

# auri research brief

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## Measuring the Age-friendliness of Korea Local Communities

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In order to respond to the aged society of the country and the local communities, evidence-based policies and strategies should be established and improved through diagnosis on the current status. If the policy is established based on surveys, it will cost a lot of the budget and labor to conduct every year and errors due to respondents' bias will be inevitable. Therefore, it is necessary to introduce the quantitative method of diagnosing the state of response to the aged society proposed by the World Health Organization to Korea, to apply the age-friendliness index using statistical data, and to check the policy direction for responding to the aged society in the local communities.

- **South Korea has become an aged society, and our rural communities have become a super-aged society**

South Korea (hereafter, Korea) is already an aged society. This means that 15% of the population is aged 65 years or older. After three years, more than 20% of the total population of Korea is expected to become the elderly, which means a super-aged society. The aging of the rural communities is also a serious issue. The population of the metropolitan area of Korea has already surpassed that of the other areas. Especially, 44.1% of the 8.12 million elderly people in Korea lived in the metropolitan area in 2020, which is expected to grow to 66.3% by 2047 (Statistics Korea, 2019).

A national policy for an aging population should come up with a direction and a strategy through the diagnosis of the local communities. The World Health Organization (WHO) emphasized the need to create an age-friendly community in response to the aging society (WHO, 2007), and major developed countries have established a system to determine the priorities of policies in response to the aging society through the diagnosis of affinity to the elderly in cities and rural areas. (The Ministry of Land, Infrastructure, Transport and Tourism of Japan, 2014; AARP, 2018). In Korea, the '4th Basic Plan for Low Fertility and Aging Society (2021-2025)' suggested that the development and evaluation of the age-friendliness indicators of local communities was necessary. It is necessary to develop an index that can quantitatively evaluate the response of the local communities to the aged society and establish evidence-based response policies for the aged society based on this.

- **Need for an indicator to easily check the status of response to an aged society in the local communities.**

An indicator to evaluate the response of local communities to the aging society should be composed so that anyone can use the indicator easily while ensuring objectivity. In addition, the contents of the diagnosis should consist of major factors affected by the aging of the local population. Ko *et al.* (2021) summarized related past studies that derived the components of an age-friendly living environment according to the WHO guide, deriving a total of 37 age-friendly indicators to check the status of response to an aged society in Korea.

## Indicators to check the status of response to an aged society in the local communities

Indicator classification			Diagnostic method
High	Moderate	Low	
Physical environment	outdoor environment	Safety of outdoor activities	<ul style="list-style-type: none"> <li>– CCTV installations with respect to the elderly population by city and province</li> <li>– Installations of safety emergency alarms with respect to the elderly population by city and province</li> <li>– Installations of security streetlights with respect to the elderly population by city and province</li> </ul>
		Comfort of outdoor activities	<ul style="list-style-type: none"> <li>– Air quality (micro airborne particles) by city and province</li> <li>– supply status of public toilet with respect to the aged population by city and province</li> </ul>
	Transportation	Access to major facilities	<ul style="list-style-type: none"> <li>– Parks with respect to the elderly population by city and province</li> <li>– Walking time to nearby groceries</li> <li>– Bus stops with respect to the elderly population by city and province</li> </ul>
		Safety of road crossing	<ul style="list-style-type: none"> <li>– Traffic accidents of the elderly with respect to the elderly population by city and province</li> <li>– Protection zones for the elderly and the disable with respect to the aged population by city and province</li> </ul>
	Housing	Residential stability	<ul style="list-style-type: none"> <li>– Residential welfare facilities for the elderly with respect to the aged population by city and province</li> <li>– Supply status of public and private rental housing with respect to the aged population by city and province</li> <li>– Installation of facilities customized for the elderly in residential areas for the elderly</li> <li>– Ratio of self-owned houses with respect to the aged population by city and province</li> <li>– Average house price by city and province</li> </ul>
Social environment	Social participation	Diversity of participation opportunities	<ul style="list-style-type: none"> <li>– Leisure and welfare facilities for the elderly with respect to the aged population by city and province</li> <li>– Ratio of volunteers with respect to the aged population by city and province</li> <li>– Financial investment amount for senior employment and social activity support with respect to the aged population by city and province</li> <li>– Participation rate in leisure and cultural activities with respect to the aged population by city and province</li> </ul>
	Respect and social inclusion	Respect for the elderly	<ul style="list-style-type: none"> <li>– Reception rate of elderly abuse report with respect to the aged population by city and province</li> </ul>
		Economic independence	<ul style="list-style-type: none"> <li>– Participation in economic activities with respect to the aged population by city and province</li> <li>– Financial level with respect to the aged population by city and province</li> </ul>
	Education and access to information	Educational opportunities	<ul style="list-style-type: none"> <li>– Lifelong education institutions for the elderly with respect to the aged population by city and province</li> <li>– Participation rate in learning activities with respect to the aged population by city and province</li> </ul>
		Diversity of educational opportunities	<ul style="list-style-type: none"> <li>– Lifelong education programs for the elderly with respect to the aged population by city and province</li> </ul>

Indicator classification			Diagnostic method
High	Moderate	Low	
Service environment	Medical service	Access to medical services	<ul style="list-style-type: none"> <li>– Hospitals and clinics with respect to the aged population by city and province</li> <li>– Public health centers with respect to the aged population by city and province</li> <li>– Medical welfare facilities with respect to the aged population by city and province</li> </ul>
		Convenience of medical service	<ul style="list-style-type: none"> <li>– Number of doctors with respect to the aged population by city and province</li> <li>– Number of personnel at public health centers with respect to the elderly population by city and province</li> </ul>
		Health maintenance and practice	<ul style="list-style-type: none"> <li>– Prevention of dementia for the elderly by city and province</li> <li>– Health check-up ratio for the elderly by city and province</li> </ul>
	Welfare service	Access to living services	<ul style="list-style-type: none"> <li>– Installation of free food service centers for the elderly with respect to the aged population by city and province</li> <li>– Home-based welfare facilities for the elderly with respect to the aged population by city and province</li> </ul>
		Access to care services	<ul style="list-style-type: none"> <li>– Senior care service facilities with respect to the aged population by city and province</li> </ul>
		Welfare budget and convenience	<ul style="list-style-type: none"> <li>– Ratio of social welfare budget to the local government budget by city and province</li> <li>– Public officials of the local governments dedicated to the social welfare by city and province</li> </ul>

Source: Ko *et al.* (2021, pp.30–32)

## ● Responses to the aged society in the local communities when compared with the national average.

Regional statistical data were applied to the age-friendliness index derived earlier. Response of a local community to an aged society can be evaluated by comparing with the national average (50 points). In this article, five local governments with prominent characteristics were selected out of 17 metropolitan cities and provinces to examine the age-friendliness.<sup>1)</sup>

Seoul City is a region with a large deviation in diagnosis results among indicators, where ‘education and access to information’ of the age-friendly social environment category was found to be very high when compared with the national average. On the other hand, ‘accessibility to senior care services (welfare services)’ was very low when compared with the national average. When compared with other regions, the absolute number of facilities was large but insufficient when compared to the elderly population living in the region. Seoul Metropolitan Government will need to supplement policies in the service area.

## Seoul Metropolitan City: Results of 16 sub-classification indicators

	Outdoor environment	Transportation	Housing	Social participation	Respect and social inclusion	Education and access to information	Medical service	Welfare service
Great					Respect for the elderly	Access to education opportunities Diversity of education opportunities		
Average	Safety of outdoor activities Comfort of outdoor activities	Access to major facilities Safety of road crossing	Residential stability	Diversity of participation opportunities	Economic independence		Service convenience Service accessibility Health maintenance and practice	Access to living services Welfare budget and convenience
Inadequate								Access to care services

Source: Ko *et al.* (2021, p.112)

In Sejong City, the ‘transportation’ sector of the age-friendly physical environment category was higher than the national average, and the ‘welfare service’ sector of the age-friendly service environment category was lower than the national average. In particular, it was found that ‘access to living services for senior citizens (welfare services)’, ‘access to senior care services (welfare services)’ and ‘health maintenance practice for the elderly (medical services)’ were lower than the national average. The number of users of home-based welfare facilities for the elderly and the number of senior care service facilities were significantly lower when compared to the elderly population. Therefore, it is necessary to review the issues related to the service environment related to the aged society.

## Sejong Special Self-Governing City: Results of 16 sub-classification indicators

	outdoor environment	Transportation	Housing	Social participation	Respect and social inclusion	Education and access to information	Medical service	Welfare service
Great		Access to major facilities				Diversity of education opportunities		
Average	Safety of outdoor activities Comfort of outdoor activities	Safety of road crossing	Residential stability	Diversity of participation opportunities	Economic independence	Access to education opportunities	Service accessibility Service convenience	Welfare budget and convenience
Inadequate							Health maintenance and practice	Access to living services Access to care services

Source: Ko *et al.* (2021, p.112)

In Chungcheongnam-do, ‘Respect for the elderly (respect and social inclusion)’, ‘Safety of road crossing (transportation)’, and ‘Safety of outdoor activities (outdoor environment)’ were found to be higher than the national average. However, since the result was not high when compared with the average at the middle classification level, it is necessary to closely examine the status of related policies, such as access to major facilities for the elderly and the comfort of outdoor activities for the elderly and to find a policy direction to improve the level of response to the aged society related to the physical environment.

#### Chungcheongnam-do: Results of 16 sub-classification indicators

	Outdoor environment	Transportation	Housing	Social participation	Respect and social inclusion	Education and access to information	Medical service	Welfare service
Great	Safety of outdoor activities	Safety of road crossing			Respect for the elderly			
Average	Comfort of outdoor activities	Access to major facilities	Residential stability	Diversity of participation opportunities	Economic independence	Diversity of education opportunities Access to education opportunities	Service convenience Service accessibility Health maintenance and practice	Access to living services Access to care services Welfare budget and convenience
Inadequate								

Source: Ko *et al.* (2021, p.113)

In Jeollabuk-do, ‘social participation’ and ‘respect and social inclusion’ in the age-friendly social environment category and ‘welfare service’ in the age-friendly service environment category were higher than the national average. ‘Accessibility to care for the elderly’, ‘welfare budget and convenience (welfare service)’, ‘health maintenance practice of the elderly (medical service)’, and ‘diverse opportunities for senior participation (social participation)’ were higher than the national average. Policies related to the age-friendly service environment were excellent, and it is necessary to maintain them through continuous monitoring.

## Jeollabuk-do: Results of 16 sub-classification indicators

	Outdoor environment	Transportation	Housing	Social participation	Respect and social inclusion	Education and access to information	Medical service	Welfare service
Great				Diversity of participation opportunities			Health maintenance and practice	Access to care services Welfare budget and convenience
Average	Safety of outdoor activities Comfort of outdoor activities	Safety of road crossing Access to major facilities	Residential stability		Economic independence Respect for the elderly	Diversity of education opportunities Access to education opportunities	Service convenience Service accessibility	Access to living services
Inadequate								

Source: Ko *et al.* (2021, p.113)

In Gyeongsangnam-do, all areas of the middle classification were found to be at the national average level. Among them, the ‘Comfort of outdoor activities for the elderly’ section in the outdoor environment category was higher than the national average. In order to create an age-friendly physical environment, it is necessary to promote policies to enhance the safety of outdoor activities for the elderly and to maintain the comfort of outdoor activities.

## Gyeongsangnam-do: Results of 16 sub-classification indicators

	Outdoor environment	Transportation	Housing	Social participation	Respect and social inclusion	Education and access to information	Medical service	Welfare service
Great	Comfort of outdoor activities							
Average	Safety of outdoor activities	Safety of road crossing Access to major facilities	Residential stability	Diversity of participation opportunities	Economic independence Respect for the elderly	Access to education opportunities Diversity of education opportunities	Service convenience Service accessibility Health maintenance and practice	Access to living services Access to care services Welfare budget and convenience
Inadequate								

Source: Ko *et al.* (2021, p.113)

- Necessity to develop indicators that can assess the responses to the aged society at the local communities and towns.

The pilot diagnosis showed that Seoul Metropolitan City had a high level of age-friendly response in the education and the access to the information category,

Sejong Special Self-Governing City in the transportation area, and Jeollabuk-do in the social participation and welfare service area. In Chungcheongnam-do and Gyeongsangnam-do, the level of age-friendly response in the outdoor environment was higher than the national average.

As such, the diagnosis results of the age-friendly index can be used as a basis for establishing policies and strategies to respond to an aged society that consider the regional influences of an aging population. It is also possible to examine the response to the aged society of metropolitan governments, check categories that are superior to the national average and those lacking and use this information as a basis for establishing plans for an age-friendly city in each region. This may also suggest the need to apply the age-friendliness indicator to local ordinances related to an age-friendly city, thereby providing a basis for the continuous use of the indicator.

The age-friendliness index was developed to derive diagnostic results by using statistical data that are periodically collected, so that the same type of data can be updated in the future and the changes in the response level of the aged society in the region can be checked frequently. Since the presented age-friendliness index is composed of diagnostic indexes at the regional level, it is expected that local governments will be able to refer to the composition of this index in developing and applying the age-friendliness index for each region.

In the future, it is necessary to consider the appropriateness of the composition and number of indicators by category and to consider the difference in facility, place, and service supply level according to the land area of local governments, or to advance the composition and diagnosis method of each indicator.

1) A region with a large deviation in diagnosis results among indicators (Seoul), regions where specific areas are very good or poor (Sejong, Chungcheongnam-do, Jeollabuk-do), and a region with the national average level (Gyeongsangnam-do).

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- Ko, Youngho, Han, Seungyeon, Her, Jaeseok & Lee, Kwanghyun. (2021). A Study on Measuring Age-friendliness for Korean Age-friendly Communities. Architecture & Urban Research Institute.
  - Republic of Korea Government. (2021). Working Together and Caring Together: The 4th Basic Plan for Low Fertility and Aging Society (2021-2025).
  - Statistics Korea. (2019). Future Population Special Estimation: 2017-2067. Statistics Korea.
  - The Ministry of Land, Infrastructure, Transport and Tourism of Japan. (2014). Guidelines for the Promotion of Community Development for Health, Medical and Welfare. Tokyo: The Ministry of Land, Infrastructure, Transport and Tourism of Japan.
  - AARP. (2018). <https://livabilityindex.aarp.org> (Retrieved: 2021.9.1.)
  - WHO. (2007). Global Age-friendly Cities: A guide. Geneva: World Health Organization.
  - WHO. (2015). Measuring the Age-friendliness of Cities: A Guide to Using Core Indicators. Geneva: World Health Organization.

