

Original Paper

# Attitudes toward the Community and Characteristics of Leaders Managing Community-based Preventive Long-term Care Services

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## Abstract

The purpose of this study was to identify characteristics of leaders managing community-based preventive long-term care services. An anonymous self-administered questionnaire survey was conducted with 109 leaders preparing and managing venues for physical exercise and 109 exercise participants. The questionnaire included demographics (gender, age etc.), perceived health status, anxiety about the future, mixing with neighbors, roles in the community, attitudes toward the community. Data were analyzed using  $\chi^2$  and *t*-tests. A stepwise multiple logistic regression analysis method was also performed with significant variables as independent variables and the leader/participant position as the dependent variable. Of 197 returned questionnaires (response rate 90.4%) 188 without missing data were analyzed. It was found that the leaders were younger than the exercise participants, not care-need certificated persons, mixed well with neighbors, had roles in the community and had positive attitudes toward the community. Multiple logistic regression with significant variables as explanatory variables revealed that the leaders scored higher both in roles in the community (OR=3.23, 95%CI 1.72-6.06) and attitudes toward the community (OR=1.06, 95%CI 1.01-1.12). Findings suggest that leaders managing preventive long-term care venues for older people have one or more roles in the community and positive attitudes toward the community.

## 1. Introduction

As the population ages and the number of elderly people in need of certified caregivers increases, fears have been voiced about the sustainability of the public nursing-care system, and so the "Act on Promotion of Reform to Establish the Sustainable Social Security System" was created in May 2013 (No. 31). This act specifies examination of the preventive care structure, in which self-help efforts are fostered and an individual approach to preventive care is encouraged (Kawai et al.<sup>1)</sup>, paragraph 1), and a provision for social infrastructure related to preventive care facilitating participation of the elderly in social activities (Kawai et al.<sup>1)</sup>, paragraph 2).

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The Ministry of Health, Labour and Welfare (MHLW) has been promoting a model preventive care support project in model municipalities, selected in collaboration with the 47 prefectures of Japan, since 2014<sup>2)</sup>.

The purpose of the project is to provide local resident-managed venues for exercise and other activities for both the healthy elderly and those receiving secondary support for preventive long-term care. In principle, the concept covers the following: (1) developing local resident-managed venues for exercise activities within easy access of the entire municipality, (2) encouraging people aged 65 or older that stay at home all day to participate, (3) allowing the project to expand autonomously by participation and management of local residents, (4) making exercise programs available for the elderly and persons requiring assistance, and (5) carrying out the exercise program at least once a week.

In this situation, A City, which has a population of 67,731 and an aging rate of 25.8% (as of March 2014), lower than the prefectural average but slightly higher than the national average, considers preventive care for senior citizens an urgent issue<sup>3)</sup>. The city, pioneering the above mentioned care prevention support model project, has been carrying out "Ikiki Exercise for 100 Year Olds" as a long-term care prevention project since 2008.

The exercise is simple: muscle building using weights. At least two participants should perform the exercise together, at a venue within a 15 minute walk from their homes, for about 40 minutes per session, at least once a week. Since beginning the exercise program, residents have performed the exercise themselves using a DVD or illustrations and a CD, and also deepened their exchange with each other through a variety of activities such as tea ceremony. Once a year staff members from the community general support center conduct a physical strength test.

A survey conducted in February 2014 revealed that 90% of the exercise participants were female, 60% were elderly, and about 7% became care-need certified. These results suggest that leaders who have managed exercise venues play an important role in this program<sup>4)</sup>. As of July 2015, it was estimated that 1,500 elderly people participated at 109 venues.

Studies on preventive long-term care activities include those on training preventive care leaders<sup>1, 5)</sup> and reports on the process of creating self-managed groups<sup>6, 7)</sup>, which argue that personnel recruitment and training functions are necessary to set up and guide a voluntary organization. Shimanuki et al.<sup>8)</sup> reported that elderly leaders were male, young-old (the age of 65 to 74 years), felt satisfied with their own health status, and had a positive attitude toward life, but did not comment on their attitudes toward the community.

In carrying out health promotion activities and preventive long-term care activities effectively and efficiently, it is important to understand attitudes toward the community<sup>9)</sup>. However, Koshida et al.<sup>10)</sup> reported the only previous study that examined people's attitudes toward the community.

Therefore, we aimed to clarify attitudes towards the community and the characteristics of leaders managing a preventive long-term care service and to find ideas to develop new leaders.

## 2. Methods

### 2.1 Subjects

The total number of subjects was 218, including 109 "Ikiki Exercise for 100 Year Olds" participants and 109 leaders at 109 venues in A City.

### 2.2 Survey

An anonymous self-administered questionnaire survey was conducted. Questionnaires were mailed or distributed by hand to the 109 leaders managing "Ikiki Exercise for 100 Year Olds" at the venues in A City. The leaders were asked to distribute questionnaires, by hand, to any general-admission participant at the venue. Then, that participant was asked to mail the questionnaire to the researcher using an envelope addressed to the researcher.

The aging rate (the percentage of people 65 years or older) of A City was 25.8%, with a national rate of 26.0%, and the nursing care qualification rate of A City was 18.6%, with a national rate of 17.6% (As of April 1, 2014).

### 2.3 Contents of survey

At the beginning of the survey, the "leader" was defined as a self appointed person who set up and managed an exercise venue, and "general-admission participant" was defined as a person who participated in the exercise program.

#### (1) Demographic characteristics of subjects

Individual demographic characteristics included age, gender, work experience, marital status, education level, and nursing care level.

Work experience was classified as either white collar or blue collar with reference to Murayama et al.<sup>11)</sup>. White collar workers included professionals, engineers, managers, sales staff, service staff, and administrators, and blue collar workers were involved in transportation/communication, security, production labor, and agricultural/fishing.

#### (2) Attitudes toward Community Scale (ACS)

Attitudes toward the community were measured using the ACS<sup>11)</sup>. The ACS was adapted for use in this study by changing the wording originally developed by Tanaka et al.<sup>12)</sup> to "Attitudes toward Community Scale". This scale comprises two factors (positiveness/passiveness and cooperativeness) with five criteria for each factor designed to measure the awareness of residents trying to address issues in the community based on a relationship of trust and a sense of solidarity and developed autonomy/self-government in the community. In this study, the subscales are referred to as the positiveness and cooperativeness subscales, as in Murayama et al.<sup>11)</sup>.

Murayama et al.<sup>11)</sup> reported, in a study conducted with health promotion members, that the reliability and validity of the ACS were established by assessing internal consistency, internal validity, and factorial validity. Specific items on the questionnaire regarding positiveness were: I would not like to speak, if possible, in the neighborhood association, because I am spoken ill of behind my back; We have only to leave it up to enthusiastic local residents to make our community better; We should leave it to the local government to maintain schools and provide areas for children to play; I do not want to get involved in a residents' campaign in our community; I would like to be friendly to neighbors, but not to strangers. Items regarding cooperativeness include the following: I am ready to take a role in the neighborhood association, if recommended; I would like to work as hard as possible to improve our living environment, if I can; I would like to take care of the elderly living alone, to help them live their daily lives comfortably; I would like to live a rich life by sharing something with people in the community; and, I feel pride and affection for the community I live in.

Respondents were asked to rate their attitudes on the 5-point Likert-type scale: strongly agree (5 points), agree (4 points), have no opinion (3 points), disagree (2 points), and strongly disagree (1 point). Scores ranged from 5 to 25 points, with higher scores indicating higher perceived positiveness and cooperativeness. The items in the positiveness subscale are reverse-scored.

#### (3) Social factors

To assess social factors, participants were asked about interacting with neighbors and their roles in the community. While the social factors were based on Shimanuki et al.<sup>8)</sup>, the questionnaires have been remodeled.

They rated their interactions with neighbors on a 4-point Likert type scale: "consulting neighbors and lending and borrowing," "having a chat," "just exchanging greetings" and "having almost no contact." However, no participants gave the following response "having almost no contact". Regarding roles in the community, participants were asked to check all of the following items that applied: official of a residents' association, district welfare commissioner, welfare volunteer, child welfare volunteer, nutritionist, official of

a women's association, preventive long-term care supporter, and any other relevant role, excluding Ikiiki Exercise for 100 Year Olds.

#### (4) Health indicators

Participants were asked about health status and their level of psychological well-being, based on Murayama et al.<sup>11)</sup>. They rated their health status on a 5-point Likert type scale: "very good," "rather good," "neither good nor bad," "not so bad," and "bad." The question was: How is your health? The results were categorized into 3 groups "good" ("very good" and "rather good"), "neither good nor bad", and "bad" ("not so bad" and "bad").

To assess psychological health status, participants were asked one question about anxiety about the future: Do you feel anxiety about your future? They answered the question on a 5-point Likert type scale: "I don't feel any anxiety," "I don't feel much," "I have no opinion either way," "I feel a little," and "I feel much." The results were categorised into 3 groups "don't feel anxiety" ("I don't feel anxiety" and "I don't feel much"), "no opinion either way", and "feel anxiety" ("I feel a little" and "I feel much").

#### 2.4 Ethical considerations

The researchers explained the purpose and content of the study orally and in writing to leaders and participants in the exercise program. They also explained that participation was voluntary, that data would be used only for the purpose of the study, that questionnaires were returned anonymously, that collected questionnaires would be shredded after the study, and that the results would be presented at a conference and published in a journal, and finally that consent was implied by the return of the questionnaire. The study was approved by the research ethics committee of Okayama Prefectural University (March 26, 2015; No. 442).

#### 2.5 Analytical method

To compare the leaders' and exercise participants' demographic characteristics and attitudes toward the community, health indicators and social factors were tested using  $\chi^2$  and *t*-tests. A stepwise multiple logistic regression analysis was performed to examine factors relating to leaders, with the significant variables identified as the independent variables and leader or participant position as the dependent variable. All analyses were performed using IBM SPSS Statistics ver. 21.0.

### 3. Results

Of 197 questionnaires returned (response rate, 90.4%), 188 complete questionnaires (valid response rate, 86.2%) were analyzed.

#### 3.1 Demographic characteristics, social factors and health indicators

Table 1 shows the demographic characteristics of the participants, consisting of 96 leaders (51.1%) and 92 exercise participants (48.9%). Of the leaders whose average age was  $71.0 \pm 7.3$  years, 18 (18.8%) were male, and 14 of the participants whose average age was  $73.8 \pm 8.0$  years (15.2%) were male.

The  $\chi^2$  test revealed that the leaders were significantly younger ( $p < .05$ ), were married ( $p < .05$ ), and did not require health care ( $p < .05$ ).

With regard to social factors, the leaders tended to interact better with their neighbors than the participants, although the difference was not significant. Most of them "talked with neighbors" or "consulted neighbors and participated in lending and borrowing with neighbors," while a minority of leaders only exchanged greetings with their neighbors. The leaders were found to take more roles in the community than the participants ( $p < .01$ ).

There was no difference in perceived health status and anxiety about the future between leaders and participants.

Table 1 Demographic characteristics, social factors and health indicators

		Leaders (n=96)	Participants (n=92)
Gender	male	18 ( 18.8 )	14 ( 15.2 )
	female	78 ( 81.3 )	78 ( 84.8 )
Age	64 years or younger	16 ( 16.7 )	7 ( 7.6 ) *
	65-74 years old	52 ( 54.2 )	44 ( 47.8 )
	75 years or older	28 ( 29.2 )	41 ( 44.6 )
	mean $\pm$ SD	71.0 $\pm$ 7.3	73.8 $\pm$ 8.0
Work experience	none	7 ( 7.3 )	6 ( 6.5 )
	white collar workers	65 ( 67.7 )	60 ( 65.2 )
	blue collar workers	24 ( 25.0 )	26 ( 28.3 )
Marital status	married	81 ( 84.4 )	64 ( 69.6 ) *
	single	15 ( 15.6 )	28 ( 30.4 )
Education level	junior high school graduate	3 ( 3.1 )	7 ( 7.6 )
	high school graduate	93 ( 96.9 )	85 ( 92.4 )
Nursing care level	not require health care	93 ( 96.9 )	81 ( 88.0 ) *
	require health care	3 ( 3.1 )	11 ( 12.0 )
Mixing with neighbors	consulting neighbors and do some lending and borrowing	53 ( 55.2 )	49 ( 53.3 )
	having a chat	41 ( 42.7 )	34 ( 37.0 )
	just exchanging greetings	2 ( 2.1 )	9 ( 9.8 )
Roles in the community	none	25 ( 26.0 )	52 ( 56.5 ) **
	one or more	71 ( 74.0 )	40 ( 43.5 )
Health status	good	80 ( 83.3 )	66 ( 71.7 )
	neither good nor bad	13 ( 13.5 )	23 ( 25.0 )
	bad	3 ( 3.1 )	3 ( 3.3 )
Psychological health status	don't feel	23 ( 24.0 )	14 ( 15.2 )
	no opinion either way	48 ( 50.0 )	48 ( 52.2 )
	feel	25 ( 26.0 )	30 ( 32.6 )

n (%)

 $\chi^2$  and t-test; \*p<.05, \*\*p<.01

### 3.2 Comparison of mean scores on attitudes toward the community

Table 2 compares the mean scores on attitudes toward the community between leaders and participants. The leaders had significantly higher scores for positiveness ( $p<.05$ ), cooperativeness ( $p<.05$ ), and attitudes toward the community ( $p<.05$ ) compared to the participants.

Table 2 Comparison of mean scores on attitudes toward the community

	Leaders (n=96)		Participants (n=92)	
Positiveness	19.2	± 4.2	17.6	± 4.4 *
Cooperativeness	19.2	± 3.9	17.9	± 4.0 *
Attitudes toward the community	38.4	± 6.3	35.5	± 6.0 *

Data are mean ± SD.

$\chi^2$  and t-test; \* $p<.05$

### 3.3 Factors related to leaders

The results of a multiple logistic regression analysis of factors related to leaders are shown in Table 3. The leaders were found to take significantly more roles in the community (OR=3.23, 95%CI 1.72-6.06) and have significantly higher scores for attitudes toward the community (OR=1.06, 95%CI 1.01-1.12) compared to the participants.

Table 3 Factors related to leaders

	Odds ratio	(95% confidence interval)
Age		
64 years or younger		
65-74 years old		
75 years or older		
Mixing with neighbors		
consulting neighbors and do some lending and borrowing		
having a chat		
just exchanging greetings		
Marital status		
married		
single		
Roles in the community		
none	1.00	
one or more	3.23	(1.72-6.06) ***
Nursing care level		
not require health care		
require health care		
Attitudes to the community	1.06	(1.01-1.12) *

Stepwise multiple logistic regression analysis; \* $p<.05$ , \*\*\* $p<.001$

The dependent variable for leader as 1, non-leader as 0

#### 4. Discussion

In this study, the leaders were younger, more likely to be married, and less likely to require care in comparison with the participants. This result is consistent with that of Shimanuki et al.<sup>8)</sup>, who reported that the leaders in fall prevention programs were young-old (65 to 74 years old) and more satisfied with their health. It is highly likely that those who are relatively young and perceive themselves to be in good health will take an active role in preventive long-term care services. In addition, females participated more than males in the exercise, although there was no difference in the leaders and the participants. Therefore, it would be an issue that men participate in the exercise in A city.

The number of the leaders who took one or more roles in the community was larger than that of the participants. This result is also supported by Shimanuki et al.<sup>8)</sup>, who found that the leaders promoting fall prevention socialize more frequently, and also by Koshida<sup>10)</sup>, who reported that the leaders participated in community activities and were responsible for organizations. People who have one or more roles to play are more likely to participate in meetings and gatherings. While the leader has a lot of roles and is more likely to feel burdened. Therefore, the government needs to help to grow up the number of leaders.

Moreover, with respect to attitudes toward the community, the leaders in this study scored higher in positiveness and cooperativeness compared to the health promotion members<sup>13)</sup> and to the residents<sup>11, 12)</sup>. Considering that younger people tend to score higher in attitudes toward the community, the results may be affected by the (younger) age of the subjects in the present study. Furthermore, attitudes toward the community may be affected by characteristics of the community, including social capital and the process of setting up exercise venues. However, this issue, which is beyond the scope of the current study, has yet to be studied.

The findings of this study suggest that the leaders managing *Ikiiki* exercise classes take one or more roles in the community, and that they have positive and cooperative attitudes toward the community. The characteristics of leaders identified in the current study are supported by the results of other studies and may contribute to promoting preventive long-term care services.

There are some limitations. First, the sample came from one city, which limited the number of leaders, and subsequently may limit the generalizability of results. Second, we asked leaders to distribute a questionnaire directly to one participant at each venue, which may increase the potential for leader bias. Last, the study did not examine factors influencing attitudes toward the community. To overcome these limitations, future studies should consider not only sampling and randomization but also how the attitudes of leaders toward the community develop, including how leaders learn to cope with the various levels of their roles in the community.

#### 5. Conclusion

The findings suggest that leaders managing preventive long-term care programs take one or more roles in the community and that they have positive and cooperative attitudes toward the community.

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