

〔報告〕

## 高松市における認知症予防の取り組み

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## A Community-based Preventive Care Program for Dementia in Takamatsu City

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## 要 旨

高齢者の急速な人口増加とともに、認知症の人の数も増加するであろうと心配されている。厚生労働省は、認知症の人が生活の質を維持・向上し、住み慣れた地域で安心して暮らせることを目的に認知症予防の施策を展開している。その施策をうけ、地方自治では地域を基盤とした認知症予防の活動を行っている。高松市も同様に、認知症についての正しい理解を普及し、高齢者や住民の社会参加を促進し、さらに健康に携わるボランティアの育成に力を入れている。その活動は、地域におけるネットワークシステムの確立により、高齢者が安心して暮らせる環境づくりを目指し、ひいては生活の質の維持・向上へと導くこととなる。この活動の効果として、高松市保健センターの介入によって5つの自主グループが育成され、数年間認知症予防を含めた自主的な活動を継続するという発展がみられた。その結果、高松市において認知症を持つ高齢者が住みなれた地域で社会的に自立した生活を維持し発展させている。

キーワード：地域での認知症予防の取り組み, 認知症, 生活の質, 高松市

## Summary

The number of people with dementia is expected to increase with the rapid aging of the population, becoming a global concern. The Japan Ministry of Health, Labour, and Welfare has started to promote preventive and interventional strategies for dementia in order for people with dementia to maintain and improve the quality of life and promote public safety in familiar communities. Local governments provide a community-based preventive care program for the elderly with dementia and their families in the community. Takamatsu City also provides programs, such as disseminating accurate information, promoting social participation, and training residents to become local community health volunteers in order to create a supportive environment, and maintain and improve the quality of life for the elderly by establishing a network system within the community. The effectiveness of the programs shows the development that 5 groups have acted independently for a few years after supporting of Takamatsu City Public Health Center. It is concluded that the elderly with dementia have maintained and

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developed social and independent life in familiar communities in Takamatsu City.

Keywords: A community-based preventive care program, Dementia, Quality of life, Takamatsu City

## Introduction

The number of people with dementia is expected to increase with the rapid aging of society, becoming a concern in most developed countries. Japan faces this situation, in which the number of those with dementia will grow with the continuing rise in the number of elderly people. In 2005, those over 65 years old comprised 20.2%. However, it is estimated that the percentage of those 65 years old and over will increase to 31.8% in 2030 and 40.5% in 2055<sup>1)</sup>. Also, it is estimated that the number of people with dementia will increase from about 1.5 million recorded in 2002 to about 3.2 million in 2025<sup>2)</sup>.

The Japan Ministry of Health, Labour, and Welfare (MHLW) introduced the long-term care insurance (LTCI) scheme in 2000. The aims of the LTCI scheme are to support people requiring long-term care, and to respond to society's major concern over aging. However, the LTCI scheme was originally set up for people with physical difficulties rather than those with dementia. In 2003, a task force under the sponsorship of the MHLW was established to look into how the LTCI scheme could be improved to take into account the various changes required. They have started to promote preventive and interventional strategies for dementia. Moreover, they published the report entitled "The Care for the Elderly in 2015". In this report, four major proposals were that 1) the promotion of care for people with dementia, 2) the development of a new type of housing facility which lies between the conventional facilities, such as nursing homes and individual homes, 3) the development of guidelines for the assessment of, and care planning for, people with dementia, which means an improvement in the quality of care for people with dementia, 4) the promotion of preventive and interventional strategies for frail elderly people, including strategies to delay the onset of dementia<sup>3)</sup>.

People with dementia exhibit behavioral and psychological symptoms, such as agitation, anxiety,

depression, apathy, delusions, sleep and appetite disturbance, elation, irritability, disinhibition, and hallucinations, which are a common cause of distress for people with dementia as well as for their families or caregivers. The symptoms are particularly associated with the care burden, often more so than cognitive problems. The presence of symptoms is associated with a reduced quality of life in people with dementia<sup>4)</sup>.

However, it is possible to prevent dementia from causing problems in daily life, minimize caregivers' burden, and to prevent further the deterioration of dementia by early intervention. According to the report on "The Care for the Elderly in 2015", the most important point is preventive care, which means to delay the deterioration of activities of daily living or cognitive function. The prevention of dementia within the community is thought to be the best way of maintaining and improving the quality of life of people with dementia and their families, and supporting people with dementia in a familiar environment, and so local governments have started a community-based preventive care system. In the community, it is also important to prevent problems caused by dementia, so that a community-based preventive care program for dementia is provided in accordance with the strategies set by local governments in order to develop a community where people with dementia can maintain and improve their quality of life in familiar surroundings. This program aims to disseminate information on dementia and improve awareness of dementia-related symptoms in residents and recognition in the community, to prevent problems caused by dementia through early detection, and to develop a community where people with dementia can maintain as much independence as possible.

In Takamatsu City, a community-based preventive care program is provided in accordance with the strategies set by the MHLW. This program includes giving lectures about dementia for residents to understand and aim to identify people with dementia

in the early stages for prompt intervention, supporting dementia prevention class, and training local community health volunteers. This program focuses on the prevention of problems caused by dementia. The city tries to maintain and improve the quality of life of people with dementia, their families, and caregivers, support people with dementia living in a familiar community, and create a network system and realize a safe community for people living with dementia.

This paper describes the effectiveness of the project that community-based preventive care program for dementia of Takamatsu City.

### About Takamatsu City

Takamatsu City is located in the center of Kagawa Prefecture, and is home to the prefectural office. The northern part of the city faces the Seto Inland Sea. The population of Takamatsu City was about 416,500 in 2000, which was divided into three age categories: ages 0-14, 15.1%; 15-64, 67%; 65 years old and over, 17.8%. However, in the year 2014, the number of citizens 65 years old and over is expected to grow by 1.4 times (24.5% of the total population). On the contrary, the number of citizens 0-14 and 15-64 years old will decrease: aged 0-14, 13.5%; 15-64, 62%<sup>5)</sup> (Fig. 1).

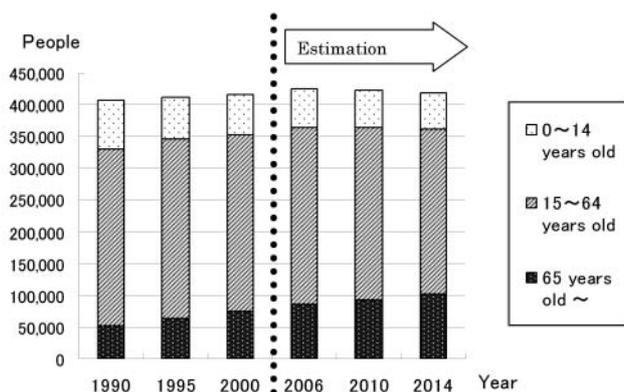


Fig.1. Population trends from 1990 to 2000 and future estimations from 2006 to 2014. The graph shows that the estimated percentage of those 65 years old and over will increase from the reported 20.2% in 2000 to 24.5% in 2014<sup>5)</sup>.

Based on this estimation, it is expected that the rate of people with dementia will also increase. It is important for elderly people to take steps to prevent the further deterioration of their physical or mental state in order to live a healthy life in a familiar environment. Therefore, the city has tried to establish a community-based care system supported by society as a whole, with activities such as screening the elderly with mild dementia in earlier stages, increasing the interests and awareness of residents by providing useful and relevant information, and promoting appropriate care for the elderly.

### 1. Programs for dementia prevention

Every year, Takamatsu City Public Health Centre (TCPHC) recommends residents 65 years old and over to have a health check and screens frail elderly people and the elderly with dementia in accordance with the strategies set by the MHLW. Subsequently, some community support programs are managed for them. The centre has set a goal to create a network system for preventing problems caused by dementia in the community and ensure safety in society for the elderly living with dementia (Fig. 2).

#### 1) Giving lectures about dementia for residents and screening people with dementia

Firstly, lectures are given by physicians, psychiatrists, and neuropsychiatrists in any area. About 30-100 such elderly and other elderly people who are interested in dementia are invited to attend these lectures by the centre, local community health volunteers, and through announcements in the Takamatsu City community health-related magazine. It is important for residents to pass on knowledge and awareness of dementia, and identify people with dementia in the early stages in the community, because appropriate care is promoted for people with dementia and families caring for them by early detection of dementia and intervention. As a result, problems caused by dementia are prevented and families' or caregivers' burden is minimized. TCPHC needs to facilitate the dissemination of information regarding the prevention of dementia, which helps residents to

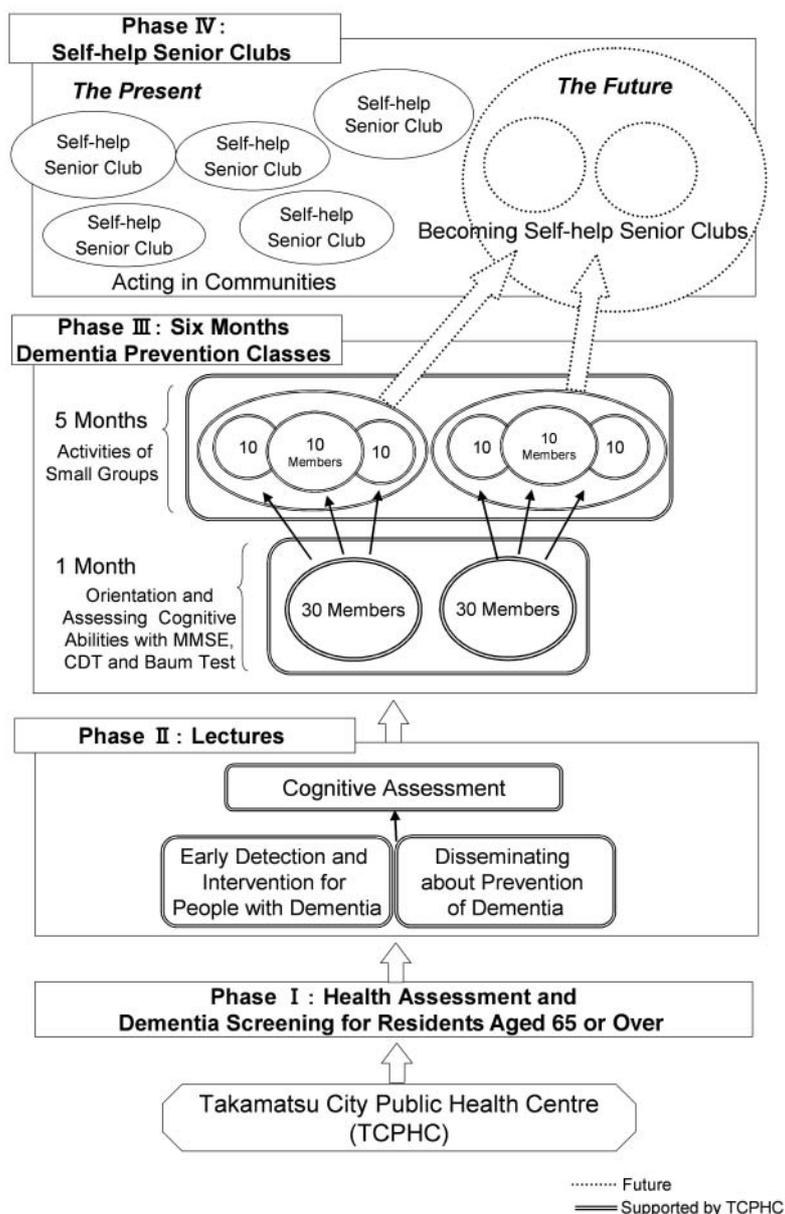


Fig.2. A community-based preventive care program in Takamatsu City.

go to outpatient clinics, public health centers, or community-based comprehensive support centers for consultations.

In the lectures, attendants assess their physical and mental states in daily life using check lists, and undergo a test, such as the Kana Pick-out Test, to self-assess their cognitive abilities. Based on the results of the test and meeting them, TCPHC can identify the elderly with mild, moderate, or severe dementia in the community by screening in the lectures. In 2006, forty-one lectures were held in

Takamatsu City, a total of 1,845 residents attended, with an average of 45 residents per lecture<sup>6)</sup>.

2) A summary of dementia prevention class activities

After attendants have checked cognitive abilities in the lectures, TCPHC asks some elderly with dementia and elderly people who are interested in dementia prevention to join in groups, which have classes to prevent problems caused by dementia and confinement to bed.

Seven groups are organized in the city, which are divided

into 5 groups acting independently and 2 groups managed by the centre. In the latter 2 groups, the class is held once a week over a period of 6 months with about 30 elderly people. TCPHC promotes information dissemination on the prevention of dementia, making friends and playing roles through group work, and helps groups to act independently, and nurtures the long-term habit of dementia prevention in members. Public health nurses play a central role, organizing members and programs.

The elderly with mild dementia tend not to use medical or LCTI services in facilities, and so TCPHC provides a place to stimulate the mind and increase social contact. Besides, it is easy to introduce members to the services when they have problems in their daily life.

At the beginning of classes, all members undergo a month of orientation together. The members work in a group in order to get to know each other and adapt to the circumstances. The programs are mainly held in order to assess the members' characters, cognitive abilities, and physical and mental states. Members' cognitive abilities are assessed with the Mini-Mental State Examination (MMSE), Clock Drawing Test (CDT), Baum Test, and so on.

A month later, the members are divided into 3 smaller groups, and each group performs activities with the same members for 5 months. Smaller groups continue activities by sharing the common goal of preventing dementia. Groups can be organized at any level of cognitive ability, so that members can help each other. Therefore, their sense of unity is developed as a group, and activities are successful with all members taking care of each other.

The program promotes rhythmical exercise, recreation to stimulate the brain, talking with members, cooking, and group work. Members choose their favorite daily activities, such as singing, dancing, ringing handbells, exercise, excursions, cooking, mental tests, origami, writing a short diary, karaoke, talking about what they hope to do, and so on. Afterwards, the program is chosen by the members, so that the class promotes a program plan in order to stimulate the brain's executive function. For example, members chose a cooking program. One day, a member suggested it and the other members



Picture 1. A public health nurse explaining how to keep a diary for homework in dementia prevention classes.

agreed with him. They worked together trying to remember and make notes of previous meals, creating a menu, and deciding on recipes and ingredients. The nutritional balance of the menu was considered, and they performed cooking following dieticians' advice and with their cooperation. As dieticians joined in, public health nurses organized the program and coordinated cooperation by professional personnel, such as nurses, dental hygienists, dieticians, clinical psychologists, and the staff of facilities.

A sense of unity develops in groups through continuing activities and sharing goals, so that the groups easily evolve to performing activities by themselves as senior clubs in the community after finishing the class. TCPHC promotes groups acting independently, nurturing the long-term habit of dementia prevention in the community. TCPHC and staff facilitate programs in order to promote their independence, so that they improve their social participation, such as understanding the relations of members and playing a role, by learning how to act and carry out activities by themselves in a group<sup>7)</sup>.

There is the case of a man who joined in the class. He was 70 years old. At the beginning of the class, he joined as a local community health volunteer. However, he often forgot plans and was aware of cognitive impairment, and so he became a member of the class. In the class, he said he hoped to go hiking in Yashima because he enjoyed going to Shionoe.

One day, the members went hiking there, and they walked together at their own pace while talking and sharing experiences. He suggested having a person on duty, and he was the first to assume this role. He sometimes forgot he was on duty, but was able to make it in the end. He always tried to work to his best ability, such as calculating practice, ringing handbells, and so on. He sometimes forgot homework, but could complete it quickly in the class. Sometimes he forgot the time and date of the class or came at the wrong time. Public health nurses rang him when he was absent without giving them prior notice. He attended the class as often as he could (Picture 1).

### 3) Training of local community health volunteers

TCPHC conducts training to nurture some residents to play a role in the dementia prevention program as local community health volunteers in the community. It is essential for the centre to work together with them and establish a network in the community in order to provide a community where the elderly and residents can live happily and independently. The volunteers receive lectures given by physicians, psychiatrists, and neuropsychiatrists in any area, which aim to promote understanding and raise awareness of dementia in the community. One hundred and fifteen local community health volunteers attended in 2006.

TCPHC supports volunteers to promote their activities, such as salons for and cooking with the elderly in the community, so that the centre promotes residents' social participation. A local community health volunteer commented that she could learn more about the community and have many opportunities to communicate with the elderly and other residents through activities, and it was easy to get some information about events organized by the centre or the city, such as a health check, lectures, and group activities, owing to acting as a volunteer.

## Discussion

Takamatsu City has provided a community-based preventive care program for dementia in accordance

with the strategies set by the MHLW. In this paper, we consider the effectiveness of this program from the stance of maintaining and improving the quality of life of people with dementia, their families, and caregivers; supporting people with dementia living in familiar communities; and training local community health volunteers to create a network system.

1. The quality of life of people with dementia, their families, and caregivers by early detection and intervention

Takamatsu City has considered the quality of life of the elderly with dementia, their families, and caregivers. Early detection and intervention are important in order to maintain and improve their quality of life in the community.

TCPHC provides accurate information about dementia by holding lectures for residents in order to pass on knowledge and raise awareness of dementia. It is important to increase the awareness of residents with mild dementia by giving educational lectures, dementia prevention classes, and providing community-based activities, in order to establish a community health care system to screen and cope with community-dwelling elderly with mild dementia in earlier stages<sup>8)</sup>. Fujishiro et al. suggested that appropriate education on dementia to older adults may contribute to earlier diagnosis at the community level, thereby maximizing the effect of therapeutic interventions<sup>9)</sup>.

TCPHC promotes residents' problem-solving abilities, which then continuously promote dementia prevention in a daily life, such as through good eating habits, exercise, talking with people, relaxation and enjoying a hobby, and going to outpatient clinics, public health centers, or community-based comprehensive support centers regarding problems caused by dementia at home.

Concerning problems caused by dementia, the presence of behavioral and psychological symptoms is a common cause of distress for people with dementia, as well as for their families and caregivers, so that it is associated with a reduced quality of life in the elderly with dementia, their families, and caregivers<sup>4)</sup>. However, early identification and intervention in

dementia reduce the distress and burden caused by the symptoms of dementia, and so specific services providing diagnosis and care in the early stage can be established in the community. These services can increase the numbers of elderly with dementia who can be identified and provided with care, and those receiving such services appear to improve in terms of their quality of life and behavioral and psychological symptoms of dementia<sup>10)</sup>.

TCPHC helps solve in their problems and supports their life in the community through its services, such as medical checks and LTCL, in order to maintain and improve their quality of life. Dias et al. reported that a community-based intervention employing locally available resources is feasible, acceptable, and leads to significant improvements in caregivers' mental health and burden of caring and is associated with reduced mortality in people with dementia<sup>11)</sup>. Trickey et al. reported that the elderly perceived that their quality of life had improved after receiving social and environmental services<sup>12)</sup>.

As previously mentioned, the education on dementia for early detection and intervention is connected to maintaining and improving the quality of life of the elderly with dementia, their family, and caregivers by reducing the distress and burden caused by the symptoms of dementia.

The same is true for Takamatsu City's activities to promote the education of residents, as well as the early detection of and intervention for dementia. Therefore, the preventive care program of Takamatsu City is significant as a centre to support residents' quality of life in the community by preventing problems caused by dementia.

## 2. Supporting the elderly with dementia living in familiar communities

Takamatsu City has tried to realize a society where people understand about dementia and respect those with it, by promoting a supportive environment for the elderly living with dementia in familiar communities.

Dementia prevention classes are an important part of a community-based preventive care program for dementia in order to maintain and improve the

quality of life within the community.

TCPHC provides dementia prevention classes in order to bring the elderly with mild dementia together, and tries to prevent their staying at home and consequent depression or cognitive impairment. However, the classes also aim to not only provide a place where the elderly and residents can participate in dementia prevention, but help maintain social ties in order to promote their social lives. It was suggested that involvement in social activities may delay the onset of dementia through mental stimulation<sup>13)</sup>.

The elderly with dementia appear to undergo reduced deterioration of their physical and mental states through social participations and maintaining social ties. Fratiglioni et al. suggested the effect of social ties on dementia development, stating that the increased mortality identified in their studies among the elderly with a poor social network could be at least partly due to the development of dementia. They also reported that a poor social network affected the immune system, and that dementia of both degenerative and vascular types led to marked inflammation in demented brains. Therefore, an extensive social network seemed to protect against dementia<sup>13)</sup>.

Moreover, TCPHC promotes the development of class activities into independent group activities as senior clubs, and tries to increase the number of such clubs. For senior clubs, it is easy for the elderly to continue social activities together by themselves in daily life. Senior clubs in which members share the same goal play important roles to promote dementia prevention and the healthy lives of residents in the community. Interventions, such as supporting group participation and continuous activities, delay institutionalization of the elderly with dementia, which improves elderly satisfaction with social support, the response to cognitive impairment of the elderly with dementia, and symptoms of depression<sup>14)</sup>. Communities are enhanced by promoting senior clubs and increasing the number of participants. Access to effective programs for promoting intervention and supporting independence in the community yields marked benefits for the elderly with dementia, their families, and society<sup>15)</sup>.

For promoting social ties in the community for dementia sufferers, it is important to promote residents' understanding of dementia, show respect for the elderly with dementia as members of society, and understand ways of supporting the elderly with dementia and their families through educating residents by facilitating the dissemination of information, communicating with people, supporting senior clubs, and promoting the making of friends.

According to earlier studies<sup>13-15)</sup> which suggested the effect of social participation and social ties, the center provides activities which promote social participation, makes the elderly play a role, and educates residents. The activities help maintain and develop social lives, strengthen social ties, strengthen respect for each other, and promote a happy and independent life in the community. Therefore, the programs are significant, and the center develops a sense of community, creates supportive environments, and maintains and improves the quality of life of the elderly with dementia living in familiar communities.

### 3. Training of local community health volunteers

TCPHC trains residents of the local community as health volunteers in order to create a network system and supportive environment. It is necessary to provide educational intervention involving the dissemination of information in order to promote understanding about dementia, and recruit volunteers from the community. Health volunteers work to strengthen relations between residents' and the centre or the city, and so they play an important role in the community-based preventive care program for dementia.

An increasing number of volunteers are coming to understand the meaning of dementia prevention and activities including those involving residents. Trickey et al. reported that volunteers who joined in social and environmental services felt that their contributions to the local community-based program had made a significant difference in their community<sup>12)</sup>. Higgins et al. stated that caregivers who attended an activity-based adult day care/caregiver education and support program reported that they greatly valued their new-found sense of community and feedback from their support group leader and other members<sup>16)</sup>. The

employment of trained local community health volunteers is effective for caregivers with no local family and little contact with family, friends, or neighbors to improve the caregivers' well-being or health-related quality of life<sup>17)</sup>.

Therefore, TCPHC provides significant programs which train residents to become partners in order to establish functional relationships, strong networks, and cooperation among residents to promote community health and a safe society. TCPHC works with many residents as partners, and this strong support by residents leads to community development and nurtures a supportive environment.

### Conclusion

This paper reported a community-based preventive care program for dementia in Takamatsu City. TCPHC aims to realize a society where the elderly can live happily and independently, and so the centre provides a significant community-based preventive care program in accordance with the strategies set by the MHLW. The effectiveness of this program shows the development that 5 groups have acted independently for a few years after supporting of TCPHC. It is concluded that the elderly with dementia have maintained and developed social and independent life in familiar communities. Next step will include working on the nurture of facilitators who are a core component of self-help senior clubs in order to continue their activities.

Further studies are required in order to evaluate the effectiveness of the program for reducing problems caused by dementia through its early detection and intervention, also maintaining and improving the quality of life through the activities of dementia prevention classes and self-help senior clubs. Moreover, for creating a supportive environment, it is necessary for the effectiveness of local health volunteers' activities to be investigated. An obvious future task is to clarify the effect of this program on the increasing number of people with dementia who continue to live in a familiar community, as the elderly with dementia join in senior clubs, which help maintain and improve cognitive functions and physical and mental states.

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