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博　士　論　文

Analysis of physical and social factors with the stroke patients transferring to home or care facilities at the time of discharging from hospital

脳卒中患者が在宅もしくは介護施設へ病院から退院するときの社会的および身体的因子の分析

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神戸大学大学院医学系研究科保健学専攻

北　浜　伸　介

論文内容の要旨

専攻領域　理学・作業療法学領域
専攻分野　臨床理学・作業療法学分野
氏　　名　北浜　伸介
論文題目　**Analysis of physical and social factors with the stroke patients transferring to home or care facilities at the time of discharging from hospital**
（脳卒中患者が在宅もしくは介護施設へ病院から退院するときの社会的および身体的因子の分析）

要旨：リハビリテーション医療では、対象者の機能予後予測は将来のゴール設定や治療方針を決定するうえで重要である。特に対象者の退院・退所時に関わる要因については詳細な分析が不可欠である。また対象者の能力や心理状態のみならず、対象者の介護にあたる家族介護者の介護負担感や心理状態、対象者を取り巻く環境因子も予後予測に大きな影響力を有している。このような点を踏まえ、本研究では、対象者および家族介護者、環境のそれぞれの因子が退院・退所に関してどのような関係にあるかを調査すると共に、対象者ならびに家族介護者や医療スタッフが退院・退所に関してどのような認識をもち、それが互いにどう関係し合っているかを調査することを研究目的とした。対象は病院に入院し、調査期間内に在宅へ退院を予定している脳卒中患者とその家族介護者 48 名および施設に退所を予定している対象者 48 名とその家族介護者 48 名である。またそれらの病院・施設で働いている理学療法士 50 名、作業療法士 48 名、言語聴覚士 48 名および看護師 49 名である。これらの対象者に対しては日常の活動状況と日常生活の自立度、生活に対する主観的な満足度を評価し、退院または退所時に必要な能力についてアンケートを用いて調査を行った。また退院・退所時に必要な能力に関しては家族介護者および医療スタッフに対しても調査を行った。家族介護者に対しては介護に関する負担感や生活に関する主観的な満足度の評価を行い、協力者の有無や経済の負担感、趣味の有無などの介護者を取り巻く環境について調査を行った。その結果、退院および退所する対象者の能力については、社会参加レベルで差（$p<0.05$）を生じた。また家族介護者の相談者や介護サービスに関しての理解の差（$p<0.05$）が退院・退所に影響することがわかった。このことより脳卒中対象者の退院時能力において社会参加レベルが一つの指標となり、この部分をどのようにサポートするかが大切になることが示唆された。また家族介護者の心理的な負担の軽減のために、相談者や介護サービスに対する理解者が必要であり、そのバイパスを医療スタッフが行う必要があると思われる。
キーワード：退院時に必要な能力、対象者の能力、介護者の能力、環境因子

指導教員：　嶋田　智明

Analysis of physical and social factors with the stroke patients transferring to home or care facilities at the time of discharging from hospital

Shinsuke Kitahama[1], Seiichi Takemasa[2], Tomoaki Shimada[2]

The purposes the this study were to examine how each factor involving physical function of stroke patients, family caregivers, and their environmental status relates to discharge from hospitals either to home or care facilities, and to examine how each factor relates to the recognition of the appropriate time to discharge patients from hospitals to home or care facilities as well as family caregivers. The subjects are 48 sufferers from stroke who have been hospitalized and their family caregivers, and 48 patients who are scheduled to be admitted to rehabilitation facilities and 48 of their family caregivers. We evaluated the degree of independence of the subjects' daily activities. As for family caregivers, we evaluated their sense of burden concerning care-giving and the degree of their subjective satisfaction. We conducted research on the environment surrounding the caregivers and whether there was anyone to help them, their sense of economic burden, and their hobbies. As a result, there was a disparity in participation level ($p<0.05$) concerning the subjects' abilities for being discharged from hospitals to home and care facilities. Consequently, our research indicates that the participation level is an index in abilities of discharging from hospital for stroke patients and it is important to find out how to support this aspect.

Key words

Discharging ability from hospital,
Caregiver, Environmental factors

Introduction

For physical therapists who conduct physical treatment (PT) for cerebrovascular disease, prognosis and prediction are very important in deciding goals for patients and for making treatment policy. In particular, setting the time for discharging the patients from hospital or sending them to care facilities for the elderly is very difficult. This frequently develops into a variety of problems in actual clinics. Much current research on prognosis and prediction is limited to the brain's function level1 and centered on the activities of daily living (ADL) .[2-3] On the other hand, there is little research into the relationship among factors: minute behaviors of the subjects, their psychological factors, family caregivers' sense of burden, their psychological factors, and environmental factors. Quite a few studies reach ambiguous conclusions. In order for the subjects of cerebrovascular disease to alleviate their disorders, widen their area of activities, and return home, paying attention to the ADL behaviors is indeed significant, but due consideration should also be paid to environmental factors, the sub-

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jects' psychological factors and caregivers' psychological factors. Imamura and others4 study environmental factors based on family elements and living patterns, but they only emphasize the importance of the spouses. Kitahama and others5 studied the subjects' abilities and psychological condition as well as family caregivers' psychological condition a few years ago. Their study reports that there is a close relationship between the subjects' physical abilities and psychological condition on the one hand and family caregivers' psychological condition and sense of burdens on the other.

Because recent healthcare reforms aim to promote early discharge from hospitals and treatment at home, the number of days hospitalization are limited. Consequently, in the medical field, in order to provide appropriate medical treatment in due period, cooperation among various types of healthcare workers for the subjects is strongly demanded. As for discharging from hospitals to home and care facilities, physicians and other medical workers dealing with the subjects have joint conferences to discuss prognosis and they use these conferences to decide the time for discharge and treatment policy. Based on the contents of the conferences, we the physical therapists send information about the subjects' function and the level of abilities to the next institution they go - in case of discharging from hospitals to home and care facilities - and we instruct the subjects on how to exercise on bed or by themselves. In case of discharging from hospital to home, we visit the home before discharging, we make a PT menu based on their actual living conditions, and we assess whether it is necessary to make changes to the houses.

However, in this situation, there are many cases in which people in different types of jobs utilize only their own knowledge and fail to implement planning based on the subjects' abilities and their family caregivers' condition. Ohmatsu[6] says that as for decision making on discharging the subjects, it is difficult to establish appropriate communication between the hospital and the subjects and their family. Ohmatsu adds that there are many problems. As for medical treatment and care services from the subjects' and their family's perspectives, the healthcare providers do not respond to the needs of the subjects partly because the subjects and their family caregivers are largely ignorant about medical treatment and care service. Consequently, it is necessary for physicians and other medical staff members to take the needs of the subjects and their family caregivers on board and to provide support for discharging from hospitals to home and care facilities.

The purposes of this study are, in cases in which the subjects of cerebrovascular disease are discharged from hospital to home and to care facilities, examining the relationship among the subjects' physical abilities, their psychological condition, their family caregivers' sense of burdens, their care techniques, their psychological condition, and environmental factors. At the same time, the purposes include finding out how the medical staff members around the subjects and their family caregivers choose important factors for discharging from hospitals to home and care facilities and the relationship among these factors.

Subjects and Methods

The subjects are hospitalized stroke patients who are scheduled to be discharged from hospital in the period between January 2005 to March 2006. There are 48 stroke patients (35 males, 13 females) and their family care persons (12 males, 36 females) where the patients are one month later scheduled to be discharged from hospitals to return home. And also the 48 patients (38 males, 10 females) and their family care persons (8 males, 40 females) where the patients are scheduled to

leave hospitals to be sent to care facilities also one month later.

The average age of those who return home is 67.5±10.7 and the average age of their family caregivers is 63.2±7.7. The average age of those who are sent to care facilities is 66.9± 9.2 and the average age of their family caregivers is 59.8±9.6. In these hospitals and care facilities, there are 50 physical therapists, 48 occupational therapists (OT), 48 speech therapists (ST), and 49 nurses (Nr). The month of experience in PT is 76.8±38.3, OT is 82.0± 40.0, ST is 30.7±9.4 and Nr is 88.9±64.1. We fully explained the aim of this study, method, and the way of using the collected data to these subjects, we obtained their consent, and implemented our research and evaluation.

As for the research method, we evaluated the situation of daily activities, the degree of independence in their daily lives, and the degree of subjective satisfaction with the daily life of the subjects. Using questionnaires concerning the abilities necessary for discharge from hospitals to home and care facilities, we conducted research. As for the family caregivers, we evaluated their sense of burden of care and the degree of subjective satisfaction with their daily lives. At the same time, we conducted research into abilities necessary for discharge from hospitals to home and care facilities. We also conducted research into the environment around the caregivers.

As for medical staff members, we chose PT, OT, ST, and Nr who frequently dealt with rehabilitation-related staff members on a daily basis. As for these medical staff members, we conducted research into the abilities necessary for discharging from hospitals to home and care facilities.

We have evaluated the daily activity situation using a simplified comprehensive evaluation system of stroke patients based on the International Classification of Functioning, Disability and Health (ICF) made by Nara and others7. This is to classify participation, activities and impairments of the patients into three primary categories based on ICF to understand the subjects' activities of life on a comprehensive basis.

Also, there are two categories for participation set from condition of living and human relationship, three categories for activities set from ability of ADL, ability of primary movements and actual practice of movements, and three categories for impairments set from intellectual and high level brain function, moving function and joint mobility and balancing ability. And each of these lower categories is classified into five different levels and the primary categories are expressed in average of each category. Also, these suggest that the group who has a higher score has a higher ability.

We evaluated the degree of independence of daily lives using the Functional Independence Measure (FIM).[8-10] The FIM aims to measure the amount of care for the subjects in their daily lives consisting of 18 items. For each item, we evaluated the care in seven levels depending on the amount of care. Care with more than six points is in the group of functional independence and that with fewer than five points is in the group that needs care. The 18 items are divided into self-care, moving on foot, moving using automobiles, communication, excretion control, and social recognition, and we can evaluate the care in each area.

As for the degree of subjective satisfaction with daily life, we used a Japanese translation version (translated by Maeda) of the Philadelphia Geriatric Center Morale Scale (PGC) comprising 17 questions.[11-13] Because of the characteristics of each question, it is possible to make an evaluation in the following four items: "factors concerning optimistic and positive feelings," "factors concerning psychological stability," "factors concerning sense of health and significance," and "factors concern-

ing attitudes toward aging."

On the evaluation of sense of burdens of care, we used Zarit's care burden scale. [14-16] This scale is frequently used to assess care burden in various countries, it comprises 22 questions and evaluates the physical and psychological burden in actually giving care.

We have collected data through questionnaires whether the care persons have someone else cooperating or not, whether they have hobbies or not, whether they have someone to consult or not, about their financial expenses, years of care, transportation of the subjects and understanding of health care for environmental factors surrounding the care persons.

As for the questionnaire concerning the abilities necessary for discharging from hospital to home and care facilities for all the subjects, we ranked the physical and psychological abilities of the subjects, the psychological abilities of the caregivers, the care giving abilities of the caregivers, the home environment, and other factors in the order of importance. In particular, as for the abilities of

Table 1-a: Abilities of subjects

①Eating movement	②Cosmetic movement
③Bathing movement	④Clothes changing movement (upper body)
⑤Clothes changing movement (lower body)	⑥Toilet movement
⑦Urination	⑧Bowel movement
⑨Movement from one position to another	⑩Movement
⑪Steps	⑫Comprehension
⑬Abilities of expression	⑭Family relationship
⑮Problematic behaviors	⑯Memory

Table 1-b: Abilities of caregivers

①Physical strength and conditions of the caregivers
②The degree of acceptance for care
③Comprehension and judgment of caregivers
④Knowledge and technique of care
⑤Whether participation in training sessions about care
⑥Whether caregivers are busy or not
⑦Human relationship between caregivers and patients
⑧Whether there are collaborators other than the main caregiver
⑨Caregivers' willingness to care

Table 1-c: Environmental factors

①Housing form
②Whether or not there is an elevator
③Secure own rooms after discharging from hospital to home
④Sunshine in own room
⑤Ventilation of own room
⑥Unevenness of floor in room
⑦Approach to home
⑧Transportation around home
⑨Use of welfare service and facilities

the subject, we selected items based on the FIM items (Table 1-a), and we selected top three items depending on importance in each item. Similarly, as for the abilities of family caregivers and environmental factors, we selected items in detail (Table 1-b and Table 1-c), and we selected the top three items depending on importance.

We also confirmed with family caregivers that as other information, whether they had care collaborators or advisers, whether they enjoyed hobbies, whether economic burden increased before and after the subjects developed illness, the degree of understanding of care service, and whether they had their own home. We also examined whether the subjects were moved by wheelchair or walked.

We conducted this research using a simplified comprehensive evaluation system of stroke patients based on the ICF and FIM. As for the FIM, we actually met the subjects and made an evaluation by measuring their abilities. As for the other evaluations, we made questionnaires and made evaluations based on these, by having direct meetings with the subjects, their family caregivers, and the medical staff members, consulting with them through telephone and partly through mail.

As for statistical processing, we divided the patients into two groups based on this research: those who were discharged from hospital to home and to care facilities. Between these two groups, we conducted Mann-Whitney U-test screening concerning the relationship among the three primary categories based on ICF, FIM, PGC, their family caregivers' sense of burden of care and their PGC. As for the family caregivers' environmental factors, such as whether they had collaborators, their sense of economic burden, and whether they enjoyed hobbies, we made an analysis using the χ squared screening. In the relationship of the subjects' abilities of daily activities, as for sub items of the participation level, activity level, and functional level, we also made an analysis using Mann-Whitney U-test screening of the relationship between the two groups. We processed these results using SPSS 12, statistical processing software. We judged that the results were significant with a risk rate of five percent.

About the relationship of necessary abilities (The subjects' physical abilities and psychology, The caregiver' technique and psychology, The environment and the others) of the medical staff members, subjects and caregivers in discharging the patients from hospital, we demonstrated a tendency and examined their relationship. The third high rank places of the number of people in which each item was selected were enumerated about abilities of subjects, abilities of caregivers and environmental factor. We demonstrated a tendency and examined their relationship.

Results

1. A simplified comprehensive evaluation system of stroke patients based on the FIM, PGC and ICF and their ages for each subject

1) Relationship with a simplified comprehensive evaluation system

Using a simplified comprehensive evaluation system, we made an evaluation of abilities in daily activities in cases where the subjects were discharged from hospital to

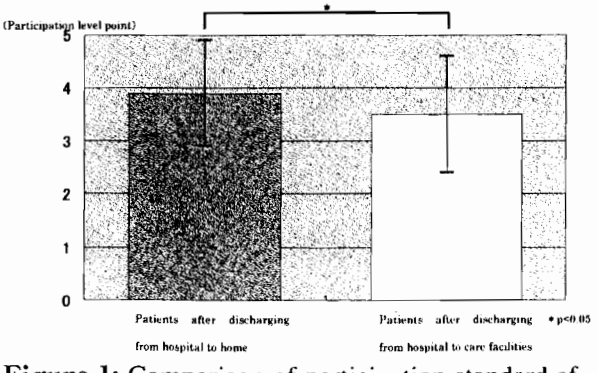


Figure 1: Comparison of participation standard after discharging from hospital to home and care facilities

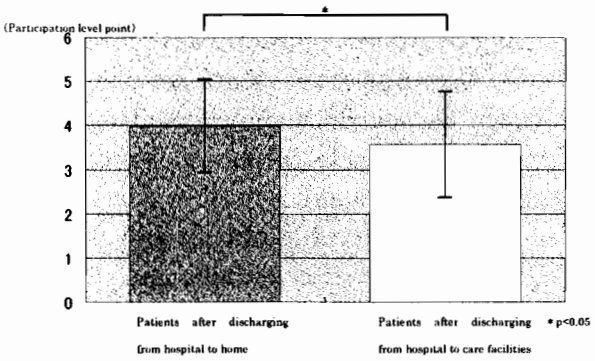


Figure 2: Comparison depending on subordinate items of discharging from hospital to home and care facilities (participation level)

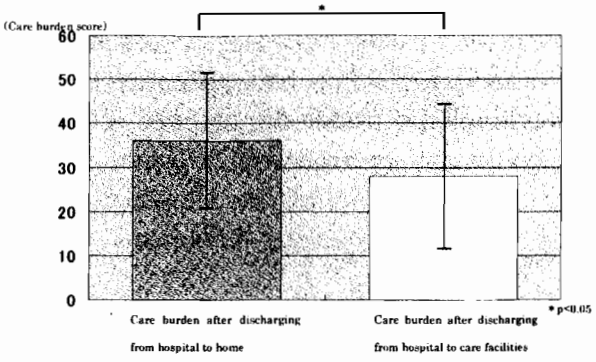


Figure 4: Comparison of sense of care burden of family caregivers after discharging from hospital to home and care facilities

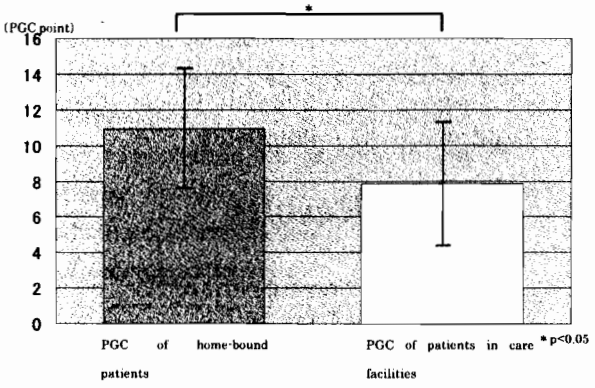


Figure 3: (PGC) comparison of the subjects of discharging from hospital to home and care facilities

home and to care facilities. We found no significance between these cases. However, as for the relationship among sub items of the participation level, the activity level, and the function level, we found a significance of ($p<0.05$) between the subjects who were discharged from hospital to home and to care facilities (Figure 1). As for the other activities level and the living level, we found no significance.

The highest points of the participation level, the activity level, and the function level in the group in which the subjects were discharged from hospital to home were 20 people (41.3%) in the participation level, 12 people (23.9%) in the activity level, and 16 people (34.7%) in the function level. The highest points in the group in which the subjects were discharged from hospital to care facilities were 34 people (71.7%) in the participation level, 10 people (21.7%) in the activity level, and 4 people (8.7%) in the function level (Table 2). In each sub item of the participation, activity, and function levels, we analyzed the relationship between the cases in which the subjects were discharged from hospital to home and to care facilities and we found that there was statistical significance ($p<0.05$) in the subjects' participation level of those who were discharged from hospital to home (Figure 2).

2) Relationship among FIM、PGC、and Ages

There was found no significance in the FIM and the subjects' ages between the subjects who were discharged from hospital to home and to care facilities. However, in the PGC's relationship, the subjects who were discharged from hospital (10.9 ± 3.5) to home and care facilities (7.8 ± 3.4) had statistical significance in PGC ($p<0.05$) (Figure 3).

2. Relationship among the degree of care burden of family caregivers, PGC, and the ages between the Subjects who were discharged from hospital to

home and to care facilities

There was no significance in PGC and the ages between the family caregivers of the subjects who were discharged from hospital to home and to care facilities. As for the degree of care burdens, the family caregivers of the subjects who were discharged from hospital to home (36.1±15.3) and care facilities (28.0±16.3) had statistical significance than those of the subjects who were discharged from hospital to care facilities ($p<0.05$) (Figure 4).

3. Relationship among related factors concerning care between the subjects who were discharged from hospital to home and to care facilities

1) Relationship among the factors of whether they had collaborators, whether they enjoyed hobbies, conditions of economic burden, years after the development of illness, and transportation means of the subjects

There was no significance in whether they had collaborators, whether they enjoyed hobbies, conditions of economic burden, years after the development of illness, and transportation means of the subjects between the subjects who were discharged from hospital to home and to care facilities.

2) Whether the family caregivers had advisers

Among the family caregivers of the subjects who were discharged from hospital to home, 36 people (75%) had advisers and 12 people (25%) had no advisers. Among the family caregivers of the subjects who were discharged from hospital to care facilities, 18 people (37.5%) had advisers and 30 people (62.5%) had no advisers. Consequently, those family caregivers of the subjects who were discharged from hospital to home had more advisers (Table 3).

3) Conditions of understanding of care service

Among the family caregivers of the subjects who were discharged from hospital to home, 32 people (66.6%) had an understanding of care service and 16 people (33.3%) had no understanding of care service. Among the family caregivers of the subjects who were dis-

Table 2: Subjects' daily activities breakdown

	Participation level	Activity level	Function level level
Subjects of discharging from hospital to home	20 people (41.3%)	12 people (23.9%)	16 people (34.7%)
Subjects of discharging from hospital to care facilities	34 people (71.7%)	10 people (21.7%)	4 people (8.6%)

Table 3: Whether or not family caregivers have advisers

	With advisers	Without advisers
Family caregivers after discharging from hospital to home	36 people (75%)	12 people (25%)
Family caregivers after discharging from hospital to care facilities	18 people (37.5%)	30 people (62.5%)

charged from hospital to care facilities, 19 people (39.6%) had an understanding of care service and 29 people (60.4%) had no understanding of care service (Table 4).

4. The necessary abilities of the family caregivers and medical staff members in discharging the subjects from hospital to home and care facilities

The subjects, family caregivers, and medical staff members selected the top three factors in order of importance separately among the subjects' physical abilities, their psychological condition, the family caregivers' care techniques, their psychological condition, and environmental factors as the subjects' abilities necessary for being discharged from hospital. They also selected the top three factors in the order of necessity among the subjects' physical functions, necessary abilities in care, and environmental factors (Tables 5, 6, 7, and 8). As a result, as for the subjects' abilities neces-

Table 4: Understanding status of care services

	With advisers	Without advisers
Family members of those discharged from hospital to home	32 people (66.7%)	16 people (33.3%)
Family members of those discharged from hospital to care facilities	19 people (39.6%)	29 people (60.4%)

Table 5: Abilities needed for discharge from hospital

	Patients discharged from hospital to home	Patients discharged from hospital to care facilities	Family members of those patients dischargedfrom hospital to home	Family members of those patients discharged from hospital to care facilities
	The subjects Body 30	The subjects' body 32	The subjects' body 24	The subjects' body 36
Second	The subjects' Psychology 8	The subjects' psychology 6	The subjects' psychology 16	The subjects' psychology 6
Third	The caregivers' psychology 4	The caregivers' psychology 4	The caregivers' psychology 4	The caregivers' technique 6
	PT	OT	ST	Nr
First	The subjects' body 29	The subjects' psychology 16	The subjects' body 22	The subjects' body 25
Second	The subjects' Psychology 9	Environment 15	The caregivers psychology11	The caregivers' psychology 9
Third	The caregivers' Psychology 6	The caregivers' psychology 9	The subjects' psychology 11	The subjects' psychology 6

(figures mean numbers of reply)

Table 6: Abilities of the subjects

	Patients discharged from hospital to home	Patients discharged from hospital to care facilities	Family members of those patients discharged from hospital to home	Family members of those patients discharged from hospital to care facilities
First	Movement 26	Movement 20	Toilet movement 29	Movement 21
Second	Toilet movement 25	Bathing movement 19	Bathing movement 18	Toilet movement 12
Third	Movement from a position to another position 14	Toilet movement 14	Movement from a position to another position 13	Bowel movement 12
	PT	OT	ST	Nr
First	Problematic behaviors 20	Problematic behaviors 39	Problematic behaviors 41	Problematic behaviors 41
Second	Movement 20	Family relationship 20	Family relationship 38	Family relationship 35
Third	Family relationship 19	urination and desire for defecation 17	Eating movement 12	Eating movement 26

(figures mean numbers of reply)

Table7: Abilities of the caregivers

	Patients discharged from hospital to home	Patients discharged from hospital to care facilities	Family members of those patients discharged from hospital to home	Family members of those patients discharged from hospital to care facilities
First	Physical strength /health 40	Physical strength /health 38	Physical strength /health 44	Physical strength /health 37
Second	Collaborators 17	Collaborators 22	Human relationships 18	Collaborators 19
Third	Comprehension 14	Comprehension 16	Knowledge/technique 17	Comprehension 13
	PT	OT	ST	Nr
First	Physical strength /health 34	Human relationship 32	Physical strength /health 36	Physical strength /health 28
Second	Human relationships 25	Physical strength/health 28	Human relationships 31	Human relationships 25
Third	The degree of Acceptance 25	The degree of acceptance 22	Collaborators 27	Collaborators 25

(figures mean numbers of reply)

sary for being discharged, the medical staff members, the subjects and the family caregivers selected the subjects' physical abilities, their psychological condition, and the caregivers' psychological condition as the top three factors, and the OT selected the subjects' psychological condition and the caregivers' psychological condition just like the others, but they selected the environmental factors instead of the subjects' physical abilities. As for the daily life abilities based on the FIM, the subjects and the family caregivers selected abilities of moving, using the bathroom, and taking a shower while the medical staff members selected the subjects' problematic behaviors and their relationship with their family members. As for the caregivers' abilities, the subjects, family caregivers, and medical staff members all selected physical strength, health, and the human relationship. As for the environmental factors, the subjects and the family caregivers selected housing form, difference in levels of the floor, and the approach to housing, while the medical staff members selected engagement of care service besides housing form.

Discussion

The present study shows that it is important for the subjects to have a high participation level in society as an ability necessary for being discharged from hospital to home. The subjects who were discharged from hospital to home had more opportunities to deal with others and to participate positively to society. It is possible that the subjects' positive psychological condition is working. As for the psychological condition, the subjects who were discharged from hospital to home had a stronger influence because their PGC figure was higher than that of the others. As Harada and others17 also say that social activities af-

Table8: Environmental factors

(The factor selected as the first choice)

	Patients discharged from hospital to home	Patients discharged from hospital to care facilities	Family members of those patients discharged from hospital to home	Family members of those patients discharged from hospital to care facilities	PT	OT	ST	Nr
①	10	22	22	10	20	10	12	17
②	0	0	0	0	0	0	0	0
③	2	1	0	4	1	1	0	1
④	1	0	0	3	0	0	0	1
⑤	0	0	0	0	0	0	0	0
⑥	18	12	12	14	2	3	3	2
⑦	16	13	14	14	14	14	13	15
⑧	1	0	0	3	0	1	2	3
⑨	0	0	0	0	13	19	18	10

(figures mean numbers of reply)

①Housing form
②Whether or not there is an elevator
③Secure own rooms after discharging from hospital to home
④Sunshine in own room
⑤Ventilation of own room
⑥Unevenness of floor in room
⑦Approach to home
⑧Transportation around home
⑨Use of welfare service and facilities

fect psychological condition, there is close relationship between the social participation level and psychological condition for the subjects who were discharged from hospital. The fact that the subjects actively engage themselves with others might mean that they accept their handicaps and demonstrates their strong will to move forward. As for acceptance of handicaps, Tanaka and others18 say, "The handicapped people not only accept their handicaps as they are but also gratify what they really were because of the psychological condition different from feelings of estrangement, surrender, rationalization, and conceit. They also maintain psychological condition to move forward." Hasegawa19 says that after the stroke patients develop handicaps and experience a variety of psychological changes, they begin to enjoy treatment, reconfirm their existence, build their subjective lives, and acquire functional improvement. In this way, psychologically positive conditions lead to an improvement of the subjects' abilities. Recovering psychological condition improve the subjects' motivation. As a result, they affect functions and abilities and improve them gradually. This phenomenon improves psychological condition. In short, it breeds a multiplier effect.

In contrast, when the subjects' psychological condition is low, this causes a "siege" mentality. According to the report by Tateishi and others20, most stroke patients do not go out and stalled with no way out after being discharged from hospital. Tateishi and others say that it is important to contact others positively and become active. In this way, even though the subjects are discharged from hospital, they have little opportunity to positively engage with those around them. As a result, even though their participation level is high when they are discharged, the current conditions induce secondary handicaps because they cannot readjust to society, they become stalled with no way out, and their activity declines. Consequently, the environment around their family caregivers and the subjects play an important role. At present, introduction of care insurance provides a variety of services, there are not many cases in which all the subjects can use the services. Care insurance is not yet widespread as a system and the service itself does not reach the end users. Existence of the so-called care refugees is a good example. For this purpose, there are cases in which those who wish to take advantage of care insurance services cannot do so due to lack of knowledge, other cases in which care plans cannot be made, and other cases in which payment for care becomes difficult because of the heavy burden of the care fees. As a result, there are many cases in which the family caregivers have to shoulder the care burden. This research indicates a similar situation. In this research, the family caregivers in the group in which the subjects were discharged from hospital to home had advisers or had an understanding of care service of a statistical significance than the other group. Consequently, collaborators who actually help the caregivers are indeed indispensable when the subjects are discharged from hospital to home, but rather those advisers who provide psychological support and the understanding of care service that may reduce the care service fees are necessary. For this purpose, we the medical and welfare staff members should play this role and it is important for us to conduct appropriate behaviors.

As for the necessary abilities of the subjects when they are discharged from hospital to home or to care facilities, the subjects, family caregivers, and medical staff members except for the OT selected the subjects' physical abilities, their psychological condition, and the family caregivers' psychological condition. When the family has a member who develops handicaps, the handicapped person becomes a core factor in the family structure, and the family is placed as a family centered on the handi-

capped person. Consequently, the family caregivers wish that the patients "could do" more in daily living activities. In contrast, the medical staff members experience that as for discharging the subjects from hospital to home, the family relationship between the subjects and the family caregivers often becomes a stumbling block and the subjects cannot return home. As for the subjects' problematical behaviors, because their family caregivers do not experience them around the clock while the subjects are in hospital, the caregivers tend to make light of these problems and suffer from care stress after the subjects return home. There are many cases in which the subjects go to care facilities. Consequently, the medical staff members selected the subjects' problematic behaviors and the family relationship as important factors. Their evaluation is different from that of the subjects and the family caregivers.

As for the caregivers' abilities, the medical staff members, subjects, and family caregivers selected health, physical strength, and human relationships. They have a common recognition that these factors are important. In particular, the family caregivers' health and physical strength may have a considerable effect on the care of the subjects. As mentioned above, when heavy care burdens persist, the caregivers accumulate both physical and psychological stresses, which may lead to abuse of the subjects or to an increase in the caregivers' stresses. Both the subjects and the caregivers end up unhappy.

Last of all, as for the environment, the subjects and the family caregivers select housing form, difference in level of the floor, and approach to the room, while the medical staff members select improvement of services besides these factors. This is the difference between the two ways of thinking: One way emphasizes improvement of the environment in the daily life site centered around the subjects, while the other way pays attention not only to the daily life but also to the environment around the subjects. We the medical staff members consider improvement of quality of life of the subjects as a basic assumption in either discharging the subjects from hospital to home or to care facilities. In particular, taking the caregivers' burdens into consideration, we pay much attention to their daily lives so that they and their family caregivers may lead better lives. From their personal experiences, the subjects and the family caregivers consider their home (a site for living) as a center point. Consequently, they may lack knowledge about how to take advantage of the care insurance services and other environmental resources effectively. Therefore, when the subjects are discharged from hospital to home or to care facilities, the medical staff should take the subjects' and their families' condition into consideration, discuss the subjects and their family caregivers to seek the best choice based on the subjects' functional aspects and abilities. Hayasaka and others22 say that approaches are different depending on each subject's background and that approach may influence his or her life. Consequently, it is necessary to make planning appropriate to the subjects and their family caregivers. For this purpose, this research does not show extreme discord of will among the medical staff members, but it is necessary to pay attention to form a common will among the medical staff members, the subjects, and their family caregivers. On the present study, the area difference and the margin of care manager's ability may have a chance to relate as a bias, so these differences will be solved in the future study.

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