

Literature Review on Dementia-Friendly Cities

認知症にやさしい町に関する文献検討

Kinuyo Okamura¹⁾ Akira Matsuyama²⁾ Shoko Nawa³⁾ Yaeko Shimizu⁴⁾

I. Introduction

The number of elderly people with dementia in Japan was estimated to be 4.62 million in 2012 and is expected to reach approximately 7 million by 2025, or one out of every five elderly people aged 65 years or older (Ministry of Health, Labor and Welfare, 2019). The promotion of dementia countermeasures is an urgent issue due to the global aging of society and the increase in the number of people with dementia.

Against this background, the World Health Organization (WHO) proposed the eight elements (WHO, 2007) (Table 1) of Age-friendly Cities (AFC) (WHO, 2007) and their indicators (WHO, 2015), as well as a global initiative to combat dementia. WHO published the Guide for Dementia Planning (WHO, 2017, 2018), which indicates "dementia-friendly community planning" as one of the seven areas of the dementia action plan.

In Japan, in the Comprehensive Strategy for Dementia Policy Promotion (hereinafter referred to as "New Orange Plan") (Ministry of Health, Labor and Welfare, 2019), supporting the lives of people with dementia and their families in the community was positioned as an important issue, and based on the eight elements of the AFC, three elements of "understanding," "coexistence (normalization)," and "power to receive help" were added and proposed, and the "Guide for Creating a Community Friendly to People with Dementia and the Elderly" was created (Horii, Ojima, 2019). "Dementia-friendly community development" is being promoted by strengthening "coexistence" and "prevention."

However, clear evaluation indicators and a specific image of a "dementia-friendly community" (International University of Japan, 2015) are still being sought. There is a tendency for efforts to be promoted without setting goals for community development or with an ambiguous evaluation of the current status (Ojima, 2019). Organizing information on these efforts and obtaining new knowledge that will contribute to the promotion of measures based on the National Outline for Dementia Policy Promotion is an important challenge. This is essential for accelerating dementia-friendly community development that takes advantage of regional characteristics.

Table 1 Age-friendly Cities (WHO, 2007)

- Outdoor spaces and buildings
- Transportation
- Housing
- Social participation
- Respect and social inclusion
- Civic participation and employment
- Communication and information
- Community support and health services

II. Research objective

The purpose of this study is to analyze previous studies on "dementia-friendly community" to clarify what kind of efforts are being made at the present stage, and to provide data for considering evaluation indicators for "dementia-friendly community" in Japan.

1) 3) 4) Asahi University School of Health Sciences, Department of Nursing, Gifu, Japan

2) Independent Scholar

III. Research methods

1. Literature search

In order to obtain an overview of the efforts being done in each country, the target literature was retrieved from PubMed. The search keyword was "Dementia-friendly community", and articles were selected from August 2018 to the last 10 years, including the year in which the AFC and the New Orange Plan were published. The titles and abstracts of the extracted papers were read and papers focusing on "dementia-friendly community development" were selected.

2. Analysis

Targeted articles were organized and reviewed according to the title, author (year of publication), research purpose, and results, referring to the review matrix method (Garrard, 2012) to extract elements of "dementia-friendly community" and compare them with AFC to clarify the actual measures taken. In extracting and analyzing the target literature, we, together with our co-researchers, faithfully handled the original words and phrases, and made sure not to infringe on the authors' copyrights.

IV. Results

1. Research Trends

After screening 138 articles in PubMed, 16 references were selected. The target articles are shown in Table 2. Eligible articles started to appear after FY 2016, the year in which the AFC was published, and the number of such articles increased after FY 2021. A majority of the articles were from the United Kingdom, with some articles from Canada, Japan, New Zealand, and other countries.

2. Elements of a "dementia-friendly community" in the present study

The elements of a "dementia-friendly community" identified in each literature were education and knowledge (6 cases), social participation and interaction (10 cases), awareness and attitude (6 cases), community environment improvement (5 cases), and caregiver support (1 case) (Table 3).

3. Actual efforts compared to the eight elements of the AFC

Compared to the eight elements proposed by the AFC, the most common element, "social participation and interaction (10 cases)" corresponded to "social participation" and "civic participation and employment" in the AFC. The next most common element, "awareness and attitude (6 cases)" corresponded to "respect and social inclusion" in the AFC, and "education and knowledge (6 cases)" to "communication and information" in the AFC. The next most common element, "community environment improvement (5 cases)" corresponded to "outdoor spaces and buildings" and "community support and health services" in the AFC. "Caregiver support (1)" which had the fewest number was found in Reference No. 5 (Thijssen et al., 2021), which examines the success factors of measures targeting people with dementia and their caregivers, and falls under AFC's "social participation," "respect and social inclusion," and "community support and health services." There was no agreement with AFC's "transportation" and "housing" categories

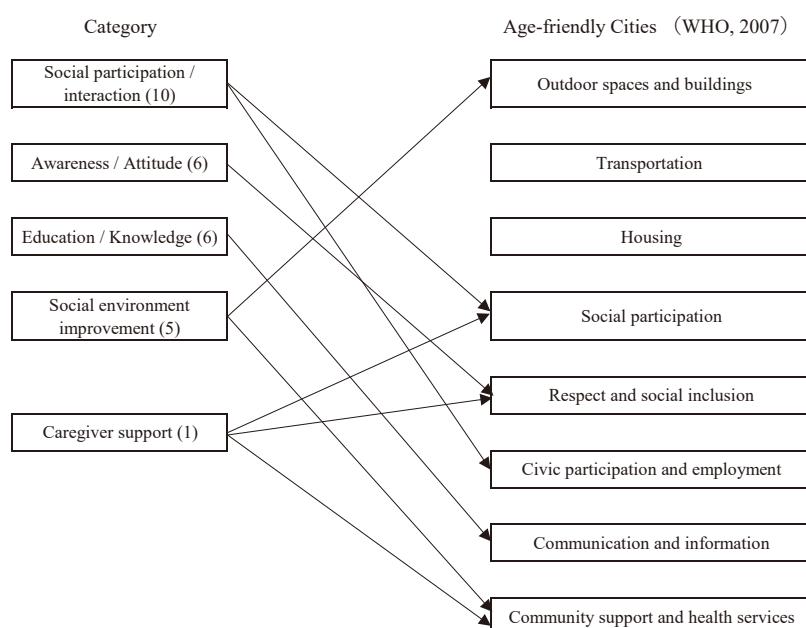
(Figure 1)

Table 2 Target literature list

No	Title	Author (Year)	Purpose	Result
1	On becoming dementia-friendly community: An empirical study of the individual factors that predict openness towards dementia-friendly communities	Parkinson, L et al. (2022)	To explore the relation between public knowledge of dementia, attitudes towards people with dementia and attitudes towards people with dementia were independent predictors of openness towards dementia-friendly communities.	
2	Promoting cultural change towards dementia friendly communities: a multi-level intervention in Japan	Tsuda S, et al. (2022)	To propose a strategy to develop DFCs from a Japanese perspective and to evaluate an intervention program that adopted the strategy.	After the DFC intervention, there was a significant increase in the percentage of men who had regular social interactions and were confident about living in the community with dementia. A similar significant increase was found in the subgroup of men living with cognitive decline.
3	Health promotion initiative: A dementia-friendly local community in Sweden	Odzakovic E, et al. (2021)	To explore the experiences related to living with dementia in the local community by advancing a health-promoting perspective.	Four themes emerged: health promotion through knowledge and public awareness, health promotion through meaningful meeting places, and health promotion through improvements in the welfare system.
4	A survey of the experience of living with dementia in a dementia-friendly community	Darlington N, et al. (2021)	To report findings from a survey of people living with dementia on their experience of living in a Dementia-friendly communities (DFCs).	Being aware of living in a DFC was associated with taking part in leisure activities, community centre attendance, being involved in organised activities or groups, feeling understood, and feeling valued for their own contributions to the community.
5	How do community based dementia friendly initiatives work for people with dementia and why? A rapid realist review	Thijssen M, et al. (2021)	To examine the success factors of dementia friendly initiatives (DFI) for people with dementia and their caregivers.	A program theories was derived that addressing caring, stimulating and activating communities. Outcomes included getting out and about, engaging with others, maintaining interest, having fun, and providing support. Outcomes for caregivers only included overcoming problems and enjoyment, reduced stress and respite from caring.
6	Dementia Friendly Care: Methods to Improve Stakeholder Engagement and Decision Making	Innes A, et al. (2021)	To achieve dementia-friendly and dementia-conscious care outcomes, focus on examples of methods and techniques for involving stakeholders, especially providers with dementia.	The potential of group-based activities to facilitate inclusion and engagement; achieving engagement in decision making; the value of developing tools to help service providers to engage those living with dementia in care decisions; the role of awareness raising and education to support the inclusion of a range of stakeholders in achieving dementia friendly support and care outcomes; the need for cultural and contextual sensitivity when seeking to engage stakeholders to achieve positive care outcomes.
7	Creating Dementia-Friendly Communities for Social Inclusion: A Scoping Review	Hung L, et al. (2021)	To identify evidence about strategies being used to create inclusive dementia-friendly communities that dementia and caregivers, especially providers with dementia, can support social inclusion.	Five primary themes were identified: active involvement of people with dementia; active involvement of people with dementia and caregivers; inclusive environmental design, public education to reduce stigma and raise awareness; and customized strategies informed by theory.
8	Dementia-Friendly Neighbourhoods in Canada: A Caregiver Perspective	Silverman M, et al. (2021)	To offers a vision of what dementia-friendly communities could look like from a carer perspective and in a Canadian context.	Much of the caregiver's choices regarding business, services, home location, outings, and daily practices were found to be based on the desire to maintain social connections and social citizenship.
9	Dementia-friendly community initiatives: An integrative review	Shannon K, et al. (2019)	To synthesise international research conducted on dementia-friendly community initiatives.	Four major concepts were identified in the literature, and these are characteristics of dementia-friendly communities, facilitators and barriers to community engagement for people with dementia, strategies for developing dementia-friendly communities and challenges encountered when developing dementia-friendly communities.
10	Dementia-friendly community indicators from the perspectives of people living with dementia and dementia-family caregivers	Wu SM,et al. (2019)	To identify dementia-friendly communities' indicators and their current conditions in Taiwan, including dementia-friendly perspectives of people with dementia and dementia-family caregivers.	Indicators for dementia-friendly communities were identified in Taiwan, including dementia-friendly hospitals, dementia-friendly community environment, dementia-friendly stores and shops, dementia friendly people, integrated dementia-related information and community contribution-and -involvement opportunities for people with dementia.
11	Dementia Friendly Communities in England: A scoping study	Buckner S,et al. (2019)	To describe the characteristics of Dementia Friendly Communities (DFCs) across England in order to inform a national evaluation of their impact on the lives of those affected by dementia.	The most frequently cited activity was awareness raising. There was some evidence of involvement of dementia-friendly communities.
12	Effects of attachment to and participation in the community on motivation to participate in dementia prevention and support activities: analysis of Web survey data	Takao M, et al. (2019)	To elucidate the effects of a sense of attachment to the community (attachment) and participation in community activities (participation) on motivation to participate in dementia prevention and support activities (motivation).	The surveyed professionals reported relying on knowledge, responsibility, dignity, and illusion discourses to construct dementia-friendliness.
13	An evaluation tool for Age-Friendly and Dementia Friendly Communities in healthcare settings	Buckner S,et al. (2018)	To present findings and outputs that are relevant to Sheffield's dementia considerations were proven to include participation, service delivery, collaboration, both Sheffield and other communities with dementia and monitoring and evaluation of older adults.	
14	Dementia-friendly communities' and being Lin SY,et al. (2017)		Discusses the concept of "dementia-friendly communities," summarizes current latest research appropriate treatment, participation in decision-making, and assessment of the physical and psychosocial friendliness.	
15	Developing a dementia-friendly Christchurch: Perspectives of people with dementia	Smith K., et al. (2016)	To gather insights from people with dementia about what would make it possible for them to live better in Christchurch.	It was identified the importance of being connected and involved, increased awareness of accommodation environment that need to be taken into account in the reconstruction.
16	From social network to safety net: Dementia-friendly communities in rural northern Ontario	Dementia-Wiersma EC, et al. (2016)	To explore and understand the context of dementia in A culture of care and looking out for each other contributed to the social support provided. In particular, the familiarity with others provided a supportive community environment.	

Table 3 Category

NO	Education / Knowledge (6)	Social participation / interaction (10)	Awareness / Attitude (6)	Community environment improvement (5)	Caregiver support (1)
1	• knowledge		• Attitude		
2		• Social interaction			
3	• knowledge	• Active, meeting places		• Welfare system	
4		• Leisure activities community centre attendance • Being involved in organised activities or groups	• Feeling understood of dementia • Valued for contributions to the community		
5		• Having fun			• Overcoming problems of caregivers • Having fun • Stress of caregivers • Reduced caring
6	• Awareness raising and education	• The potential of group-based activities to facilitate inclusion and engagement • Achieving engagement in decision making	• Cultural and contextual sensitivity		
7	• Education	• Involvement		• Inclusive environmental design	
8		• Social connection	• Social citizenship		
9		• Facilitator to community engagement, barrier removal		• Challenge encountered when developing dementia-friendly community	
10	• Integrated dementia-related information	• Community contribution • Providing involvement opportunities		• Hospital • Care service • People • Transportation • Store and shop	
11			• Awareness raising		
12	• knowledge		• Responsibility • Dignity		
13		• Social participation of older adult • Collaboration		• Service delivery	
14				• Equal healthcare service level • Appropriate treatment • Assessment of the physical and psychosocial environment	
15		• Being connected and involved	• Increased awareness	• Physical environment improvement	
16		• Caring and looking out for each other • Familiarity with others			

**Figure 1 Category and AFC comparison**

V. Discussion

Based on the results of this study, research on "dementia-friendly communities" worldwide was undertaken with a focus on the eight elements proposed by the AFC. In the United Kingdom, a leading country in dementia care, various efforts are being made as a national strategy for creating dementia-friendly communities based on the awareness that the social environment surrounding people with dementia and their families should change. In the present study as well, efforts for "co-existence" and "prevention" through changes in the social environment such as "social participation and interaction," "awareness and attitude," and "education and knowledge" were observed. "Education and knowledge" and "awareness and attitude" are the two aspects that promote "social participation and interaction," and it can be inferred that they will lead to the development of residents who can think and act about dementia as their own issue, rather than as someone else's problem. Although there was only one study on "support for caregivers," we found the possibility of reducing problems related to caregiving through efforts related to "social participation/interaction," "awareness/attitude," and "education/knowledge."

Meanwhile, the results of studies on "community environment improvement" suggest the need to improve the physical environment and establish institutions. The physical environment and the establishment of institutions are issues that are difficult to solve in the short term because they strongly reflect the regional characteristics, financial resources, and manpower of the municipality concerned. No category matches were found with "transportation" and "housing" in AFC, which may be because only PubMed was used as a search tool.

In the future, we would like to study the actual measures taken through a review of domestic literature utilizing multiple search tools, compare them with those of other countries, and consider evaluation indicators for "dementia-friendly community" according to the characteristics of each region in Japan.

There are no conflicts of interest to be disclosed in this study.

VI. Target literature

- Buckner, S., Darlington, N., Woodward, M., Buswell, M., Mathie, E., Arthur, A., ... Goodman, C. (2019). Dementia Friendly Communities in England: A scoping study. *Int J Geriatr Psychiatry*, 34(8), 1235-1243. doi: 10.1002/gps.5123.
- Buckner, S., Mattocks, C., Rimmer, M., & Lafontaine, L. (2018). An evaluation tool for Age-Friendly and Dementia Friendly Communities. *Work Older People*, 22(1), 48-58. doi: 10.1108/WWOP-11-2017-0032.
- Darlington, N., Arthur, A., Woodward, M., Buckner, S., Killett, A., Lafontaine L, ... Goodman, C. (2021). A survey of the experience of living with dementia in a dementia-friendly community. *Dementia (London)*, 20(5), 1711-1722. doi: 10.1177/1471301220965552.
- Hung, L., Hudson, A., Gregorio, M., Jackson, L., Mann, J., Horne, N., ... Phinney, A. (2021). Creating Dementia-Friendly Communities for Social Inclusion: A Scoping Review. *Gerontol Geriatr Med*, 7, 1-13. doi: 10.1177/23337214211013596.
- Innes, A., Smith, S. K., & Bushell, S. (2021). Dementia Friendly Care: Methods to Improve Stakeholder Engagement and Decision Making. *J Healthc Leadersh*, 13, 183-197. doi: 10.2147/JHL.S292939.

- Lin, S.Y. (2017). 'Dementia-friendly communities' and being dementia friendly in healthcare settings. *Curr Opin Psychiatry*, 30(2), 145-150. doi: 10.1097/YCO.0000000000000304.
- Odzakovic, E., Hellström, I., Nedlund, A. C., & Kullberg, A. (2021). Health promotion initiative: A dementia-friendly local community in Sweden. *Dementia (London)*, 20(6), 1971-1987. doi: 10.1177/1471301220977736.
- Parkinson, L., Sullivan, K. A., & Graham, K. (2022). On becoming a dementia-friendly community: An empirical study of the individual factors that predict openness towards dementia-friendly communities. *Dementia (London)*, 21(6), 1971-1986. doi: 10.1177/14713012221106328.
- Shannon, K., Bail, K., & Neville, S. (2019). Dementia-friendly community initiatives: An integrative review. *J Clin Nurs*, 28(11-12), 2035-2045. doi: 10.1111/jocn.14746.
- Silverman, M. (2021). Dementia-Friendly Neighbourhoods in Canada: A Carer Perspective. *Can J Aging*, 40(3), 451-462. doi: 10.1017/S0714980820000252.
- Smith, K., Gee, S., Sharrock, T., & Croucher, M. (2016). Developing a dementia-friendly Christchurch: Perspectives of people with dementia. *Australas J Ageing*, 35(3), 188-92. doi: 10.1111/ajag.12287.
- Takao, M., & Maki Y. (2019). Effects of attachment to and participation in the community on motivation to participate in dementia prevention and support activities: analysis of Web survey data. *Psychogeriatrics*, 19(3), 236-245. doi: 10.1111/psyg.12388.
- Thijssen, M., Daniels, R., Lexis, M., Jansens, R., Peeters, J., Chadborn, N., ... Graff, M. (2022). How do community based dementia friendly initiatives work for people with dementia and their caregivers, and why? A rapid realist review. *Int J Geriatr Psychiatry*, 37(2), 1-14. doi: 10.1002/gps.5662.
- Tsuda, S., Inagaki, H., Okamura, T., Sugiyama, M., Ogawa, M., Miyamae, F., ... Awata S. (2022). Promoting cultural change towards dementia friendly communities: a multi-level intervention in Japan. *BMC Geriatr*, 22(1), 360. doi: 10.1186/s12877-022-03030-6.
- Wiersma, E. C., & Denton A. (2016). From social network to safety net: Dementia-friendly communities in rural northern Ontario. *Dementia (London)*, 15(1), 51-68. doi: 10.1177/1471301213516118.
- Wu, S. M., Huang, H. L., Chiu, Y. C., Tang, L. Y., Yang, P.S., Hsu, J. L., ... Shyu, Y. L. (2019). Dementia-friendly community indicators from the perspectives of people living with dementia and dementia-family caregivers. *J Adv Nurs*, 75(11), 2878-2889. doi: 10.1111/jan.14123.

VII. References

- Garrard, Judith (2010) / Yoko Abe (2012). Literature Review for Nursing Research: A Matrix Approach. Tokyo: Igaku Shoin.
- Horii, S. & Ojima, T. (2019). A Guide to Creating Dementia-Friendly Communities for People with Dementia including the Elderly together with Utilization of Indicators https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/0000167731_00002.html.
- International University of Japan (2015). Ninchishou no hitoniyasasii machidukuri no suishin nikansuru chousakenkyuujigyou: heisei 26 nendo roujinhokenjigyousuishinhitouhojokinroujin-hokenkenkouzousintoujigyou (in Japanese). Tokyo: International University of Japan.
- Ministry of Health, Labor, and Welfare (2019). Comprehensive Strategy for the Promotion of Dementia Policies (New Orange Plan): Toward the Creation of Dementia-Friendly Communities for the Elderly and Others with Dementia. <https://www.mhlw.go.jp/file/06-Seisakujo>

- uhou-12300000-Roukenkyoku/kaitei_orangeplan.pdf 2022-9-1
- Ojima, T. (2019). Health and Labor Administration Promotion Research Project Subsidy (Health and Labor Science Special Research Project) Subcontracted Research Report. On Elderly-Friendly Community Development Indicators and Evaluation Methods.
- World Health Organization (2007). Global Age-Friendly Cities: A Guide (Ageing and Life Course, Family and Community Health).https://www.who.int/ageing/publications/age_friendly_cities_guide/en/.
- World Health Organization (2015). Measuring the Age-Friendliness of Cities: A Guide to Using Core Indicators. <https://www.who.int/ageing/publications/measuring-cities-age-friendliness/en/>.
- World Health Organization (2017). Global Action Plan on the Public Health Response to Dementia20122025.https://www.who.int/mental_health/neurology/dementia/action_plan_2017_2025/en/.
- World Health Organization (2018). Towards a Dementia Plan: A WHO Guide. http://www.who.int/mental_health/neurology/dementia/en/ PDF. 2022-9-15.