

The perception of inconveniences and interests to daily life performance of the elderly people qualified for secondary prevention program

RUMI SUNOHARA¹, MASAYOSHI KOBAYASHI²

¹*Department of Rehabilitation, Faculty of Health Science,
Nagano University of Health and Medicine*

²*Graduate School of Medicine, Shinshu University*

ABSTRACT: This study used the Kihon Checklist, Daily Life Performance Checklist and Interest Checklist toward 337 healthy elderly persons in the community to examine their perception of inconveniences to daily life performance as well as the daily activities which they are ‘doing,’ ‘want to do’ and are ‘interested in doing.’ Among 377 healthy elderly participants, 20.0% were found to be qualified for the Secondary Prevention Program, 49.3% experienced inconvenience to ‘get up from the floor,’ 42.7% suffered inconvenience to do ‘weeding,’ 38.7% recognized inconvenience to ‘go up and down stairs,’ and 54.7% recognized ‘forgetfulness.’ Both the qualified and the unqualified elderly were ‘interested in’ and ‘want to do’ ‘haiku,’ ‘painting and writing picture-letters,’ ‘calligraphy,’ and besides ‘dance’ and ‘volunteer’ were drawn as the daily life performance that the qualified persons for the Secondary Prevention Program are ‘interested in doing’ and ‘want to do.’ The perception of inconveniences and interests to daily life performance of the elderly people qualified for secondary prevention program.

Key words: Elderly people, Daily life performance, Care prevention

1. Introduction

According to the Annual Report on Aging Society: 2018, the population aged 65 and over has reached 35.15 million which are the largest in the past, and the ratio of the elderly people against total population became 27.7% which was also the largest in the past¹⁾. The ratio of people 65 years old and over has reached 31% in Nagano prefecture. By 2025 in Japan, the baby boomer generation will be the late stage elderly people aged 75 or over, and Japan will be the super-aged society. Therefore, through the Preventive Care and Daily Life Support Program, the care management of preventing long-term care has been widely implemented for the persons requiring special care, the qualified persons of the Secondary Prevention Program, and the persons who satisfy the standards of the General Program by using Basic checklist.

Preventing long-term care aims to not only improve motor function and nutritional status of each elderly person but improve their life function (activity level)

as well as social participation (level of their role in the society), and this leads to supporting individual efforts to live meaningful life and achieve self-fulfillment and therefore enhances their quality of life²⁾.

Occupational Therapy is occupation-focused therapy, guidance and support provided in fields such as medical care, public health, welfare, education and employment, with the aim of promoting human health and well-being. “Occupation” refers to daily activities that are purposeful and meaningful to each person³⁾.

Towards the establishment of ‘Community-based Integrated Care System’ being planned for 2025, the support to maintain and improve daily life performances of elderly people has begun to be provided aiming at promotion of the rehabilitation focusing on ‘activity’ and ‘participation’ by employing ‘Management Tool for Daily Life Performance (MTDLP)’ which was developed by Japanese Association of Occupational Therapist⁴⁾.

Moreover, it is thought that MTDLP is efficient in terms of preventive intervention to ordinary elderly

people, and ‘Daily Life Performance Checklist’ has been developed in order to measure the sense of inconveniences about daily life performances of elderly people⁵⁾.

2. Purpose

The purpose of this study was to investigate the perception of daily life performance (DLP) in healthy elderly people and to examine the occupations in which they wished to participate, and examined their perception of inconveniences to daily life performance as well as the daily activities which they are ‘doing,’ ‘want to do’ and are ‘interested in doing.’

Furthermore, the results may be helpful in planning community occupations to promote participation and activities for the elderly.

3. Participants and Method

3-1. Participants

Participants of this study were the elderly persons who were over 60 years old and joined either ‘the Lecture to find a meaningful life’ held by Nagano City Higano Welfare Center for the Elderly (hereafter, the Welfare Center) or ‘the Senior College (hereafter, SC)’ offered by Nagano Center of Social Development for Senior Citizens. Criteria for the eligibility to participate in this study were those who did not have a severe underlying disease / impairment as well as were able to answer the questionnaire. The following persons were excluded from the sample of this study: those who had a underlying disease and were scheduled to be hospitalized or admitted to the necessary facilities or those who were within a year of discharging from hospitals or necessary facilities, those who had mental and physical depression and been certified in need of care or support, and those who had difficulties to answer the questionnaire due to mental and physical depression.

The questionnaire forms, which are 1. Basic Survey, 2. The Kihon Checklist, 3. Daily Life Performance Checklist, and 4. Interest Checklist, were distributed to 250 men and 250 women over 60 years old who participated in either ‘the Lecture to find a meaningful life’ held by the Welfare Center or ‘the Senior College’ offered by Nagano Center of Social Development for Senior Citizens. The participants were explained by both oral and written that submitting the questionnaire (or dropping the form in the designated box) means the agreement to join this study.

The total of 377 answers, which was consisted of 120 persons (27 men, 93 women, average 73.3 ± 5.5

years old) participated in the Welfare Center and 257 persons (91 men, 160 women, average 68.6 ± 6.3 years old) in the Senior College, were received.

The Period of this study was from 1st July 2017 to 30th September, 2017. This study has gained the approval from Shinshu University’s ethics committee.

3-2. Data collection and statistical analysis

3-2-1. Questionnaire Form

The data is collected by the following four methods.

1) Basic Survey

The researchers of this study made the Basic Survey to collect baseline information regarding age, gender, family members, the presence or absence of hospital visit, and means of transportation.

2) The Kihon Checklist (the version made by Ministry of Health, Labor and Welfare)⁵⁾

3) Daily Life Performance Checklist (the version made by Japanese Association of Occupational Therapists)⁶⁾

4) Interest Checklist (the version of Japanese Association of Occupational Therapists)

3-2-2. Method of analysis

The answers collected from 500 persons were analyzed in line with the following procedure by Simple aggregate analysis.

1) Identified the qualified persons of Secondary Prevention Program from either the Welfare Center or SC.

2) Identified the qualified persons by the score analysis of Daily Life Performance Checklist and compared the answers between the qualified persons and the unqualified persons. Connections between the age of the qualified persons, the answers of the Kihon Checklist and Daily Life Performance Checklist were evaluated.

3) Compared the inconveniences about the daily life performances of the elderly people from the score analysis of Daily Life Performance Checklist.

4) Made the comparative review of daily life performances that the elderly persons ‘are interested in ‘doing’ or ‘want to do.’ The missing values were excluded from the analysis as they were found.

4. Results and Discussion

4-1. Basic survey and the Kihon Checklist

Based on the the Kihon Checklist, the qualified persons of the Secondary Prevention Program (hereafter the qualified persons of the Program) and unqualified persons (hereafter the unqualified persons) were examined respectively. The number of persons in the qualified group was 74 (25 men, 49 women,

average age of 73.3 ± 6.5) which covered 20%, and that of in unqualified group was 302 (93 men, 204 women, average age of 69 ± 5.2) which covered 80.0%. Among the qualified persons of the Program, 46.4% were conscious of 'motor deterioration,' 4.0% were 'undernutrition,' 69.3% were aware of 'loss of oral function,' 3.0% were categorized as 'stay-at-home,' 53.0% were conscious of 'decline in cognitive function,' and 44.0% fell into the group of 'depression.' Regarding the unqualified persons, 0% responded 'motor deterioration, undernutrition and loss of oral function,' 2.0% retorted as 'stay-at-home,' 32.0% were conscious of 'decline of cognitive function,' and 9.0% persons fell into 'depression.' The average age of the qualified persons of the Program is older than that of the unqualified group, and the qualified persons of the Program have a higher rate for seeing a doctor regularly than the unqualified persons. The percentage of the qualified persons of the Program who answered that they did not have friends and contacted with neighbors were also higher than the unqualified persons.

The score of "Kihon Checklist" became higher as the age of qualified persons of the Program became older, and they reported motor deterioration, depression and loss of oral function.

It indicates that these findings need to be incorporated in the community program.

In this study, among 377 elderly persons who joined the programs offered by the Welfare Center and SC, 75 persons, which account for about 20%, were determined as qualified persons of the Secondary Prevention Program. According to the report from Ministry of Health, Labor and Welfare⁷⁾, the rate of the qualified persons of the Secondary Prevention Program is 9.5% of all elderly population so this showed that the rate in this study was roughly twice the rate in the report of the Ministry. It is necessary to introduce a proactive program for the users of Higano Welfare Center for the Elderly as well as the Senior College from the perspective of health promotion.

The response rate to the Check List was 30.1% in the nation, and it is pointed out that the elderly people may have feelings of resistance to be categorized in the Secondary Prevention Program⁷⁾. It is needed to create an environment to support elderly people's health that correct knowledge and information about health promotion and preventive care are widely understood among elderly people is needed.

One of the factors might increase the rate in our study was that the average age of the qualified persons of the Program which was 73.3 ± 6.5 years old.

4-2. Daily Life Performance Checklist

The items that were answered 'have an inconvenience very much' and 'have a slightly inconvenience' regarding the inconveniences to daily life performances of both the qualified and the unqualified persons for the Secondary Prevention Program are shown in the Table 1. The qualified persons for the Secondary Prevention Program suffered inconveniences more about their daily life performances compared to the unqualified persons. Especially about the half of the qualified persons for the Program reported 'forgetfulness' and motor deterioration such as 'getting up from the floor.' They also reported inconvenience about 'weeding,' 'cleaning,' 'uncap wide-mouthed jar' and 'daily housework such as carrying 2 kg luggage home.' The qualified persons for the Program have also inconvenience regarding daily life performances that require cognitive function such as 'phone conversation and listening to conversations.' However, similarly, the unqualified persons also have inconvenience about their daily life performances such as 'forgetfulness,' 'snow shoveling,' 'getting up from the floor,' 'weeding,' and 'uncap wide-mouthed jar.' Hence the Primary Prevention Program⁸⁾ focusing on daily life performances is necessary.

The subjective sense of well-being was considered generally good since more than 55% of both the qualified persons for the Program and the unqualified persons responded that their health condition is 'slightly well,' and 36.3% of non-qualified persons answered, 'very well.' However, 21.4% of the qualified persons for the Program responded they are 'not so well' so this reflected the low sense of well-being of the qualified persons for the Program (Table 2). The subjective sense of well-being of elderly people contributes to not only mental health performance but physical and social health performance, and thus it may be said that the subjective sense of well-being is the comprehensively assessable benchmark to individual quality of life⁹⁾. Furthermore, the subjective sense of well-being reflects something we cannot apprehend by objective factors and has predictability about physical depression which recently has got attention as an indicator for mortality risk and nursing care prevention¹⁰⁾, therefore individualized support will be necessary for the qualified persons¹¹⁾.

4-3. Interest Checklist

4-3-1. Performances 'doing' in daily life

From the results of 'Interest Checklist,' the number of answers about daily life performances that the qualified persons for the Program and the unqualified

Table 1. Daily life performances the participants having inconveniences

		Unqualified persons of the Program (n=302) The number of people (%)		Qualified persons of the Program (n=759) The number of people (%)	
1	Getting up from the floor	57	18.9	37	49.3
2	Picking up a pen from the floor	11	3.6	17	22.7
3	Walking for about 15 min.	15	5.0	17	22.7
4	Going up and down stairs	43	14.2	29	38.7
5	Carrying 2 kg luggage home	22	7.3	18	24.0
6	Enter and getting out of the Bath	4	1.3	10	13.3
7	Hanging out the laundry	10	3.3	8	10.7
8	Button the clothes	5	1.7	5	6.7
9	Zippering up and Unzipping	6	2.0	4	5.3
10	Cutting toenail	15	5.0	16	21.3
11	Cleaning (vacuum cleaner, swab the floor with wet cloth)	18	6.0	20	26.7
12	Using Chopsticks	2	0.7	6	8.0
13	Using a kitchen knife	3	1.0	4	5.3
14	Opening the lid of the plastic bottle	21	7.0	12	16.0
15	Uncap wide-mouthed jar	44	14.6	20	26.7
16	Opening the yogurt lid	11	3.6	8	10.7
17	Reading newspaper and circular notice	43	14.2	15	20.0
18	Phone conversation and listening to conversations	32	10.6	20	26.7
19	TV remote control operation	7	2.3	7	9.3
20	Planning meals	13	4.3	8	10.7
21	Medication management	2	0.7	6	8.0
22	Paying in small change	2	0.7	2	2.7
23	Driving	6	2.0	8	10.7
24	Going out troublesomely	19	6.3	13	17.3
25	Stopping to having hobby	18	6.0	10	13.3
26	Snow shoveling	72	23.8	12	16.0
27	Pouring heating oil into a tank of oil heater	23	7.6	17	22.7
28	Weeding	57	18.9	32	42.7
29	Feeling depressed often	25	8.3	9	12.0
30	Became forgetful	102	33.8	41	54.7

Table 2. Sense of Well-being

	Qualified persons of the Program	n=70 (%)	Unqualified persons of the Program	n=302 (%)
3. Very well	13	18.6	99	36.3
2. Slightly well	41	58.6	151	55.3
1. Not so Well	15	21.4	22	8.1
0. Not Well	1	1.4	1	0.4

persons ‘doing’ are shown separately in the Table 3.

Both the qualified persons for the Program and the unqualified persons have maintained the ability to perform ADL and IADL. Regarding the daily life performances other than IADL, compared to the

unqualified persons, the qualified persons for the Program tended to perform fewer daily performances.

4-3-2. Daily life the performances participants ‘are interested in doing’ and ‘want to do’

From the results of ‘Interest Checklist,’ the number

Table 3. The List in order of performances 'doing' in daily living

		The qualified persons for the Program (n=66)		The unqualified persons for the Program (n=291)	
1	Using the toilet	66	100.0	291	100.0
2	Taking a bath	65	98.5	289	99.3
3	Putting on his/her clothes	65	98.5	289	99.3
4	Eating	65	98.5	288	99.0
5	Brushing teeth	65	98.5	287	98.6
6	Caring about his/her appearance	64	97.0	287	98.6
7	Sleeping	53	80.3	253	86.9
8	Cleaning	60	90.9	279	95.9
9	Cooking	46	69.7	243	83.5
10	Shopping	61	92.4	280	96.2
11	House and garden maintenance	60	90.9	278	95.5
12	Laundry	51	77.3	260	89.3
13	Driving	62	93.9	275	94.5
14	Outing on train or bus	51	77.3	263	90.4
15	Caring for children or grandchild	32	48.5	189	64.9
16	Caring for pets	18	27.3	88	30.2
17	Chat	56	84.8	272	93.5
18	Fireside	54	81.8	271	93.1
19	Date	12	18.2	84	28.9
20	Going to Bar	19	28.8	103	35.4
21	Volunteer	20	30.3	132	45.4
22	Activity in community	28	42.4	150	51.5
23	Religion	27	40.9	151	51.9
24	Career education	39	59.1	176	60.5
25	Reading	48	72.7	207	71.1
26	Haiku	11	16.7	22	7.6
27	Calligraphy	15	22.7	66	22.7
28	Drawing	12	18.2	60	20.6
29	Computer and word processing	32	48.5	142	48.8
30	Photograph	24	36.4	124	42.6
31	Cinema, theater, and concert	36	54.5	176	60.5
32	Tea ceremony and flower-arranging	17	25.8	70	24.1
33	Singing and Karaoke	33	50.0	149	51.2
34	Listening to music and playing	34	51.5	158	54.3
35	Go, shogi, and other board games	15	22.7	61	21.0
36	Gymnastics	35	53.0	208	71.5
37	Waling	42	63.6	224	77.0
38	Sports	21	31.8	117	40.2
39	Dancing	7	10.6	52	17.9
40	Baseball and sumo	24	36.4	109	37.5
41	Bicycle race and horse racing	2	3.0	21	7.2
42	Knitting	14	21.2	73	25.1
43	Sewing	20	30.3	136	46.7
44	Working in Field	37	56.1	182	62.5
45	Job	14	21.2	69	23.7
46	Traveling and hotspring	52	78.8	240	82.5

of answers about daily life performances that the qualified persons for the Program and the unqualified persons ‘want to do’ or are ‘interested in doing’ are shown separately in the Table 4.

Among the qualified persons for the Program, 28 persons (42.2%) reported ‘calligraphy’ was the most interesting activity and followed by ‘painting’ which was responded by 26 persons (39.4%), ‘dance’ by 22 persons (33.3%), and ‘volunteer’ by 21 persons (31.8%). Among the unqualified persons for the Program, 130 persons (44.7%) answered ‘haiku’ was the most interesting activity, followed by ‘painting’ responded by 121 persons (41.6%), ‘calligraphy’ by 120 persons (41.2%), and ‘tea ceremony and flower arrangement’ by 49 persons (35.1%).

From the examination of the collected answers, ‘haiku,’ ‘painting’ and ‘calligraphy’ were extracted as common daily life performances that both the qualified persons for the Program and the unqualified persons are ‘interested in doing’ and ‘want to do.’ These activities are relatively easy to be introduced in community activities for elderly people as avocational and learning activities, and the Annual Report on Aging Society: 2018¹⁾ indicated that 24% of the elderly people are doing above mentioned three activities in conjunction with ‘dancing’ and ‘tea ceremony/flower arrangement.’ Although ‘volunteer’ was indicated as 11.0% in the Report on Aging Society: 2018, this study showed that 30% of both the qualified persons for the Program and the unqualified persons had an interest in ‘volunteer.’ Thus, this indicates they have more needs for social contribution. Having roles in their community through volunteer activities contributes the improvement of elderly people’s own physical and mental health¹²⁾, and thus the results of this study presents the needs to coordinate the opportunities for elderly people to participate in activities that are easy to access for them.

5. Conclusion

This study examined and analyzed the sense of inconveniences as well as interests toward daily life performances for elderly people who were qualified and unqualified for the Secondary Prevention Program chosen from the participants of ‘the lecture to find a meaningful life’ held by the Welfare Center, and the ‘Senior College’ offered by Nagano Center of Social Development for Senior Citizens. Through this study, higher percentage of the qualified persons for the Secondary Prevention Program recognized inconvenience to ‘forgetfulness,’ ‘getting up from the floor,’ and ‘weeding,’ however, unqualified persons

equally perceived inconveniences to the above-mentioned performances. The need of comprehensive nursing care prevention program focusing on daily life performances was suggested¹³⁾. Doing daily life performances makes people healthy but it also makes people unhealthy if they do them wrong way. Occupational Therapy is the one that makes elderly people think for themselves how to deal with daily life performances which they feel inconveniences, allows them to control those performances, and supports to maintain their health. In the program that elderly people are participated in, it is indicated that the approach to relieve difficulties in daily performances should be considered. It is also necessary to conduct community performances to promote the elderly people’s ‘activity’ and ‘participation’ through understanding their needs in daily life performance. In addition, in order to make it possible to support the lives of the Secondary Prevention Program targets, it is necessary to use the survey items in this study to identify the needs of individuals and examine the factors involved.

6. Limitations and Problems

This study was conducted to participants of the lectures held by the Welfare Center and the SC in Nagano prefecture, and thus there are limitations to discuss and generalize characteristics of elderly people. The necessary process to conduct a random sampling survey will be required in the future. In addition, as future issues, it is necessary to investigate the relationship with objective indicators, examine between the extracted factors.

Conflicts of Interest

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Acknowledgements

We deeply appreciate cooperation to Mr. Hiroaki Iwakura, the director of Nagano city Higano Welfare Center for the Elderly, Ms. Chitomi Toda, the coordinator of Nagano Center of Social Development for Senior Citizens, and all participants of this study from the Welfare Center and the Senior College.

Table 4. Performances in daily life the participants are 'interested in doing' and 'want to do'

		The qualified persons for the Program (n=66)		The unqualified persons for the Program (n=291)	
		n	%	n	%
1	Using the toilet	0	0.0	0	0.0
2	Taking a bath	0	0.0	0	0.0
3	Putting on his/her clothes	0	0.0	0	0.0
4	Eating	0	0.0	1	0.3
5	Brushing teeth	0	0.0	1	0.3
6	Caring about his/her appearance	1	1.5	2	0.7
7	Sleeping	7	10.6	24	8.2
8	Cleaning	3	4.5	8	2.7
9	Cooking	15	22.7	29	10.0
10	Shopping	4	6.1	3	1.0
11	House and garden maintenance	4	6.1	6	2.1
12	Laundry	9	13.6	9	3.1
13	Driving	0	0.0	2	0.7
14	Outing on train or bus	7	10.6	16	5.5
15	Caring for children or grandchild	10	15.2	34	11.7
16	Caring for pets	12	18.2	56	19.2
17	Chat	5	7.6	10	3.4
18	Fireside	2	3.0	10	3.4
19	Date	13	19.7	69	23.7
20	Going to Bar	12	18.2	69	23.7
21	Volunteer	21	31.8	96	33.0
22	Activity in community	11	16.7	49	16.8
23	Religion	3	4.5	26	8.9
24	Career education	15	22.7	79	27.1
25	Reading	10	15.2	50	17.2
26	Haiku	22	33.3	130	44.7
27	Calligraphy	28	42.4	120	41.2
28	Drawing	26	39.4	121	41.6
29	Computer and word processing	16	24.2	80	27.5
30	Photograph	13	19.7	64	22.0
31	Cinema, theater, and concert	19	28.8	61	21.0
32	Tea ceremony and flower-arranging	19	28.8	102	35.1
33	Singing and Karaoke	13	19.7	70	24.1
34	Listening to music and playing	14	21.2	78	26.8
35	Go, shogi, and other board games	18	27.3	81	27.8
36	Gymnastics	11	16.7	57	19.6
37	Waling	12	18.2	32	11.0
38	Sports	13	19.7	92	31.6
39	Dancing	22	33.3	93	32.0
40	Baseball and sumo	14	21.2	72	24.7
41	Bicycle race and horse racing	13	19.7	44	15.1
42	Knitting	12	18.2	67	23.0
43	Sewing	12	18.2	46	15.8
44	Working in Field	8	12.1	37	12.7
45	Job	8	12.1	71	24.4
46	Traveling and hot spring	6	9.1	35	12.0

References

1. Cabinet Office: The Annual Report on Aging Society: 2018. Available from: <http://www8.cao.go.jp/kourei/whitepaper/w-2015/zenbun/27index.html> (cited on April 5th, 2019).
2. Ministry of Health, Labor and Welfare: The Guideline for Preventive Care · Daily Life Support Program (Translated from Japanese). Available from: <http://www.mhlw.go.jp/stf/seisakunitsuite/bunya/0000074126.html> (cited on December 28th, 2019).
3. Japan Association of Occupational Therapists: The Definition of Occupational Therapy (Translated from Japanese). Available from: <http://www.jaot.or.jp/about/definition.html> (cited on November 23rd, 2019).
4. Shinichi Noto, Chika Murai, Sawori Takeuchi, Yoshiaki Iwase, Haruki Nakamura: The effect of Occupational Therapy using ‘Management Tool for Daily Life Performance’ to the elderly who live in the community and need care—Randomized controlled study (Translated from Japanese). *The Occupational Therapy* vol.33: 259–269, 2014.
5. Ministry of Health, Labor and Welfare, Health and Welfare Bureau for the Elderly, Division of the Health for the Elderly: Regarding utilizing the Kihon Checklist etc. (Translated from Japanese). Available from: <http://www.mhlw.go.jp/topics/kaigo/kaigi/051219/dl/2.pdf> (cited on January 3rd, 2016).
6. Japan Association of Occupational Therapists: Management Tool for Daily Life Performance. Available from: <http://www.jaot.or.jp/science/mtdlp-newpage.html> (cited on April 24th, 2015).
7. Ministry of Health, Labor and Welfare: The survey results (Summary) of implementation status on the Preventive Care Program and the Preventive Care · Daily Life Support Program (Community Support Program) [Translated from Japanese]. Available from: <http://www.mhlw.go.jp/topics/kaigo/kaigi/051219/dl/2.pdf> (cited on January 3rd, 2016).
8. Junpei Ohba, Masayoshi Kobayashi, et al.: Development of new occupational therapy in the community- The survey of needs for the elderly people using Daily Life Performance Checklist and Interest checklist (Translated from Japanese). *The Occupational Therapy* vol.47: 423–428, 2013.
9. Naoto Hasegawa, Wakako Saito: Correlated factors of subjective sense of well-being of the elderly who need of care. *Journal of Japan Academy of Nursing Science* vol.31 No.2 13–23, 2011.
10. Katsunori Kondo: Health Disparities in Society, What Undermine Our Health Mentally and Physically? (Translated from Japanese) pp.93–97, Igaku-Shoin Ltd (Tokyo), 2007.
11. Japan Association of Occupational Therapists: 2013 Geriatric Health Promotion Project "Evaluation Research Project on the Effect and Quality of Rehabilitation for Independence Support of Consistent Living Activities from Medical Care to Long-term Care Insurance" Report III.: Available from: <http://www.jaot.or.jp/wp-content/uploads/2013/08/seitaksukoui-houkokusho21.pdf> (cited on April 5th, 2015).
12. Yoshinori Fujiwara, Yoko Sugiwarara, Shouji Shinkai: The impact of volunteer activities on the mental and physical health of the elderly—The significance of volunteer activities by the elderly in community health and welfare (Translated from Japanese). *Japanese Journal of Public Health* vol.54 (4): 293–307. 2005.
13. Masahiro Miyamoto: The Viewpoint of Management Tool for Daily Life Performance that can be utilized in the new Preventive Care · Daily Life Support Program (Translated from Japanese). *Journal of OT* vol.50: 902–907, 2016.