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【Press release】

Potential for Dementia Prevention in Japan - Nearly 40% of Dementia Cases Are Preventable -

~Hearing Loss Identified as the Leading Risk Factor, Followed by Physical Inactivity~

An international collaborative research group led by Professor Koichiro Wasano, MD, PhD. of the School of Medicine, Tokai University (Isehara Campus; 143 Shimokasuya, Isehara, Kanagawa, Japan; President: Hideki Kimura), together with Kasper Jørgensen, MSc, from the University of Copenhagen Dementia Research Centre (Denmark), has demonstrated that 38.9% of dementia cases in Japan are theoretically preventable through improvements in lifestyle and health-related factors.

This conclusion was drawn from analyses based on Japanese public statistics and epidemiological data.

The study identified hearing loss (6.7%) as the largest modifiable risk factor for dementia in Japan, followed by physical inactivity (6.0%) and high LDL cholesterol (4.5%). The findings further suggest that a uniform 10% reduction in these 14 modifiable risk factors could potentially prevent more than 200,000 future dementia cases nationwide.

These results were published at 23:30 UTC/GMT on January 11, 2026, in the international medical journal *The Lancet Regional Health - Western Pacific*.

Key Points

- Analysis based on Japanese public and epidemiological data revealed that approximately 38.9% of dementia cases in Japan are theoretically preventable.
- The most influential modifiable risk factors were identified as hearing loss, physical inactivity, and high LDL cholesterol, all of which are amenable to preventive interventions.
- The findings suggest that a uniform 10% reduction in these risk factors could potentially prevent more than 200,000 future cases of dementia in Japan.
- These results are expected to serve as important scientific evidence to inform future dementia prevention policies and public health strategies.

Background

Dementia is a rapidly growing global public health challenge. The worldwide economic burden associated with dementia was estimated at approximately USD 1.3 trillion in 2019 and is projected to increase to USD 1.7 trillion by 2030, potentially reaching USD

2.8 trillion when including informal caregiving costs.

Japan has the longest life expectancy in the world and is experiencing rapid population aging, making it a so-called “super-aged society.” The proportion of individuals aged 65 years and older exceeded 21% in 2010 and reached 29.3% in 2024. It is projected that by 2045, more than one in three people in Japan will be aged 65 years or older. Given that aging is the strongest risk factor for dementia, Japan is among the countries most vulnerable to the growing impact of dementia.

According to estimates from the Ministry of Health, Labour and Welfare, as of 2022, approximately 12.3% of adults aged 65 years and older had dementia, while 15.5% had mild cognitive impairment (MCI). This corresponds to approximately 4.43 million individuals with dementia, and nearly 10 million people when MCI is included. By 2050, the number of people with dementia is projected to reach 5.87 million (15.1% of the older population), with 6.31 million (16.2%) having MCI.

In recent years, novel disease-modifying therapies, including amyloid beta targeting monoclonal antibodies, have emerged. However, their real-world implementation remains limited due to modest clinical benefits, high costs, and strict eligibility criteria. As a result, increasing attention has been directed toward prevention, with the goal of delaying onset or reducing the incidence of dementia.

In this context, the Lancet Commission on Dementia has reported that up to 45% of dementia cases worldwide may be preventable through interventions targeting modifiable lifestyle and environmental risk factors. However, these estimates are largely based on data from Western countries and may not adequately reflect the social structure, health characteristics, and risk factor distribution specific to Japan.

Therefore, the present study aimed to quantitatively assess the potential for dementia prevention in Japan using Japanese public statistics and epidemiological data. The objective was to provide scientific evidence to identify which risk factors should be prioritized and to what extent, in order to effectively address the expected increase in dementia cases.

Methods

This study analyzed 14 modifiable risk factors for dementia identified in the 2024 Lancet Commission on Dementia, based on robust scientific evidence:

- Lower education
- Hearing loss
- High LDL cholesterol

- Depression
- Traumatic brain injury
- Physical inactivity
- Smoking
- Diabetes
- Hypertension
- Obesity
- Excessive alcohol consumption
- Social isolation
- Air pollution
- Untreated visual loss

For each risk factor, prevalence estimates were derived from reliable Japanese data sources, including the National Health and Nutrition Survey, government statistics, epidemiological studies, and environmental datasets.

Using these data, we calculated the Population Attributable Fraction (PAF) and the Potential Impact Fraction (PIF) to quantitatively evaluate the potential scale of dementia prevention in Japan.

Key Results

Population Attributable Fraction (PAF) ^{*1}

When all 14 risk factors were considered together, 38.9% of dementia cases in Japan were estimated to be preventable. The most influential risk factors were:

- Hearing loss: 6.7%
- Physical inactivity: 6.0%
- High LDL cholesterol: 4.5%

Potential Impact Fraction (PIF) ^{*2}

- A uniform 10% reduction in all modifiable risk factors could potentially prevent approximately 208,000 future cases of dementia.
- A uniform 20% reduction could potentially prevent approximately 408,000 future cases of dementia.

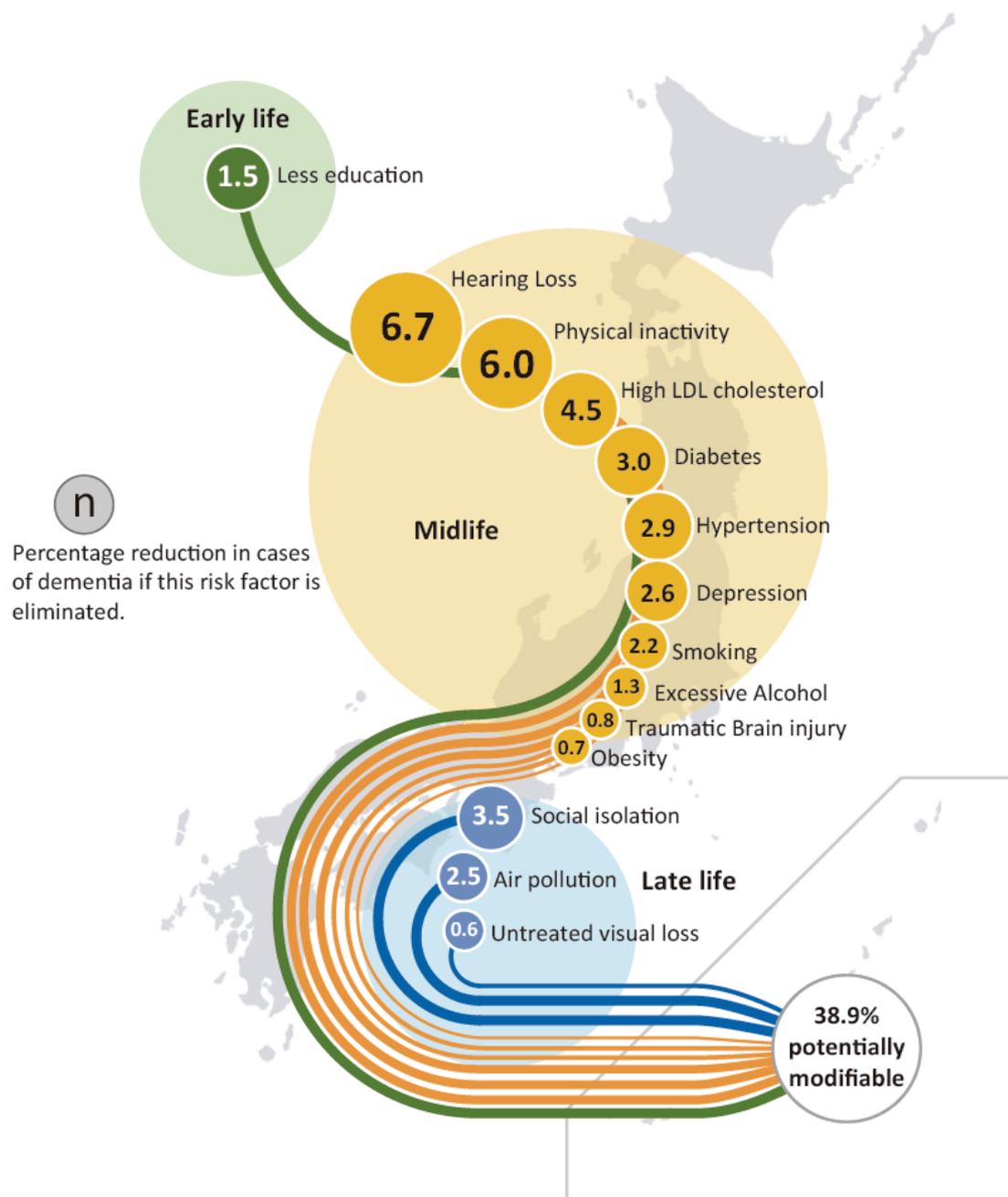


Figure Population attributable fraction (PAF) of potentially modifiable risk factors for dementia in Japan

● **Note on the Classification of Life Stages for Each Risk Factor**

In the figure, the classification of each risk factor into young adulthood, midlife, or late life does not indicate that the risk is confined to that specific life stage. Rather, it signifies that the risk emerges at that stage and persists thereafter. For example, hearing loss, which showed the largest contribution to dementia risk, is defined as affecting individuals aged 55 years and older. This indicates that preventive and intervention measures are important not only during midlife but also throughout later life.

■ Significance of the Study

This study is significant in that it quantitatively identifies priority targets for intervention using data that accurately reflect the Japanese population and social context. In particular, the findings demonstrate that modifiable factors, such as hearing loss and physical inactivity, can make a substantial contribution to dementia prevention when appropriately addressed.

The study was conducted with the support of the Royal Danish Embassy, Japan, and Healthcare Denmark, which supported the collaboration through facilitation, convening and international outreach, and represents the fruit of academic collaboration between Japan and Denmark in the field of dementia research.

These findings are expected to serve as important scientific evidence for the implementation of the Basic Act on Dementia, which came into force in 2024, as well as for the development and refinement of future national dementia prevention strategies in Japan.

■ Article information

◇ Journal: *The Lancet Regional Health – Western Pacific*

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◇ Title: The potential for dementia prevention in Japan: a population attributable fraction calculation for 14 modifiable risk factors and estimates of the impact of risk factor reductions

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Glossary

*1 Population Attributable Fraction (PAF)

The Population Attributable Fraction (PAF) is an index that estimates the proportion of dementia cases that could theoretically have been prevented if a specific risk factor had been completely absent. For example, a PAF of 10% indicates that, in theory, 10% of dementia cases might not have occurred if that risk factor had not existed.

In this study, the PAF was calculated for each of the 14 modifiable risk factors. In addition, overlaps and interrelationships among the factors were taken into account to estimate the

overall proportion of dementia that could potentially be prevented in the population.

*2 Potential Impact Fraction (PIF)

The Potential Impact Fraction (PIF) estimates the reduction in dementia incidence that could be achieved by realistically lowering the prevalence of risk factors, such as by 10% or 20%, rather than completely eliminating them.

While PAF represents the theoretical maximum preventable proportion, PIF provides a more practical estimate of the impact that actual public health policies and interventions could achieve. In this study, we estimated the potential reduction in the number of future dementia cases if each of the 14 risk factors were reduced by 10% or 20%, respectively.

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