose, and stress release. The former three types correspond to our work, going home, and non purpose type, and the last is similar to our physiological type. However, her classification lacks a type relevant to our interaction type. On the other hand, Amamiya<sup>1)</sup> classified wandering behavior into Alzheimer's and cerebrovascular types. He found that elderly people with Alzheimer's dementia tend to gather together because of a strong concern about isolation, and that this situation is linked to wandering. Our interaction type is similar to his types, but the other background factors discussed in his study have little connection to our types. In sum therefore, although the content of our typology may not be particularly new, because it is directly based on conversations with the participants, it differs to some extent from and complements previous research.

### 4.1 Types of Wandering in the Individual and their Meaning

Regardless of the degree of impaired cognitive function, two or more wandering types were exhibited by all participants. Moreover, the purposes and reasons for wandering varied among individuals at any given time. Two participants out of ten in Koizumi's<sup>3)</sup> study showed two wandering types although the others showed just one type. However, she does not discuss this finding. Little has been written in previous studies about the number of wandering types with-

in individuals. The primary concern of caregivers in general is not to provide care for the wandering behavior itself but for elderly people with dementia who wander. Therefore, it is very important to add a discussion about the variety of wandering types within individuals. Although people with no dementia regard wandering behaviors as purposeless, aimless and excessive movement, our results in fact indicated different types of wandering from the wanderers' points of view. In view of the plurality and variety of wandering types observed, we must consider wanderers as full individuals with an invisible, but potentially rich inner world. Therefore, it is necessary for caregivers to consider a number of purposes and reasons when residents wander, and respond appropriately to the full individual variety of wandering types. Also, they should regard wandering as a part of the wanderers' lives, not as problem behavior. In this study it was difficult to establish commonalities among the participants, so it is necessary to provide nursing care according to individual needs.

### 4.2 Relationship between Feelings during Wandering and Types of Wandering

It seems unlikely that caregivers can give appropriate nursing care without considering the wanderers' feelings during wandering. It was found from our results that in the three purposeful types of wandering - work, interaction, physiological - feelings were positive in the case of accomplishing their purposes, and negative in the reverse case and in the purposeless type. It is assumed as an axiom that all human behaviors have a purpose or a reason associated with the situation in which they occur. However, it tends to be difficult for elderly people with Alzheimer's disease to understand the purpose or reason for behaviors in given situations, because they have deficits with regard to memory, thought, evaluation, and attention. Accordingly, it is necessary that caregivers understand why they wander and how they feel during wandering. Our results showed that feelings were positive in the case of accomplishing their purposes, and negative in the reverse case and in the purposeless type. It is likely that the reason why feelings were negative in the going home type is that they were unable to realize that they lived in a nursing home. Furthermore, it is impossible for wanderers to accomplish their purposes, so it seems difficult to promote positive feelings. Also, probably as a result of their impaired cognitive function, they felt negative in the non purpose type since they did not understand what to do or where to go. It is thus important to help wanderers achieve their goals in the work, interaction, and physiological types, which belong to the purposeful type.

#### 4.3 Relationship between Non-wandering Patterns and Types of Wandering

It is difficult to relate to previous research, because there have been no studies that attempt to reveal non-wandering patterns; our study investigated and revealed discontinuous wandering patterns. We consider that it is unnecessary to discourage wandering in all wandering types, but it is essential for caregivers to understand clearly in what types of wandering intervention is necessary, as sometimes wandering involves risks such as physical exhaustion, anhydration, and falling. In the pattern of physiological needs, participants took a seat voluntarily saying they had got tired from wandering or from the movement involved in doing a job in the work or interaction type, and in the setting of drinking and eating, they discontinued wandering, regardless of the degree of impaired cognitive function in interaction and physiological types. In other words, we can regard work, interaction, and physiological as types of wandering which may be interrupted naturally in daily life, and there is consequently a reduced need for intervention. On the other hand, discontinued wandering was relating to others, and this pattern can be applied to all wandering types except the going home type. With regard to the non purpose type, Soneta<sup>2)</sup> regarded wandering freely rather than relating to others as the most effective approach to care. We do not share this view, because there is a risk that trouble between residents may occur, as in the case where a participant felt restlessness and anger about imagined damage caused by other residents. On the contrary, relating to others makes sense, because it helps create a safe environment.

With regard to peace of mind in non-wandering patterns, discontinued wandering was observed in all five wandering types. In particular for going home type, this was the only way to discontinue wandering. We cannot say that it is necessary to stop wandering in the going home type, because there is no clear risk in this type of wandering. If intervention is nevertheless required, peace of mind is an effective method for discontinuing wandering. Concentrating in non-wandering patterns was an effective method of discontinuing the work and physiological types of wandering. Wanderers in the work type did jobs in a sitting position but continued working. In these cases, there is only a low risk of physical problems - falls, loss of bodily strength, anhydration, and so on - which may typically occur in wandering. Thus, the appropriate response is not for caregivers to stop wandering forcibly but to observe residents' actions and maintain a safe environment while they are concentrating on their work. In addition, discontinuous wandering was observed in physiological wanderers while concentrating on enjoying watching, reading, listening, and

looking. On the other hand, there is also a possibility of continuous wandering, unless fundamental physiological factors of discomfort are removed, as concentrating on something may only be a temporary solution. Accordingly, the first thing to do is to remove the basic factors.

## 5 Conclusions

- 1) There were basically two types of wandering, purposeful and non purposeful. The former could be categorized into four types: work, going home, interaction, and physiological.
- 2) Regardless of the degree of impaired cognitive function, two or more wandering types were exhibited by all participants, and each individual combination of types is different.
- 3) Feelings were broadly classified into positive and negative in investigating the relationship between feelings during wandering and types of wandering. In the three purposeful types of wandering except for going home - i.e. work, interaction, physiological - feelings were positive in the case of accomplishing their purposes, and negative in the reverse case and in the non purpose type.
- 4) The best method for discontinuing wandering, which was effective for all five wandering types, was peace of mind. The next most effective way of discontinuing wandering was relating to others, and this pattern can be applied to all wandering types except for the going home type. For the going home type of wandering in particular, this was the only way to discontinue wandering. However, work and physiological type were observed in all the four patterns as an effective way to discontinue wandering.

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## アルツハイマー病高齢者の徘徊行動に関する研究

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### 抄 録

本研究では、認知症高齢者の徘徊時の気持ちや徘徊中断について聴取、および観察を行なった。認知症高齢者の徘徊の目的および理由と徘徊時の気持ちや徘徊を中断するときの関連から、徘徊者の気持ちを踏まえたより効果的な援助方法を探ることが目的である。徘徊には大きく分けて、有目的と無目的の二つのパターンがあり、前者は、さらに「勤勉性」「帰宅願望性」「親密性」「生理的要因性」の四つのタイプに分類された。個人を主体とした徘徊行動では、全ての対象者のタイプは単一ではなく、認知レベルにかかわらず、二ないし五タイプであり、個人における組み合わせも異なっていた。また、徘徊時には、肯定的及び否定的な感情があり、非徘徊時のパターンには、「集中する」「精神的安寧が得られる」「他者と関わる」「生理的欲求がある」があった。そして、「精神的安寧が得られる」ことは全ての徘徊行動パターンに有効な徘徊中断への対応方法であった。

**キーワード：**徘徊, アルツハイマー病高齢者, Behavioral and Psychological Symptoms of Dementia