Social Interaction as an Effective Tool for Dementia Prevention:
Six-year Follow-up Study

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Purpose

The purpose of this study is to clarify

1. Importance of social interaction for dementia prevention.

2. How to enhance effective empowerment for dementia prevention.
Social Background

1. The Japanese population is aging faster than other countries.
2. Japanese people enjoy the longest life span in the world.
3. The average life expectancy for females was 86.4 years and for males 79.6 years.
4. Almost 23.1% of the population was 65 years of age or over in 2010.
Healthy Longevity Project

“Tobisima Longitudinal Study” (TLS)

1991-2030 Forty years cohort study
All the residence (n=5,000) participate

Tobisima is one of the typical community in Japan (location, population structure)

Purpose: Making most healthy longevity village in Japan (till 120 years of age!)
## Research Design

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</table>
Conceptual Framework

Demographic data
- age
- gender
- education
- occupation

Social Interaction

baseline
Health Status
- Disease
- Function

Service Utilization
- Health Habit

outcome
Health Status
- Dementia
- Mortality
- Morbidity
- Function
- Cost

Health Habit
Conceptual and Operational Definition

1. **Social Interaction**
   Index of Social Interaction (ISI)
   Cronbach $\alpha = .78$  reliability = .81

2. **Function** (3 category)
   Independence, care for IADL, care for ADL

3. **Health habits**: exercise, smoking, diet

4. **Dementia** (2 category) Yes or No
   by Health Professional Evaluation

5. **Other variables** (2 category) Yes or No
Index of Social Interaction (ISI) - 18 items and 5 subscales -

1. Independence
   Active approach, Life style motivation, etc.
2. Social curiosity
   Reading newspapers, Having hobby, etc.
3. Interaction
   Communication with family, outsiders, etc.
4. Feeling of safety
   Having counsel, supportive person, etc.
5. Participation in the society
   Participation in social groups, etc.
Subjects and Methods

Subjects
All the resident of age 65 or over in one of typical community: 558 (IADL independence in 2003)
108 subjects become demented within six years

Methods
Year 2003 self-rated questionnaire
Year 2009 Professionals’ evaluation of dementia using Government Standardized Index
# Chi-square Test for Dementia Prevention

<table>
<thead>
<tr>
<th>Items of ISI</th>
<th>p</th>
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<td>Reading newspapers</td>
<td>&lt;0.001 **</td>
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<td>Social Contribution</td>
<td>0.002 **</td>
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<tr>
<td>Active approach</td>
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<td>Having a hobby</td>
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<td>Life style motivation</td>
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<td>Active role</td>
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<td>Reading Books</td>
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<td>Using new Devise</td>
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<td>Regular life style</td>
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**P<0.01 \*P<0.05**
### Logistic Analysis for Dementia Prevention

<table>
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<th>Items of ISI</th>
<th>Odds ratio</th>
<th>95% range</th>
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<td>Reading newspapers</td>
<td>2.12 **</td>
<td>1.32 - 3.40</td>
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<td>Age</td>
<td>3.51 *</td>
<td>2.26 - 5.46</td>
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**P<0.01**: P<0.05
Social Interaction and Dementia Prevention

1. Greater social interaction was positively related to reduced dementia.

2. The multiple logistic regression analysis adjusted for baseline age, gender, and physical function indicated that low frequency of newspaper reading was related to increased risks of dementia.
ENHAENCE

Effective Empowerment for Dementia Prevention

1) prevention oriented
2) adapt requirement
3) evaluation setting
4) utilize information technology
5) promotion of participation
Conclusion

1. These findings highlight the importance of social interaction in dementia prevention.

2. The introduction of new services such as "strengthening of social ties" represent initial steps in establishing systems that enable elderly persons to live independently with dignity.

3. An ongoing longitudinal study of elders in one community demonstrate that prevention-oriented services are essential to improving the healthy longevity of citizens, and that seniors will accept such services.