Efficacy of Group Reminiscence Therapy for Elderly Dementia Patients Residing at Home: A Preliminary Report

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ABSTRACT. The purpose of this study was to conduct group reminiscence therapy by using cooking activities among elderly dementia patients and to assess its efficacy. We conducted reminiscence therapy for 11 patients in a total of 9 sessions, once a week, 60 minutes each. Evaluations were performed on three occasions: one week before the start of the intervention and one week and four weeks after completion of the intervention. No particular adverse events were noted during the conduct of the study. There were significant improvements in the patients' scores for cognitive function and in their behavior, and the improvement in cognitive function continued until four weeks after the intervention. Based on these results, it will be necessary to verify the efficacy by means of a

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KEYWORDS. Dementia, cognitive function, reminiscence, reminiscence therapy

INTRODUCTION

The core manifestations of dementia are cognitive impairment, primarily memory disorders, but secondary manifestations, such as affective disorders, including depression, anxiety, and decreased willingness to participate, cannot be ignored. They appear not merely to consist of reduced ability to perform activities of daily living or behavior disorders, such as loitering, but to be capable of leading to a decrease in quality of life (QOL). Because of this, psychological assistance and care that make it possible for elderly patients with dementia to spend their final years with greater dignity have become important tasks.

Reminiscence therapy is one psychosocial approach. By deliberately encouraging the elderly to reminisce about the past, with an empathetic and accepting attitude, reminiscence therapy encourages the elderly to re-evaluate their lives and strengthen their identity, as well as to improve their psychological stability and QOL (Butler, 1963). Reminiscence therapy was first advocated by Butler in the United States in the early 1960s, and was subsequently applied to maintaining and improving the mental health of the elderly by a variety of specialist personnel, primarily in the United States and the United Kingdom. In the beginning, it was conducted among elderly subjects without dementia, but in recent years it has come to be performed for persons with dementia as a means of activating their residual functions and stabilizing their affect (Bains et al., 1987; Goldwasser et al., 1987; Kiernat, 1979). However, little research on reminiscence therapy in elderly persons with dementia has accumulated. Although occasional reports suggest the efficacy in terms of affective function and cognitive function (Bains et al., 1987; Goldwasser et al., 1987), no consensus has been reached, and various tasks remain in regard to establishing the methodology of reminiscence therapy. Moreover, few studies have reported significant efficacy in terms of cognitive function, such as orientation. In many studies a variety of materials, tools, and activities, have been used to stimulate reminiscence

throughout a single session, and while some reminiscence studies have focused on music (Ashida, 2000), few have used a single means of stimulation throughout, and few have discussed the nature of the stimulation. First, it will be necessary to conduct reminiscence therapy focused on a single means of simulation and assess its efficacy in order to identify effective intervention methods.

Against this background, it is reported that changes in spontaneity and behavioral aspects, such as improvement in interest and participation in daily life or an increase in opportunity for interaction with others, were observed as a result of conducting cooking activities for female patients with dementia in a previous study (Ohshima et al., 1997). Since cooking stimulates all five senses, it would promote reminiscences, and since the actions involved in preparing food are activities that use procedural memory of habitual activities learned in the past, those activities themselves should serve as stimuli that further promote reminiscence. No reports of studies that have actually investigated cognitive function by reminiscence therapy that is embedded in a cooking activity were found. The purpose of the present study was to adopt a single activity, cooking, as a means of stimulation and to perform group reminiscence therapy using that single means of stimulation throughout all sessions and assess its efficacy in regard to affective function and cognitive function.

METHODS

Subjects

The subjects were elderly persons living at home who were using day care rehabilitation services at two institutions. The eligibility conditions were: (1) 65 years of age or over, (2) diagnosis of mild to moderate dementia by a psychiatrist, (3) ability to participate in group activities, and absence of serious hearing disorders, vision disorders, or language disorders, and (4) consent of the patient's family.

Procedure

We conducted a group program for subjects who fulfilled the eligibility criteria. The sessions were carried out by using the kitchen, and the leader was an occupational therapist. Each group was composed of three to five subjects. The participants were told that an intervention

would be conducted that consisted of nine sessions, including an orientation, once a week, 60 minutes each, on the same day of the week, and at the same time of day.

Evaluations were conducted on three occasions: one week before the start of the intervention, one week after completion of the intervention, and four weeks after completion of the intervention. Participants who were absent from five or more of the nine sessions were considered dropouts.

Intervention Method

Nine sessions were planned, eight sessions plus one session that was also used for orientation (Table 1). The topics were arranged in sequence, and the stimulus materials (ingredients) were specified in advance so that they would seem related to the topics. It was decided that since the purpose was reminiscing, not the cooking activities themselves, it was unnecessary to perform the entire cooking procedure, and care was taken to conduct the sessions so as to finish within the allotted time.

Care was also taken to ensure that the content of the reminiscences would develop as a result of interaction among the members. Reminiscences were elicited by asking appropriate questions that would stimulate and encourage reminiscences. We developed the sessions by using supportive, receptive listening.

TABLE 1. Program of Group Reminiscence Therapy: Reminiscence Topics and Reminiscence-Stimulating Materials

Session no.	Topic	Menu	
1	Self-introductions/proverbs	None	
2	Hometown memories	Steamed potatoes	Green tea
3	Memories of playing	White flour dumplings dipped in soy bean flour	Green tea
4	Memories of school	Thick fried eggs	Green tea
5	Memories of the season (spring)	Boiled butterbur	Green tea
6	Memories of marriage	Potato wrapped in a fried tofu pouch	Cherry-blossom tea
7	Memories of home and work	Ivy sap mixed with yam	Green tea
8	Memories of trips	Rice balls	Cold tea
9	Overall review (the future)	Decorations Hotcakes	Green tea or coffee

Measures

Subjects' Characteristics

Age, gender, current living environment (living alone, living with others), and type of dementia were considered.

Cognitive Function

Hasegawa Dementia Scale-Revised. The Hasegawa Dementia Scale (HDS) was prepared by Hasegawa et al. (1974), and as a result of a revision in 1991 became better able to discriminate dementia (Kato et al., 1991). It is the test most widely used in Japan to measure cognitive function, and there are relatively few questions. It is characterized by convenience of use and use in a short time. The maximum score is 30, scores of 20 or under are used to diagnose dementia. Scores of 21 or more are used to rule out dementia.

Mini-Mental State Examination (MMSE). The MMSE was developed by Folstein et al. (1975) and is the most widely used test to measure cognitive function worldwide. Its reliability and validity have been confirmed. The MMSE is composed of 11 questions, and scores range from 0 to 30 points. Higher scores mean better cognitive function. A score of 20 or less means a strong possibility of dementia, delusions, schizophrenia, or emotional disorder. The cutoff point between dementia and non-dementia is usually set at 23/24 points (Mori et al., 1985).

Affective Function: Gottfries-Brane-Steen (GBS) Scale

The GBS scale can be used to evaluate both the severity of dementia and qualitative differences in dementia. Four areas can be evaluated by behavioral observations: motor function, intellectual function, emotional function, and mental symptoms. The assumption was that staff members who are very familiar with the subject's condition would perform the scoring. The GBS consists of 26 items in four areas: motor function (6 items), intellectual function (11 items), emotional function (3 items), and other manifestations common with dementia (6 items). They are scored on a 7-grade scale that ranges from "0 (normal)" to "6 (severest)." Higher scores mean worsening of mental and emotional aspects. Gottfries et al. (1989) confirmed its reliability in 100 dementia patients

and its validity in 70 nursing home residents. The reliability and validity of the Japanese version (GBSS-J) were verified by Honma et al. (1991) in 246 elderly Japanese persons with dementia. Although both overall scores and subscale scores on the GBS scale can be used for evaluations, because we especially intended to evaluate the subjects' mental status, we used the subscales in two areas, intellectual function and emotional function, in the analysis.

Behavioral Aspects: Troublesome Behavior Scale (TBS)

We used the Troublesome Behavior Scale (TBS), which was developed in Japan, to assess problem behavior and to evaluate frequency of problem behavior as an index. Asada et al. (1994) used the TBS to measure 313 patients, 146 patients residing at home, and 167 in hospitals or institutions, and confirmed its reliability and validity. The TBS is composed of 14 items, and can be used in any setting, such as home or an institution. Caregivers and nursing care staff submit the information and make their evaluations of severity on a 5-grade scale, ranging from "never (0)" to "one or more times a day (4)" based on observations over the previous month. In the present study we used estimated values of the standardized causality coefficient, calculated the total scores according to factor (Factor 1 = acts directed toward the caregiver; Factor 2 = acts in which the subject is self-absorbed; and Factor 3 = differentiated behavior), which were used in the analysis.

Statistical Analysis

Changes in the scores for the test items described above were subjected to a repeated-measures analysis of variance (ANOVA) in order to examine for changes in cognitive function, emotional function, and behavioral aspects between one week before the start of the intervention, one week after completion, and four weeks after completion of the intervention. A multiple comparison of the above evaluation items in which there were significant changes was then performed by the Dunnett method to examine for changes in scores between one week before the start of the intervention, one week after completion and four weeks after completion.

The p values in all tests were two-tailed, and p values < 0.05 were considered statistically significant. All statistical analyses were performed

with Statistical Package for the Social Sciences (SPSS) ver. 13.0J software.

Consideration for Ethical Aspects

After obtaining the approval of the Ethics Committee of each of the institutions, the purpose, methods, and content of the study, the fact that they could refuse to participate in the study at any time, and that privacy would be strictly maintained was explained to all of the subjects. In addition, because the subjects had dementia, the same explanation as above was given to their families in writing, and only the subjects from whose family consent was obtained were adopted as subjects of the study.

RESULTS

Subjects' Participation in the Study

Since one of the 12 persons who fulfilled the eligibility criteria dropped out because of poor physical health after the intervention had started, the evaluation one week after completion of the intervention was conducted on 11 subjects. None of the subjects dropped out before the follow-up four weeks after intervention, and thus there were 11 subjects in the final analysis, whose characteristics at baseline are shown in Table 2.

Changes in Cognitive Function, Affective Function, and Behavior

Changes in scores for cognitive function, affective function, and behavioral aspects between one week before and one week and four weeks after completion are shown in Table 3. The results of repeated measures ANOVA of the changes in individual scores revealed significant changes in the HDS-R and TBS Factor 1 scores.

Multiple comparison revealed significant changes in the HDS-R both one week after completion ($p = 0.043$) and four weeks after completion ($p = 0.043$). A significant change was observed in TBS Factor 1 at one week after completion of the intervention ($p = 0.004$), but not at four weeks after completion of the intervention ($p = 0.062$).

TABLE 2. Subjects' Characteristics (N = 11)

	N or Mean ± SD[a] (range)
Age (years)	88.5 ± 4.9
Gender	
Male	3
Female	8
Type of dementia	
Alzheimer disease	3
Vascular dementia	8
Current living environment	
Living alone	0
Living with others	11
HDS-R[b]	10.3 ± 4.6
MMSE[c]	14.2 ± 4.7
Number of times the subjects participated	8.0 ± 1.1(5.0 – 9.0)

[a]Standard Deviation.
[b]Hasegawa Dementia Scale-Revised.
[c]Mini-Mental State Examination.

DISCUSSION

Subjects' Participation in the Study and the Feasibility of the Program

There was only one dropout after the start, and that was because the subject did not feel well. The mean number of times subjects participated was high: eight times. One subject participated, five times, but that was because the patient was admitted to the hospital during the middle of the intervention, not because the patient refused. There was a strong possibility of participation being refused because the activity was cooking, which tends to evoke a negative image, such as making patients wonder whether they will be able to use a kitchen knife safely. However, since the men in the present study who had experience with cooking vigorously engaged in cooking, and the men with no experience with cooking played the role of "people who will eat for us," the sessions proceeded smoothly. It was possible to perform the activities safely, with no behaviors or actions in the cooking settings that seemed

TABLE 3. Results of Repeated Measures Analysis of Variance on HDS-R, IES-R, MAC Scale, and QLQ-C30

	1 week before the start of the intervention	1 week after completion of the intervention	4 week after completion of the intervention	Time	
				F value	p
HDS-R[a]	10.3 ± 4.6	12.8 ± 5.5	12.8 ± 6.6	4.02	0.034
MMSE[b]	14.7 ± 4.7	16.4 ± 3.8	16.0 ± 5.0	2.71	0.091
GBS[c]					
Intellectual function	12.3 ± 9.3	12.0 ± 10.6	10.2 ± 7.5	1.36	0.279
Emotional function	1.8 ± 1.5	2.0 ± 2.1	1.8 ± 2.0	0.08	0.917
TBS[d]					
Acts directed toward the caregiver	5.0 ± 5.3	3.1 ± 4.3	3.8 ± 4.9	6.28	0.008
Acts in which the subject is self-absorbed	2.1 ± 2.3	1.9 ± 2.0	2.2 ± 2.4	0.39	0.677
Differentiated behavior	−0.1 ± 0.4	−0.2 ± 1.0	−0.4 ± 0.8	1.13	0.325

[a]Hasegawa Dementia Scale-Revised.
[b]Mini-Mental State Examination.
[c]Gottfries-Brane-Steen Scale.
[d]Troublesome Behavior Scale.

dangerous. Based on the above, participation in this program is feasible, and the results suggested that there are no great obstacles or problems to conducting this program.

Efficacy of the Intervention

We conducted group reminiscence therapy using cooking as a means of stimulation for elderly persons with dementia who were utilizing day care services, and assessed its efficacy in terms of affective function and cognitive function. The results suggested it may have been effective in terms of cognitive function and behavior. Moreover, although the efficacy of group reminiscence therapy, in terms of behavior, had diminished four weeks after completion of the intervention, the improvement in cognitive function persisted until four weeks. Although many previous studies

have reported improvement in affective function as a result of reminiscence therapy, few studies have used objective evaluations of cognitive function. In addition, while there have been reports of observations of changes in cognitive function before and after interventions (Hitch, 1994), none of the studies have investigated the persistence of their efficacy after the intervention. In the present study we followed up four weeks after the intervention. The results that showed improvement in cognitive function until four weeks after the intervention seem to be meaningful from the standpoint of assessing effective intervention methods in clinical settings.

Reminiscence therapy is reported to raise the arousal level of elderly persons with dementia through past memories or evoked affects and to stimulate and activate residual functions (Pittiglio, 2000). On the other hand, cooking is said to be one of the intellectual activities that uses the frontal lobe, and it is an activity that uses continuous memory as well as episodic memory, attention-splitting function, and planning ability (thinking ability). There have been reports stating that it is possible to reduce problem behavior by attempting to improve care deliberately using continuous memory that had been maintained (Camberg et al., 1999). Reports that, since past procedural memory (memory of cognitive and motor skills) often remains, ordinary cleaning or cooking provides good stimuli (Egan, 2006). Therefore, it was speculated that having incorporated the work properties and therapeutic efficacy that cooking (cooking activity) offers, into reminiscence therapy in the present study, lead to evoking memories more easily and to improving cognitive function as a result. However, this study is a pilot, and did not definitively proved the effect of the intervention. It will be necessary to verify the efficacy by means of a randomized controlled study in a larger number of patients.

Cognitive function disorders in elderly persons with dementia increase anxiety and confusion as the dementia progresses, which appears to be a major factor in increasing friction between the patients and their surroundings. Improvement in both cognitive function and behavioral aspects was observed in the present study, and it appeared that anxiety and confusion were alleviated by improving cognitive function, which are the core manifestations of dementia, and that alleviating them may have been linked to the alleviation of the behavior disorders, which are said to be secondary manifestations. On the other hand, the decrease in efficacy against the behavioral aspects at the follow-up examination four weeks after completion of the intervention suggested that the program needed to be continued.

Limitations of the Study

First, because of the small number of subjects in this study and the fact that only a couple of institutions participated, it is difficult to generalize the results. Moreover, since no control group was established, it is impossible to conclude anything more than that the intervention program may be effective. It will be necessary to assess the efficacy of the program by means of a randomized controlled study after obtaining participation by a large number of subjects and institutions and reassessing the evaluation items. It will also be necessary to prepare a program that is reliable and valid based on the present study. However, because the results of this study suggested the possibility of using cooking to implement reminiscence therapy and its efficacy in regard to cognitive function and behavioral aspects in elderly persons with dementia, they pointed to the possibility of being able to use this method as a means of improving the QOL of the elderly with dementia.

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REHABILITATION IN PRACTICE

Survey of the current status of cancer rehabilitation in Japan

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Abstract

Purpose. To elucidate the current status of cancer rehabilitation in institutions nationwide.

Method. A questionnaire survey regarding the current status of cancer rehabilitation in 1693 healthcare institutions was conducted by mail. The survey first asked whether rehabilitation was being conducted for cancer patients and, in facilities in which it was being conducted, it then asked about the content of the rehabilitation, the stage of the cancer patients, etc. Facilities in which cancer rehabilitation was not being conducted were surveyed in regard to whether there was a need for cancer rehabilitation.

Results. Valid replies were obtained from 1045 (62.0%) institutions and 864 (82.7%) of them conducted rehabilitation for cancer patients. A high proportion of the content of the rehabilitation was found to be related to physical function. Activities of daily living guidance and training were also found to be conducted in a high proportion. Low proportions of the facilities conducted content that was specialized for cancer. Of the 181 facilities in which rehabilitation was not being conducted for cancer patients, 171 (94.5%) replied that they felt that rehabilitation was needed for cancer patients.

Conclusions. Based on the results of this fact-finding survey it will be necessary to consider strategies for popularizing and developing rehabilitation programmes for cancer patients in Japan.

Keywords: *Cancer, current status, nationwide survey, rehabilitation in Japan*

Introduction

In the year 2000 it was estimated that there were 538 345 new cancer cases in Japan and the number of new cases has continued to be high [1]. In 2004 the Ministry of Health, Labour and Welfare inaugurated the 'Third 10-Year Comprehensive Anticancer Strategy' and adopted 'Improving the Quality of Life (QoL) of Cancer Patients' as its principal focus. More specifically, the major tasks are (1) to proceed with the development of function-preserving and function-restoring therapy and the development of palliative therapy techniques and attempt to popularize treatment methods with the aim of relieving cancer patient's distress and (2) to prepare a system that makes it possible to provide palliative therapy nationwide for terminally ill cancer patients in an attempt to improve QoL because of the need for support from a mental standpoint. Thus, it appears that there will be an ever greater increase in the need for rehabilitation, including mental and physical functions, to recover from symptoms and as a response to the needs of patients in the terminal stage [2–4].

As their condition deteriorates cancer patients experience a decrease in physical function, difficulty

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with movement and daily tasks [5–7] and a decrease in QoL [8–12]. In recent years progress has been made in research on rehabilitation for cancer patients and an ameliorating effect on QoL has been demonstrated by (1) exercise therapy designed to improve physical function [13–15], (2) psychosocial interventions designed to improve mental and psychological function [16–19] and (3) specialized methods for individual cancers (stoma care after surgery for colorectal cancer [20–22], shoulder exercise therapy for breast cancer patients [23], airway rehabilitation for lung cancer patients [24], training to cope with dysphagia [25] and voice and speech training [26,27] after surgery for head and neck cancer and improvement of transfer methods for terminal cancer patients) [28].

However, there has been little comprehensive rehabilitation research in Japan and no systematic cancer rehabilitation programmes have ever been popularized or developed. Thus, it will first be necessary to elucidate the situation regarding the conduct of cancer rehabilitation in healthcare institutions in Japan and its content. This study was carried out for the purpose of elucidating the current status of cancer rehabilitation at healthcare institutions nationwide by means of a questionnaire survey.

Subjects and methods

In March 2006, questionnaires regarding the conduct of cancer rehabilitation were mailed to departments associated with rehabilitation at 1693 healthcare institutions accredited as acute care hospitals, long-term care hospitals and multiple care hospitals according to the hospital function evaluation of healthcare institutions nationwide by the Japan Council for Quality Health Care in December 2005. In May a postcard requesting return of the questionnaire was sent to all healthcare institutions that had not returned them by the end of April 2006. This study adopted as the target population the 1686 facilities that remained after excluding the seven facilities whose accreditation in terms of the hospital function evaluation by the Japan Council for Quality Health Care had been withdrawn by the end of March 2006.

The survey asked:

(1) the occupation and number of years of clinical experience of the responder to the questionnaire,
(2) whether rehabilitation for cancer patients had been conducted in 2005, and the following in regard to the institutions that had conducted it:
(3) the person engaged in rehabilitation (1: physician; 2: nurse; 3: nurse's aid; 4: nursing care worker; 5: physical therapist; 6: occupational therapist; 7: speech therapist; 8: prosthetist; 9: psychotherapist; 10: social worker; 11: psychiatric social worker),
(4) type of cancer (primary cancer only) of the patients receiving rehabilitation (1: brain, nerve, eye; 2: mouth, nose, pharynx, larynx; 3: lungs or bronchi; 4: breast; 5: gastrointestinal tract; 6: liver, gallbladder, pancreas; 7: urinary tract; 8: gynecologic; 9: skin; 10: bone or muscle; 11: blood or lymph);
(5) stage of the cancer patients (1: early stage; 2: recurrence or advanced stage; 3: terminal stage),
(6) number of patients (new patients only) who received rehabilitation in 2005 according to whether the patient was an inpatient or outpatient (1: fewer than 10; 2: 10–49; 3: 50–99; 4: 100 or more);
(7) content of the rehabilitation (1: gait training; 2: muscle strengthening exercises; 3: range of motion exercises; 4: respiratory and pulmonary physical therapy; 5: analgesia, control of inflammation; 6: prosthetic hand and foot training after limb amputation; 7: guidance and training for activities of daily living (ADL); 8: functional restoration of the upper limb after breast cancer surgery; 9: care for lymphoedema; 10: care after surgery for head and neck cancer; 11: stoma care after surgery for colorectal cancer; 12: urostomy care after surgery for urinary tract cancer; 13: creative activities; and 14: psychotherapy and psychological counselling).

The healthcare institutions that did not conduct rehabilitation for cancer patients in 2005 were surveyed in regard to

(8) whether there is a need for rehabilitation for cancer patients,
(9) the situations in which they felt a need for rehabilitation for cancer patients (1: when patients request that they would like to stand and walk again; 2: when they teach methods of nursing care to families and caregivers for patients who are transferred to their homes; 3: when patients request that they wish to be able to use the toilet without depending on others; 4: when they wish to devise a method of moving patients who are bedridden and struggle with moving them; 5: when patients are isolated and do not find life worth living; 6: when attempting to deal with psychological distress, such as depression and anxiety; 7: when attempting to deal with mental pain);

(10) the reason for the delay in introducing rehabilitation for cancer patients (1: absence of prescriptions for rehabilitation by attending physicians; 2: insufficient rehabilitation staff; 3: facility and equipment not prepared; 4: no economic support; 5: absence of any scientific basis for the efficacy of rehabilitation for cancer patients; 6: absence of feeling a need for rehabilitation for cancer patients), and

(11) whether they had plans to conduct rehabilitation for cancer patients in the future.

The content of the above questions was thoroughly considered and decided on by physicians, nurses, physical therapists, occupational therapists, psychologists and epidemiologists who are knowledgeable about cancer rehabilitation and involved in the Third Term Comprehensive Control Research for Cancer Project 'Development of Strategies to Improve the QoL of Different Types of Patients'.

The 1045 of the 1059 institutions that mailed back the questionnaire and replied to the question asking whether they conducted rehabilitation for cancer patients were used as the denominator to calculate the percentage that conducted rehabilitation for cancer patients. The percentages for each item in the content of the survey on cancer rehabilitation were calculated by using the number of institutions that conducted rehabilitation and the number of institutions that did not conduct rehabilitation, respectively, as denominators.

The following definition of rehabilitation was provided on the first page of the questionnaire:

> Rehabilitation means recovery of various abilities, including physical functions, daily living functions and activities of daily living. Methods include nursing, nursing care, physical therapy, occupational therapy, speech therapy and counselling. It is not limited to gait training or to muscles and joints, but includes support for daily living and social activities.

Results

Valid replies were obtained from 1045 (62.0%) of the 1686 institutions nationwide. The most common occupation of those who filled out the questionnaire was physical therapist (78.7%), followed by physician (8.7%), occupational therapist (7.2%) and nurse (1.5%). Other occupations that can be cited are: speech therapist (0.5%), clerical staff (0.2%) and psychologist (0.1%). The proportions of institutions according to number of years of clinical experience of the responder were: 1–10 years, 30.9%; 11–20 years, 39.6%; 21 years or more, 28.6%. There were no significant differences in reply rates according to region of Japan (Hokkaido Region, 60.2%; Tohoku Region, 59.1%; Kanto Region, 59.5%; Chubu Region, 71.3%; Kinki Region, 64.3%; Chugoku Region, 59.6%; Shikoku Region, 59.0%; Kyushu and Okinawa Region, 63.2%) ($\chi^2 = 11.6$, $p = 0.11$).

Current status at facilities that conduct rehabilitation for cancer patients

In 2005, rehabilitation for cancer patients was being conducted at 864 facilities (82.7%). Physical therapists (97.3%) accounted for the occupation most commonly employed in departments associated with rehabilitation and were followed by physicians (74.9%), occupational therapists (64.6%) and speech therapists (57.1%) (Table I).

In the majority of facilities patients with primary cancer at the following sites received rehabilitation: gastrointestinal system (81.4%), lung and bronchi (64.7%), breast (63.4%), brain, nerves, eyes (59.0%), liver, gallbladder, pancreas (56.7%).

The proportions according to the stage of the cancer patients who received rehabilitation were: recurrence or advanced stage, 86.8%; terminal stage, 84.6%; and early stage in 79.6%, and a high proportion of facilities provided rehabilitation in all three stages.

The proportions of facilities that conducted rehabilitation for inpatients according to the numbers of cancer patients who received rehabilitation (new patients only) were: 10–49 patients, 44.9%; fewer than 10 patients, 34.1%; 50–99, 10.8%, and 100 or more, 8.1%, and the proportions for outpatients were: fewer than 10 patients, 65.6%; 10–49 patients, 8.6%; 50–99 patients, 1.4%; and 100 or more patients, 0.3%.

The content of the rehabilitation for cancer patients in terms of physical function consisted of gait training (92.1%), muscle strengthening exercises

Table I. Percentages of institutions according to the occupations of persons engaged in departments associated with rehabilitation ($n = 864$).

Occupation	No. of institutions	%
Physical therapist	841	97.3
Physician	647	74.9
Occupational therapist	558	64.6
Speech therapist	493	57.1
Nurses' aide	137	15.9
Nurse	131	15.2
Social welfare worker	69	8.0
Psychotherapist	46	5.3
Prosthetist	28	3.2
Nursing care worker	23	2.7
Psychiatric social worker	9	1.0
Other	294	34.0

(88.9%) and range of motion exercises (85.6%) and the rates of conduct of rehabilitation were high. The content in terms of ADL consisted of guidance and training for activities of daily living (ADL) (adjustments to the environment, health care equipment, self-help devices) (73.6%) and the rates of conduct of rehabilitation were high. The results for content in terms of post-operative care showed that functional restoration of the upper limb after breast cancer surgery was performed at more than half of the facilities (56.6%), but that there were low rates of conduct of care for lymphoedema (43.4%), care after surgery for head and neck cancer (14.8%), stoma care after surgery for colorectal cancer (10.3%) and urostomy after surgery for urinary tract cancer (5.4%).

The rates for conduct of content focused on patients' mental and psychological aspects were low and the content consisted of creative activities (recreation, music, painting, handicrafts, etc.) (24.4%) and of psychotherapy and psychological counselling (7.6%) (Table II).

Current status at facilities that do not conduct rehabilitation for cancer patients

There were 181 facilities that did not conduct rehabilitation for cancer patients in 2005. Of them, 171 health care institutions (94.5%) replied 'yes' to the question asking whether rehabilitation is needed for cancer patients. Only two (1.1%) replied 'no', that it is not needed; the other eight facilities (4.4%) did not reply to the question.

Of the 171 facilities that replied that there is a need for cancer rehabilitation, the highest percentage, 69.1%, replied that the occasion when they felt the need for rehabilitation was 'when patients request that they would like to stand and walk again'. Other replies that exceeded 50% were: 'when teaching methods of nursing care to families and caregivers for patients who are transferred to their homes', 'when patients request that they wish to be able to use the toilet without depending on others', 'when wishing to devise a method of moving patients who are bedridden and struggling to move them' (Table III).

More than half of the institutions, 50.8%, gave 'absence of prescriptions for rehabilitation by attending physicians' as the reason for the delay in introducing rehabilitation for cancer patients and other reasons were 'insufficient rehabilitation staff', 30.4%; 'institution and facilities not prepared', 27.1%; 'absence of economic support', 23.8%; 'absence of any scientific basis for the efficacy of rehabilitation for cancer patients', 19.9%; and 'do not feel any need for rehabilitation for cancer patients', 5.5%.

Twenty-two (12.2%) of the 181 facilities replied that they 'have plans' to perform rehabilitation for cancer patients, while 58.6% 'have no plans' to perform it, 23.2% are 'considering it' and 6.1% did not reply.

Table II. Numbers of institutions according to the content of the rehabilitation conducted for cancer patients.

Content	No. of replies	%
Physical function		
Gait training	796	92.1
Muscle strengthening exercises	768	88.9
Range of motion exercises	742	85.9
Respiratory and pulmonary physical therapy	536	62.0
Analgesia, control of inflammation, etc.	433	50.1
Prosthetic hand and foot training after limb amputation or dissection	193	22.3
Daily living		
Guidance and training for activities of daily living (ADL) (including adjustment of the environment, health care equipment, self-help devices)	636	73.6
Care after cancer surgery		
Restoration of upper limb function after breast cancer surgery	489	56.6
Care for lymphoedema	375	43.4
Care after surgery for head and neck cancer	128	14.8
Stoma care after surgery for colorectal cancer	89	10.3
Urostomy after surgery for urinary tract cancer	47	5.4
Mental and psychological aspects		
Creative activities (recreation, music, painting, handicrafts, etc.)	211	24.4
Psychotherapy and psychological counseling	66	7.6

Discussion

In this study a survey targeting healthcare institutions in Japan was conducted in order to determine the

Table III. Occasions when the need for cancer rehabilitation was felt ($n = 171$).

Occasion	No. of replies	%
When patients request that they would like to stand and walk again	125	68.3
When teaching methods of nursing care to families and caregivers for patients who are transferred to their homes	123	67.2
When patients request that they wish to be able to use the toilet without depending on others	119	65.0
When wishing to devise a method of moving patients who are bedridden and struggling to move them	102	55.7
When patients are isolated and do not find life worth living	85	46.4
When attempting to deal with psychological distress, such as depression and anxiety	82	44.8
When attempting to deal with mental pain	48	26.2
Others	20	10.9

current status of rehabilitation for cancer patients. The results showed that rehabilitation for cancer patients is being conducted at more than 80% of the facilities and that ~95% of the facilities where it was not being conducted in 2005 recognized the need for it. Thus, it was found that both the rate of conduct of cancer rehabilitation in Japanese healthcare institutions and the need for it are high.

The percentages of facilities according to the content of the rehabilitation they conducted for cancer patients were, in descending order: gait training, muscle strengthening exercises, range of motion exercises and guidance and training for ADL. On the other hand, while the rate for conduct of functional restoration of the upper limb after breast cancer surgery as post-operative care exceeded 50%, the rates for conduct of specialized rehabilitation in the form of care for lymphoedema, care after surgery for head and neck cancer, stoma care after surgery for colorectal cancer and urostomy after surgery for urinary tract cancer were low. These findings regarding the current status of rehabilitation for cancer patients in Japan demonstrate that rehabilitation is conducted for the purpose of enabling basic living activities, but they also suggested that specialized rehabilitation programmes for cancer may not have been widely adopted. In the future it will be necessary to make an effort to popularize rehabilitation for individual types of cancer and after cancer therapy.

The three points described below can be cited as the merits of this study. First, this is the first study to assess a survey of the current status of cancer rehabilitation in Japan. The results of this survey have demonstrated the current status of the conditions of conduct and the content of cancer rehabilitation in healthcare institutions and they have clarified the need to consider strategies for popularizing and developing rehabilitation programmes for cancer patients. Secondly, letters urging institutions to reply were sent out to the target institutions in order to increase the reply rate in this study and, since a high reply rate of 62.5% was achieved with no significant differences in reply rate among the regions, the results of this study appear to reflect the situation in Japanese healthcare institutions as a whole. Thirdly, the questions in the survey were carefully examined by a study group that was well versed in rehabilitation and the questions were drawn up based on a thorough assessment by physicians, nurses, physical therapists, occupational therapists, psychologists and epidemiologists. Thus, the questions that were posed incorporated the opinions of each occupation and they appear to better reflect the current status of cancer rehabilitation.

The following three points can be cited as limitations of this study. First, according to occupation, physical therapists accounted for the highest proportion of persons who filled out the questionnaire (78.7%). Although physical therapists were found to be the major occupation that conducts rehabilitation for cancer patients, the replies regarding the conduct of rehabilitation in this survey may have been biased toward the occupation of physical therapist. Secondly, the definition of rehabilitation may have been vague. A definition of rehabilitation was stated in the questionnaire (see Methods section), but the definition of rehabilitation may vary from individual-to-individual and from occupation-to-occupation and as a result there may have been slight changes in the rates of conduct of rehabilitation and rates of conduct of the content of the rehabilitation. Thus, caution is required when interpreting the results of this questionnaire. Thirdly, analysis according to hospital size and type (university hospital, general hospital, specialized hospital, etc.) was impossible in this study and the possibility of the content of the rehabilitation differing according to the size and characteristics of the hospital cannot be ruled out.

Based on the above points, in order to popularize rehabilitation for cancer patients in the future it will first be necessary to establish its validity according to cancer type, cancer stage and method of cancer therapy. It will also be necessary to assess how to popularize cancer rehabilitation according to method of cancer therapy.

Conclusions

The results of a survey of the status of rehabilitation for cancer patients in healthcare institutions in Japan showed that more than 80% of them conducted it. The highest proportions in regard to content were related to physical function and daily living. Many of the facilities where it was not being conducted felt a need for it. Based on the results of this survey it appears necessary to assess strategies for popularizing and developing rehabilitation programmes for cancer patients.

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Factors Associated with the Somatic Sensation of Inpatients with Schizophrenia

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ABSTRACT. The purpose of this study was to identify factors associated with changes in an "awareness of somatic sensation" score after performing occupational therapy (OT). The subjects were 21 patients with schizophrenia who participated in an OT group for 8 weeks. Scores on the Rating Scale for Occupational Therapy Experience, the Rosenberg Self-Esteem Scale, and the Japanese version of the Body Awareness Scale were obtained twice: at baseline, and immediately after completion of the intervention. A multiple regression analysis identified observed psychopathology, specifically the sub-item "emotional change" alone, as a significant factor. The results suggest that the factor "emotion," which had not been the focus of attention in the past, is associated with the "awareness of somatic sensation" of inpatients with schizophrenia.
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INTRODUCTION

The factors that compose occupational therapy for mental disorders have been summarized into: (1) subjects, (2) work activity, (3) occupational therapist, and (4) group. The factors (5) setting and (6) time are also said to contribute (Yamane, 2003). In other words, occupational therapy consists of the therapeutic relationship between the subject and the occupational therapist mediated through the work, and the therapeutic structure can be said to consist of using a group, creating a setting, and deciding the time to perform it so that the participants can have the proactive experience of doing something themselves and interacting with people. Up until now the therapeutic structure of such psychiatric occupational therapy has for the most part been organized on the basis of clinical practice and passed on in the form of therapeutic techniques. In other words, the physical and psychological effects of the unique properties of the work activity during psychiatric occupational therapy have been studied empirically, and their properties have been described and used as therapeutic techniques.

In most previous reports, the methods have primarily consisted of the therapists observing the phenomena that occur during occupational therapy, hypothesizing about their meaning, and describing them. Few studies have actually investigated the sensations experienced by the patients who actually engaged in occupational therapy in association with the activity and the psychological and physical changes that occurred (Shingu, Nishimura, Hanaoka, & Okamura, 2001). Nowadays, evidence-based medicine (EBM) is frequently advocated, and provision of documented data which can be generalized and reproduced are demanded of occupational therapists. In order to determine the meaning of work activity as a treatment technique, and using more than traditional beliefs, it is absolutely essential to conduct studies that include the subjective experience of the participants performing the activity.

Based on these ideas, in our previous study we devised the Rating Scale for Occupational Therapy Experience (RSOTE) (Shingu et al., 2001), a self-report-type evaluation sheet designed to identify the feelings of the subjects as they perform their work activity. We used it to investigate the factors involved and the degree to which the subjects