

# Effects of Intervention with To-balance Exercise on the Elderly Requiring Assistance and Lower Levels of Care

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**Abstract.** [Purpose] To examine the effects of intervention combining individualized and group rhythm (To-balance) exercises on the mental and physical functions of the elderly requiring low level care. [Subjects] A total of 29 elderly persons requiring level 2 assistance to level 2 who were and using outpatient care services participated in this study. [Methods] The participants were randomly allocated to 2 groups: To-balance, and Sitting. The former group performed individualized and To-balance group exercises, while the latter group performed individualized exercise, as well as group exercise while sitting on a chair. The effects were evaluated through somatometric, physical fitness, and mental function measurements before and 3, 6, and 9 months after the initiation of the intervention. [Results] The lower-limb muscle strength and mental function significantly improved in both groups. Particularly, in the To-balance group, early improvement in balance and gait ability were observed. [Conclusion] The To-balance exercise may be useful for quickly improving the elderly's static balance ability.

**Key words:** Elderly persons, Rhythm exercises, Balance ability

*(This article was submitted Jan. 7, 2014, and was accepted Feb. 16, 2014)*

## INTRODUCTION

The total population of Japan has been decreasing since 2011. In 1970, the proportion of the elderly was 4.9%. It has increased to 25.2% in 2013, and it is expected to reach 40.5% in 2055. Japan will become a super-aged society in the future, with 1 in 2.5 people aged 65 and over. In the 5 years following the adoption of the Long-term Care Insurance System, the number of elderly people requiring assistance and low levels (level 1) of care markedly increased. Also, when the Long-Term Care Insurance Act was revised in April 2006, a new category of prevention benefits was added, with a view to promoting independence and preventing care dependency among the elderly requiring assistance. In terms of the new category of prevention benefits, it is crucial to prevent motor function from decreasing to maintain the independence of the elderly. Since Fiatarone<sup>1)</sup> reported the effects of muscle training for very old individuals, the trainability of elderly people has been widely recognized. Similarly, the effects of exercise-based intervention on an aging population have been examined on a worldwide basis from diverse viewpoints in previous studies<sup>1–12)</sup>.

Exercise-based approaches for the elderly may be classified into 2 major categories: individualized, and group. In addition to the effects of individualized approaches<sup>4–6)</sup> and the usefulness of group exercises<sup>2, 3)</sup>, the appropriateness of intervention combining them has recently been reported<sup>7–9)</sup>.

Helbostad et al. reported individual exercise is effective at improving the physical function of the elderly over the age of 75<sup>10)</sup>. Yokoyama et al. performed a similar comparison, and emphasized the usefulness of group exercise in improving mental function and its necessity in forming exercise habits<sup>11)</sup>. Nakagawa et al. also compared individual and group exercises, and reported that combined exercise improved balance ability in a static standing posture and mental function<sup>13)</sup>. However, the effects of exercise-based intervention, focused on improvement of balance ability, as well as the long-term impact of group exercise on mental and physical function, have not yet been fully examined. Furthermore, the effects of intervention combining individualized and group exercises have mainly been examined using general specific groups of elderly people, rather than those requiring assistance or low levels of care. Under these circumstances, it may be necessary to examine the current status of therapeutic exercises and review their effects.

Province and Whipple et al. recommended rhythm exercises for improving the balance ability of the elderly<sup>14, 15)</sup>. Whipple also described the components of balance training as movements sufficiently supporting the body weight, fast horizontal movements, and large vertical movements, and concluded that they are easy to include in rhythm ex-

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ercises<sup>15</sup>).

A previous study examining the mental function, of the elderly have reported a sense of isolation and anxiety are experienced by approximately 60% of elderly people, confirming that isolation is a factor closely associated with depression<sup>16</sup>). Another report suggested that the association between the mental and physical functions may be stronger in the elderly than in other age groups, and the more severe the sense of isolation, the lower the activity level<sup>16</sup>). Furthermore, Fader et al. reported that group exercise is more effective than individualized exercise at motivating participants since it creates feelings of joy, satisfaction, and fulfilment<sup>12</sup>). Based on these findings, we previously developed a group rhythm exercise called To-balance exercise (“To” in the “To-balance” means “to balance”), and examined the effects of 6 month intervention based on it. Lower-limb muscle strength, balance and gait abilities, and mental function significantly improved through the intervention combining individualized and To-balance exercises; however, the long-term effects of this intervention have rarely been examined. Considering this situation, in this study we examined the long-term effects of an intervention combining individualized and To-balance exercises, and 3 months withdrawal from the latter exercise, on the mental and physical functions of elderly subjects receiving low level care.

## SUBJECTS AND METHODS

### *Subjects*

A total of 29 (13 males and 16 females; mean age: 78.6±6.6) elderly persons requiring level 2 assistance to level 2 care who were using outpatient care services participated in this study. The inclusion criteria were as follows: ability to independently walk (with or without a cane or prosthesis); not requiring assistance to perform daily activities; ability to comprehend oral explanations about the exercises; absence of pain possibly requiring withdrawal from exercises, or fast-advancing progressive or unstable chronic disease; or a history of myocardial infarction or lower-limb fracture within the last 6 months. To confirm the effects of the intervention, the 29 participants were randomly allocated to 2 groups: To-balance (15); and Sitting (14). The former group performed individualized and To-balance group exercises, while the latter group performed individualized exercise, as well as group exercise while sitting on a chair. The basic characteristics of the two groups are shown in Table 1.

This study was conducted with the approval of the Ethics Review Committee of Houwa Group and the Epidemiologic and Clinical Research Ethics Committee of Fujita Health University after obtaining the participants' consent.

### *Methods*

The effects of intervention on the To-balance and Sitting groups were evaluated by conducting somatometric and physical fitness measurements, and a questionnaire survey for mental function 4 times: before, and 3, 6, and 9 months after the initiation of intervention. During the final 3-month period, group exercise was not performed by either group to

examine the negative influence of withdrawal from it on the subject's mental and physical functions.

The items of somatometric measurement were height (cm), body weight (kg), and body mass index (BMI). For the physical fitness measurements grip strength (kg/W), was measured using a digital grip dynamometer (Grip D, Takei Scientific Instruments Co., Ltd.), and maximum isometric knee extension force (knee strength; N/W), was measured using a hand-held dynamometer (Hoggan Health Industries). Single-leg standing time with the eyes open (sec), the Timed Up & Go (TUG; sec), and comfortable and maximum gait speeds (m/min) were measured using standard procedures. Mental function was measured using the 36-Item Short-Form Health Survey (SF-36). The SF-36 assesses health-related QOL, and is comprised of the following 8 sub-scales: physical function, role-physical, bodily pain, social function, general health, vitality, role-emotional, and mental health. Total scores were calculated for each sub-scale and converted into deviation values based on national standards for comparison and analysis.

The intervention consisted of 3 exercises: an individualized exercise program developed by Nakagawa et al.<sup>13</sup>), the To-balance exercise, and a conventional group exercise which was performed while sitting on a chair. They were usually performed when the participants visited the facility, 2 to 3 times a week, except on Sundays and when special events took place. The participants were instructed to report to the therapist in charge if changes in their physical condition, such as the occurrence of pain or persistent fatigue, were experienced while performing the exercises. On such occasions, the contents of exercises were changed.

The individualized exercise program was performed by both the To-balance and Sitting groups. It consisted of 8 exercise items, including major trunk and lower-limb muscle training, an exercise to be performed in the standing position, and 5 stretches<sup>13</sup>). In consideration of the results of physical fitness measurements, presence/absence of pain, and main complaint, 5 of the 13 items were individually adopted. The maximum number of stretches was set to 2, so that all participants would equally perform the exercises. The duration of each exercise session was approximately 10 minutes, and consisted of 3 sets of 10 repetitions. It was performed with a weight belt for 9 months at an intensity level of 12 or 13 (somewhat hard) on the Borg Scale. During the intervention, we periodically confirmed that the individualized exercise was being appropriately performed, and, when necessary, the intensity level was adjusted.

The To-balance exercise consisted of stages 1 to 3, and was performed only by the To-balance group. The duration of each session was approximately 15 minutes, and the intervention period was 6 months. The intensity level was set at 12 or 13 (somewhat hard) on the Borg Scale. All stages were performed with music which was familiar to the subjects and appropriate for rhythm exercises, at a tempo of 70 to 110 bpm in triple measure<sup>17</sup>). The exercise was performed using parallel bars or corridor handrails to prevent falls. One therapist took care of one participant, and the maximum number of participants in each session was 8, including therapists. To reduce differences in intervention ap-

**Table 1.** Participants' basic characteristics

	To-balance group (n = 15)	Sitting group (n = 14)
Sex	Males: 7 Females: 8	Males: 6 Females: 8
Age (years)	78.6 ± 5.3	79.3 ± 8.5
Height (cm)	154.5 ± 7.8	153.1 ± 8.3
Body Weight (kg)	55.5 ± 5.6	53.0 ± 5.2
BMI (%)	23.3 ± 2.2	22.7 ± 2.5
Primary diseases leading to care dependency		
Cerebrovascular diseases	5	6
Orthopedic diseases	9	7
Cardiovascular diseases	1	1
Levels of needed assistance/care		
Level 2 assistance	6	7
Level 1 care	4	2
Level 2 care	5	5

**Table 2.** Group exercise while sitting on a chair

Types of movement	Number of repetitions	Types of movement	Number of repetitions
1. Deep breath	3	7. Hip flexion	10
2. Shoulder elevation	10	8. Anterior trunk flexion with knee extension and foot dorsiflexion	10
3. Shoulder rotation	10	9. Anterior trunk flexion with hip flexion	10
4. Anterior/posterior and lateral trunk flexion and rotation	10	10. Lower-limb elevation with knee extension and foot dorsiflexion	10
5. Anterior/posterior and lateral cervical flexion and rotation	10	11. Stepping	20
6. Upper-limb reaching movement on both sides	10	12. Deep breath	3

proaches and communication methods between therapists, which may influence participants' mental function, the same four therapists were in charge of the group. In stages 1 and 2, one of the therapists led the group, while the others monitored the participants to guard against falls. In stage 3, the participants performed exercise under the guidance of their therapists in charge.

In stage 1, exercise items, such as stepping, anterior/posterior and lateral weight shifting with the weight-supporting face fixed, squat, and walking backwards, were performed for approximately 3 minutes and 30 seconds with music at a tempo of 60 bpm and handrails.

In stage 2, exercise was performed for approximately 2 minutes and 30 seconds, with music with lyrics at a tempo of 100 bpm. To motivate the participants to perform the group activity, they and the therapists formed a circle.

In stage 3, stepping was performed using handrails. This stage was divided into 2 halves. In the first half, exercise was performed for approximately 3 minutes and 20 seconds, with music at a tempo of 100 bpm, in line with stage 2, and was followed by an approximately 3-minute break. The second half lasted 2 minutes and 50 seconds, and was performed with music at a tempo of 120 bpm. The

following steps were performed: 1) taking the first and second steps without body shift; 2) taking the third step in an instructed direction; and 3) taking the fourth step similar to 2) so that the foot used in the fourth step was placed next to the one used in the third step. These sets of steps were repeated throughout the exercise. The direction for the third and fourth steps was set to forward beforehand for the first set. In the subsequent sets, the therapist instructed a new direction immediately after each third step. When stepping laterally, the steps were taken outwards to avoid crossing of the feet.

The conventional group exercise was performed while sitting on a chair. This exercise has been adopted in a large number of care facilities, and it was performed only by the Sitting group. The exercise mainly consists of uniformed muscle training for the major trunk, and upper- and lower-limb muscles, and its duration was approximately 15 minutes. As shown in Table 2, one session consisted of 3 repetitions of deep breathing (1, 12), 10 repetitions of exercises (2 to 10); and 20 repetitions of stepping (11). It was performed for 6 months at an intensity level of 12 or 13 (somewhat hard) on the Borg Scale, and the participants were instructed to rest if they felt it was harder than this. The subjects

and the therapists in charge sat facing each other. Blood pressure, pulse, and the Borg scale score were measured before and after the exercise for risk management.

The effects of the intervention on the To-balance and Sitting groups were examined by performing Friedman's  $\chi^2$  r-test (significance level: 0.05) on the results of the somatometric, physical fitness, and mental function measurements made before and at 3, 6, and 9 months after the initiation of intervention. Items showing significant differences were subsequently analyzed using Wilcoxon's signed-rank test with the Bonferroni correction, and a significance level of 0.0083. For comparison of the effects of intervention between the To-balance and Sitting groups, the results of somatometric, physical fitness, and mental function measurements made before and at 3, 6, and 9 months after the initiation of intervention were examined using the Mann-Whitney U test (significance level: 0.05). For computation, PASW Statistics 17.0 for Windows was used.

**RESULTS**

The mean attendance of the participants in the exercise program in the period from before to 3 months after the initiation of the intervention was 2.2±0.3 days/week in the To-balance and 2.2±0.4 days/week in the Sitting group, that in the period from before to 6 months was 2.2±0.4 and 2.2±0.3 days/week, respectively, and that in the period from before to 9 months was 2.2±0.4 and 2.2±0.3 days/week, respectively. That in the period from 3 to 6 months was 2.1±0.5 and 2.2±0.3 days/week, respectively, and that in the period from 6 to 9 months was 2.2±0.3 and 2.2±0.4 days/week, respectively. There were no withdrawals from the intervention during any period.

Table 3 shows the results of the physical fitness measurements before and during the intervention in the To-balance and Sitting groups. Before the intervention, no significant differences were observed between the 2 groups. In the To-

**Table 3.** Comparison of the results of physical fitness measurements before and after intervention between the To-balance and Sitting groups

		Before	3 months	6 months	9 months
Body weight (kg)	To-balance Group	55.5±5.6	55.8±5.3	55.6±5.6	54.7±5.7
	Sitting Group	53.0±5.2	52.3±5.2	52.5±5.2	52.0±5.6
BMI	To-balance Group	23.2±2.5	23.4±2.6	23.1±2.4	22.9±2.5
	Sitting Group	22.8±2.5	22.5±2.1	22.5±2.0	22.3±2.2
Grip (kg/W)	To-balance Group	0.4±0.1	0.4±0.1	0.4±0.1	0.4±0.1
	Sitting Group	0.4±0.1	0.4±0.1	0.4±0.1	0.4±0.1
Knee strength (N/W)	To-balance Group	3.3±0.9	4.2±0.8	4.3±0.6	4.0±0.5
	Sitting Group	3.4±1.0	4.0±1.2	4.1±1.0	3.8±0.9
Single-leg standing time (sec)	To-balance Group	6.3±4.0	11.6±7.3 <sup>#</sup>	14.0±6.3 <sup>#</sup>	11.8±6.2
	Sitting Group	6.0±2.4	6.9±2.9	9.2±4.3	7.3±2.9
TUG (sec)	To-balance Group	16.5±3.8	14.8±3.0	14.0±2.9	16.2±2.5
	Sitting Group	16.4±5.6	15.7±6.4	14.8±5.3	16.3±5.7
Comfortable gait speeds (m/min)	To-balance Group	41.5±11.0	46.3±9.4	48.1±9.4	41.9±9.4
	Sitting Group	39.3±10.7	43.1±11.7	44.8±9.4	40.8±10.1
Maximum gait speeds (m/min)	To-balance Group	56.5±17.2	60.6±15.6	65.7±13.6	57.5±14.1
	Sitting Group	56.1±18.9	57.6±21.4	60.1±21.7	57.3±23.6

To-balance Group (n=15), Sitting Group (n=14)  
 \*: p<0.0083, \*\*: p<0.0016 (Wilcoxon signed-rank test with Bonferroni correction)  
 #: p<0.05, ##: p<0.01(Mann-Whitney U test)

balance group, the knee strength, single-leg standing and TUG times, and comfortable and maximum gait speeds significantly improved in the period from before to 3 months after the initiation of intervention. In the period from 3 to 6 months, the knee strength, single-leg standing and TUG times, and comfortable and maximum gait speeds significantly improved. Significant improvements were also observed in the period from before to 6 months. In contrast, at the end of the withdrawal from group exercises, from 6 to 9 months after the initiation of intervention, significant decreases in the single-leg standing and TUG times and comfortable and maximum gait speeds were observed.

In the Sitting group, the knee strength in the period from before to 3 months after the initiation of the intervention and the knee strength, single-leg standing time, and comfortable and maximum gait speeds in the period from 3 to 6 months significantly improved. In the period from before to

6 months, significant improvements were observed in knee strength, single-leg standing and TUG times, and comfortable and maximum gait speeds. In contrast, at the end of withdrawal from group exercise, from 6 to 9 months after the initiation of the intervention, significant decreases in the single-leg standing and TUG times and comfortable and maximum gait speeds were observed.

In the comparison of the effects of intervention between the To-balance and Sitting groups, significant differences were observed only in the single-leg standing times at 3 and 6 months after the initiation of the intervention.

Table 4 shows the results of mental function measurements for the To-balance and Sitting groups before and during intervention. Before the intervention, no significant differences were observed between the 2 groups.

In the To-balance group, significant improvements were observed in social function, vitality, role-emotional, and

**Table 4.** Comparison of the results of mental function measurements before and after intervention between the To-balance and Sitting groups

			before	3 months	6 months	9 months
SF-36	Physical Function	To-balance Group	30.3±11.4	32.4±8.7	35.5±9.7	32.5±7.5
		Sitting Group	28.2±11.7	30.1±10.3	34.2±9.4	30.0±9.6
	Role-Physical	To-balance Group	38.1±10.2	38.2±7.4	42.3±8.2	34.8±6.9
		Sitting Group	38.1±9.2	38.5±7.8	41.9±6.2	35.1±8.2
	Bodily Pain	To-balance Group	38.8±9.0	41.6±8.8	43.8±8.0	37.8±6.2
		Sitting Group	38.2±8.5	40.3±8.7	43.8±9.2	38.1±9.0
	Social Function	To-balance Group	42.4±7.6	47.6±7.6	52.7±4.5	41.7±8.7
		Sitting Group	42.8±8.6	44.4±6.6	48.0±6.2	41.9±6.1
	General Health	To-balance Group	41.2±6.2	40.7±5.7	44.2±6.9	38.2±6.6
		Sitting Group	39.6±8.3	42.2±6.6	43.7±7.4	39.3±5.7
	Vitality	To-balance Group	45.4±6.3	51.6±5.4	54.7±6.6	49.1±5.4
		Sitting Group	44.5±7.7	49.6±5.9	49.6±5.7	42.0±9.0
	Role-emotional	To-balance Group	35.4±9.3	41.0±9.2	45.3±6.4	35.7±8.3
		Sitting Group	36.4±7.8	37.7±7.9	40.0±8.5	35.8±7.3
	Mental Health	To-balance Group	45.7±9.2	49.6±7.7	52.4±6.0	43.9±6.8
		Sitting Group	45.4±9.7	47.1±9.3	51.2±6.5	45.1±6.7

To-balance Group (n=15), Sitting Group (n=14)

The higher the deviation value, the more favorable the mental function for all items.

\*: p<0.0083, \*\*: p<0.0016(Wilcoxon signed-rank test with Bonferroni correction)

#: p<0.05, ##: p<0.01(Mann-Whitney U test)

mental health in the period from before to 3 months after the initiation of the intervention, and role-physical, social function, general health, vitality, and role-emotional in the period from 3 to 6 months. In the period from before to 6 months, social function, vitality, role-emotional, and mental health significantly improved.

In the Sitting group, significant improvements were observed in vitality and role-emotional in the period from before to 3 months after the initiation of the intervention, and role-physical, social function, role-emotional, and mental health in the period from 3 to 6 months. In the period from before to 6 months, social function, vitality, role-emotional, and mental health significantly improved.

In both groups, significant decreases in role-physical, bodily pain, social function, general health, vitality, role-emotional, and mental health were observed during the withdrawal from group exercise, from 6 to 9 months after the initiation of the intervention.

In the comparison of the effects of intervention on the mental function between the 2 groups, a significant difference was observed only in social function at 6 months after the initiation of the intervention.

## DISCUSSION

This study examined the effects of a new intervention approach combining group and rhythm exercises for the elderly requiring assistance or low levels of care, considering that interventions based on individualized or group exercise or combining them have already been examined in previous studies<sup>2-9</sup>). The results of the present study show there were significant improvements in the mental and physical functions of the To-balance group, which both individualized and group rhythm exercises were performed. In particular, static balance ability improved rapidly, and dynamic balance and gait abilities improved more markedly than in the Sitting group.

In the aspect of physical fitness, knee strength had significantly improved in both the To-balance and Sitting groups at 3 months after the initiation of the intervention. This improvement was maintained even after the 3-month withdrawal from group exercise, without differences in effect between the 2 groups. A significant improvement in knee strength was also observed after three months intervention in our previous study, in which only the individualized exercise program used in the present study was performed<sup>18</sup>). This suggests that, the individualized exercise program may have improved knee strength in the present study. Recently, the appropriateness of performing 50% or less of 1RM of low-intensity resistance exercise or a weight-supporting squat as a low-intensity resistance exercise to enhance the muscle strength has been reported<sup>19</sup>). The group rhythm exercise performed in the present study also consisted of weight-supporting muscle training; therefore, in future studies, it may be necessary to examine the muscle-strengthening effect of an intervention based only on weight-supporting muscle training.

Regarding balance ability, significant improvements in the single-leg standing and TUG times were observed in

the To-balance group 3 months after the initiation of intervention. While a number of reports have pointed out that 6 months or more are needed to improve the elderly's balance ability<sup>8, 20, 21</sup>), balance improved within 3 months of the start of the intervention in the present study, in which individualized and group rhythm exercises were simultaneously performed. Furthermore, the significant difference in the single-leg standing time observed between the To-balance and Sitting groups suggests that it may be possible to improve the static balance ability of frail elderly subjects within 3 months through this approach. It may be necessary to clarify this point in future studies, in addition to the above-mentioned muscle-strengthening effects as the effects of intervention based only on group rhythm exercise were not examined in this study.

Some reports have emphasized the importance of developing programs to improve the balance ability of the elderly with consideration of their individual characteristics<sup>7</sup>). Nakagawa et al. pointed out the necessity of performing more dynamic movements in individualized exercises to improve dynamic balance ability<sup>13</sup>). In the present study, stepping with continuous changes of direction was performed in the To-balance exercise, with a view to improving the ability of subjects to change direction and appropriately deal with instant stepping reactions. Rogers et al. reported that it is effective to intensively perform fast anterior/posterior and lateral stepping movements, in order to improve lateral stability and lower-limb control in the presence of involuntary stepping reactions<sup>22</sup>). Steps are also assessed in detail in the Basic Balance Ability Test developed by Mochizuki<sup>23</sup>). The criterion-related validity of this test has been confirmed ( $r=0.88$ ) against the Berg balance scale. These findings support the usefulness of the stepping exercise developed for the present study for improvement of balance ability. In fact, after the 3-month withdrawal from group exercise, significant decreases in balance ability were observed in both the To-balance and Sitting groups, suggesting that the balance ability may have been more markedly influenced by exercise levels than by muscle strength or flexibility. Therefore, it may be necessary to continuously provide the elderly with exercise-based programs to maintain their balance ability.

Regarding gait ability, significant improvements in the comfortable and maximum gait speeds were observed only in the To-balance group at 3 months after the initiation of intervention. Gait ability has been reported to be closely associated with knee extensor strength and balance ability. In a study conducted by Iguchi, a 6-month intervention with exercise at a low frequency, such as twice a month, improved gait ability<sup>24</sup>). Similarly, in the study of Hauer et al., a 3-month intervention with balance training 3 times a week improved the subject's TUG times<sup>25</sup>). Similarly, the improved knee strength and balance ability observed in the present study may also have improved the gait ability. After the 3-month withdrawal from group exercise, a significant decrease in gait ability was observed in both the To-balance and Sitting groups, highlighting the importance of continuously providing intervention for abilities which are difficult to improve.

Mental function improved as assessed by all SF-36 items

in both the To-balance and Sitting groups, and role-physical, social function, vitality, role-emotional, and mental health significantly improved. While a number of reports have pointed out that group exercise is effective at activating the elderly's mental function<sup>11-13</sup>, in the present study, exercise-based intervention significantly improved role-physical and general health, in addition to mental function. Considering that social function and role-emotional are associated with social communication-related QOL, their improvement in the present study may suggest a solution to the elderly's social isolation and consequent development of depression. The importance of continuously providing exercise-based interventions was also suggested in this respect. Furthermore, in this study, communication among the participants may have been promoted, as initially aimed, as the participants stated that "There's one more thing to look forward to" and "I would like to invite a friend of mine to this session". After the 3-month withdrawal from group exercise, significant decreases in 7 of the 8 SF-36 items were observed in both the To-balance and Sitting groups, suggesting the necessity of continuously providing group approaches for improving and maintaining the mental function of the elderly requiring low level care.

Based on our present results, activating the mental and physical functions of the elderly requiring assistance and low levels of care may need continuous provision of combined exercise therapy with consideration given to individuals' mental and physical functions.

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