Trajectories of Functional Health and Subjective Well-being over 20 Years

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October 23, 2013
Well-being in Ageing Societies: Perspectives from China, Germany and Japan
Drastic Increase of Older-olds (age75+)

2005
Population 127.77 million
Age75+ 1.16 (9%)
Age65-74 1.41 (11%)
Age15-64 8.41 (66%)
Age0-14 1.75 (14%)

2030
Population 115.22 million
Age75+ 2.27 (20%)
Age65-74 1.40 (12%)
Age15-64 6.74 (59%)
Age0-14 1.12 (10%)

2055
Population 89.93 million
Age75+ 2.39 (27%)
Age65-74 1.26 (14%)
Age15-64 4.60 (51%)
Age0-14 .75 (8%)
Well-being of Japanese Elderly
N=5715, (1987- )

Social Relations

Economic Status

Health
Survey Design

• National probability sample of 5715 Japanese (age 60+)

• Face-to-face interview in every three years

• Supported by NIA & Ministry of Health, Welfare and Labor
National Panel Survey of Japanese Elderly

Wave 1 1987
Wave 2 1990
Wave 3 1993
Wave 4 1996
Wave 5 1999
Wave 6 2002
Wave 7 2006
Wave 8 2012

(Biomarkers and performance tests added)

20 years
Functional Health Measure

Score
3  ADL & IADL without assistance
2  IADL with assistance but ADL without assistance
1  ADL & IADL with assistance
0  Dead

ADL questions
- Bathing
- Walking a short distance
- Going up a few steps

IADL questions
- Shopping for groceries or clothes
- Using the telephone
- Going out by bus/train
Latent Class Analysis: Model

P.F. at age 63-65
P.F. at age 66-68
P.F. at age 69-71
P.F. at age 72-74
P.F. at age 75-77
P.F. at age 78-80
P.F. at age 81-83
P.F. at age 84-86
P.F. at age 87-89
Trajectories of Functional Health

Men

- Resilient (10.9%)
- Gradual Decline (70.1%)
- Early Decline (19.0%)

Age:
- 63-65
- 66-68
- 69-71
- 72-74
- 75-77
- 78-80
- 81-83
- 84-86
- 87-89

Functional Health:
- Scale from 0 to 3
Trajectories of Functional Health

Women

Gradual Decline (87.9%)

Early Decline (12.1%)
Subjective Well-being Measures

LSI-A

- The happiest time in life
- Looking back, satisfied with my life
- Will enjoy the life

General life satisfaction
Trajectories of Life Satisfaction

Men

Women

LSI-A

GLS

LSI-A (temporal variability) vs. LSI-A (period variability)

Women
Changes in Functional Health and Subjective Well-being

Changes in FH every 3 years

Changes in SWB every 3 years

Functional Health at age 63

SWB at age 63
Changes in Functional Health and Subjective Well-being

**LSI-A**

**Men**

- Self-reliance
- Life satisfaction
- Life satisfaction
- Self-reliance

**Women**

- Self-reliance
- Life satisfaction
- Life satisfaction
- Self-reliance

Correlation coefficients:

- Men: -0.334, 0.476, -0.125, 0.042
- Women: -0.172, 0.514, -0.070, 0.340
Changes in Functional Health and Subjective Well-being

General Life Satisfaction

Men

Women

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Redesigning Communities for 2030

- Hospital to Home
- ICT Network
- Diverse housing
- 24-hr. visiting nurses & home help
- Diverse housing
- Productive aging
- Attending Dr.
- E-health
- Pharmacy
- Primary care
- Patient studies
- Health Info
- Quality of Life (QOL)
- Costs
- Quality of Community (QOC)

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Major Projects

- Productive aging
- Human Bonds
- Housing
- Health Care
- Transportation
- ICT
Social Experiment Sites

China
Korea

Pacific Ocean
Osaka
Fukui
Kashiwa
Tokyo
Work Places for the Second Life

- Community Farm
- Roof Garden
- Mini-vegetable Factory
- Farmers Market
- Paper Diapers Recycling Factory
- After-school Program
- Community Eatery
- Meal Delivery

Places for the Second Life
Creating Places to Work

- Using fallow lands
- Urban farming
- Using vacant houses
- Mini vegetable factory
- @ renovated apartment complex
- Rooftop farm
- Community eatery
- Mobile shops, meals-on-wheels
- Child-care support
- Supporting & enhancing living

Coordinating Body
- Kashiwa-Toyoshikidai Community Comprehensive Research Group on Aged Society
- Daiwa House Urban Renaissance Agency (URA)
- Farmers union “Kashiwa Noen” Kashiwa City, Agri. Committee, etc.
- Urban Renaissance Agency (URA) (discussing the post-renovation plans)
- Private company (open invitation for participation)
- Kurumi Gakuen (local facility) Sugiura Environ. Project (local company) Kashiwa City Dept. of Family, etc.
- Tokyo Marine Nichido Better Life Service City Dept. of Aging, Social Welfare Council, etc.

Daiwa House Urban Renaissance Agency (URA)

Kashiwa City

URA

Univ. of Tokyo
Effect Indicators

Individual
- Physical and mental health
- Social relations
- Meaningful life
- Smile

Community
- Tax revenue
- Health care costs
- Social capital
Evaluation Study

Vascular test
- CAVI/ABI
- FMD

Body composition
- Fat/body water/bone and muscle mass

IOG Lab

Bone density

Physical activity
- Pedometer/calories/Mets

Cognitive function
Data

Physical Activities

Activity Tapestry

Jan. 15

Feb. 2

Feb. 15

6:00 12:00 18:00

低

活动频率

高

工休日

工作日

就労前 就労日 非出勤日

就労前 就労日 非出勤日

就労前 就労日 非出勤日

Mets（运动强度）

* p < 0.001

步数

* p < 0.001

消费卡路里

* p < 0.001