

## Association between accessibility to elementary school and depression in older Adults: JAGES Study

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### Background:

The connection in a local community has diluted in an aging society, and the importance of intergenerational exchange has increased for older adults' health. Some positive effects of intergenerational exchange have reported. For example, a reciprocal intergenerational exchange contributes to better mental health in later life. However, there is little evidence of the relationship between neighborhood environments causing intergenerational exchange and the health status of older adults. This study investigated the association between geographical accessibility to elementary school, enhancing intergenerational exchange, and depression in older adults.

### Methods:

The data were retrieved from the Japan Gerontological Evaluation Study (JAGES) 2016, a population-based study of independently living people  $\geq 65$  years old. The dependent variable is depression evaluated by the Geriatric Depression Scale (GDS $\geq 5$ ). The geographical accessibility to elementary School is the distance between the representative points of their residences and the nearest elementary school. Logistic regression analysis calculates the odds ratio to determine the association between depression and accessibility to elementary school and compare models to examine the effect of intermediate factors.

### Results:

Overall, 20.4% of the participants had depression. Compared with the longest distance from elementary school ( $\geq 950$ m), the odds ratio was 0.91 (95% CI = 0.86, 0.96) for the nearest category ( $< 330$ m), 0.91 (95% CI = 0.87, 0.96) for the second-nearest (330-490m) and 0.94 (95% CI = 0.89, 0.99) for the third (490-670m) in model 1. After adjusting for intermediate factors, the odds ratio was 0.94 for the first and second-nearest groups.

### Conclusions:

Geographical accessibility to elementary school was associated with decreased depression for older adults. The result indicates that older adults' daily meetings with children around elementary schools can result in a positive effect on their mental health.

**Key messages:**

- Geographical accessibility to elementary school was associated with decreased depression for older adults.
- The neighborhood design enhancing intergenerational exchange might be useful for age-friendly cities.