

Aging, Disability and Health in Singapore and Japan

A/P Angelique Chan
Department of Sociology
National University of Singapore

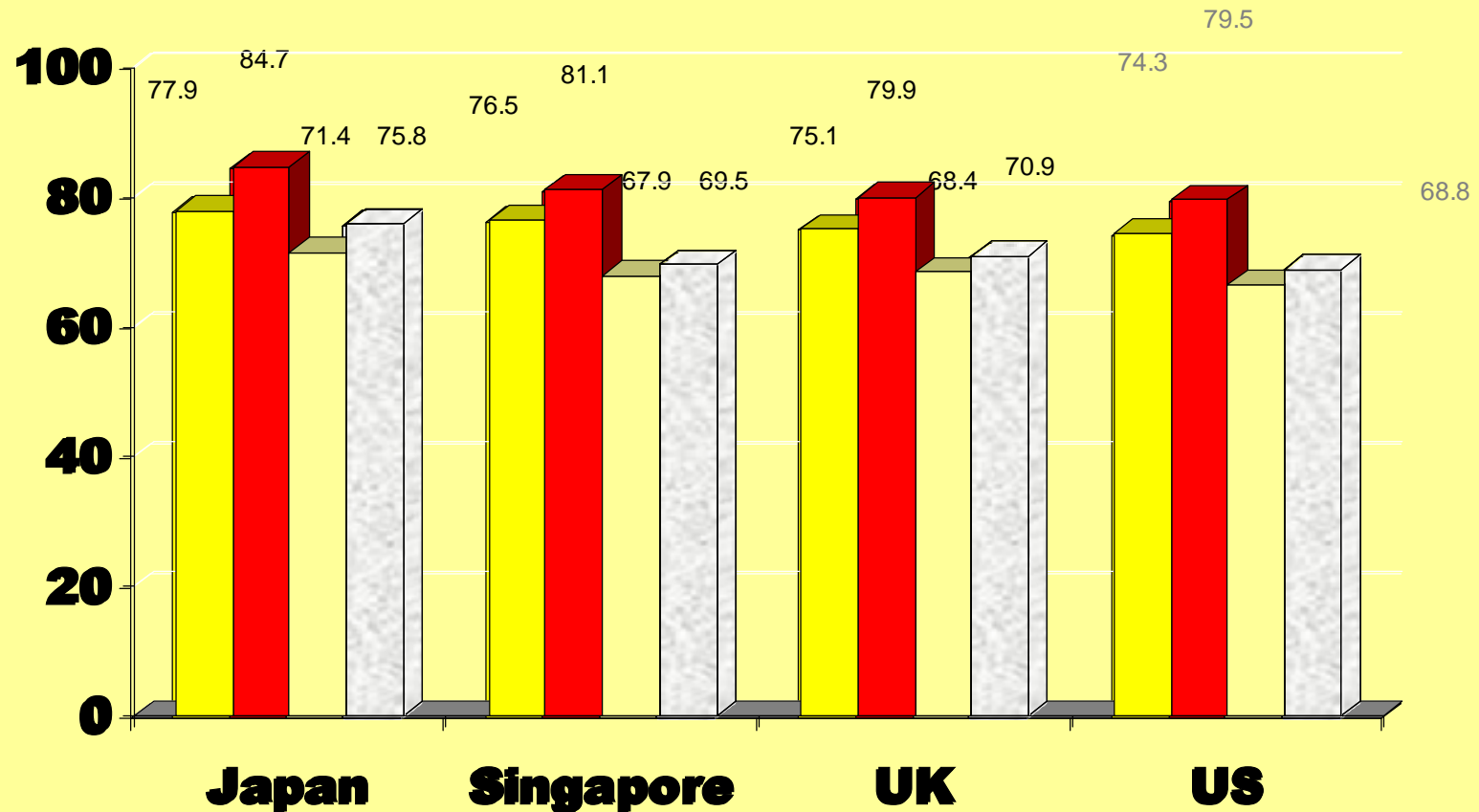
With acknowledgements to:

Professor Yasuhiko Saito (Nihon University, Japan)
Professor Zachary Zimmer (University of Utah, USA)

Compression of Morbidity

- James Fries (1980) – adding life to years.
- Verbrugge (1984) – adding years to life.
- **Active Life Expectancy**
- How many years can an older person expect to live free of disability/illness?

Life expectancy & healthy life expectancy, by gender



■ Males-LE ■ Females-LE □ Males-HLE □ Females-HLE
Source: World Health Organization, <http://www.who.int/country/en>

Conceptual framework to study health of elderly

- Population health perspective that emphasizes the importance of biological, behavioral, physical and social environments, socioeconomic status, and housing in predicting health outcomes (Bould 2005).
- Emphasizes the link between disability and depression and the role of policy (housing, transportation) in allowing older adults to better adapt to their living environments.
- Addresses larger issues, e.g., higher levels of disability are linked to depression especially among elderly women living alone.

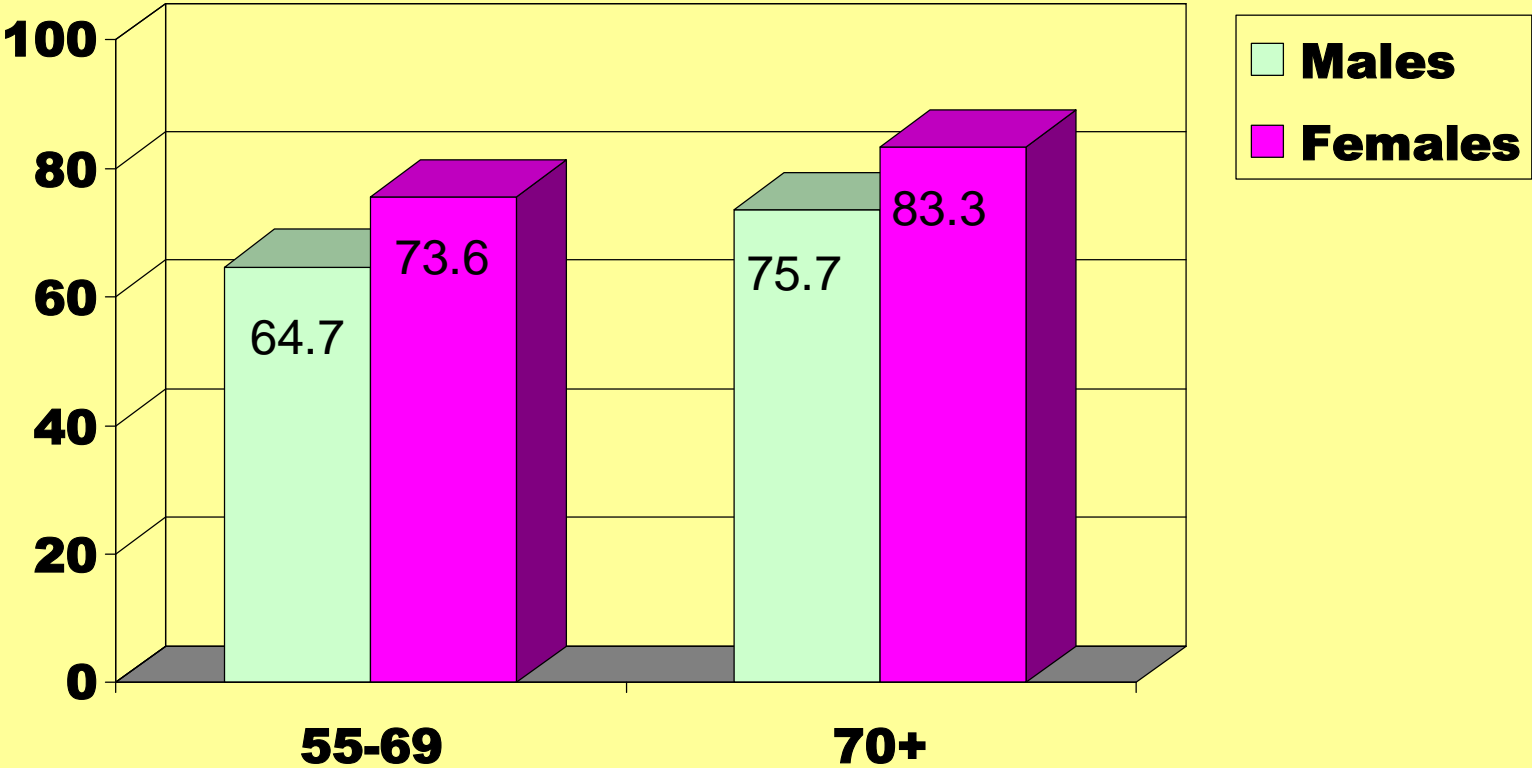
What predicts health status among older adults?

- **Individual demographic characteristics** (Jorm 2000; Roberts et al. 1997; Boey & Chiu 2005; Bould 2005; WHO 2001; Fones et al. 1998; Kua et al. 2003; Zylstra et al. 1999).
- **Social integration/social support** (Boey & Chiu 2005; Chen and Silverstein 2000; Durkheim 1897; Gove, Hughes, and Style 1983; Okabayashi et al. 2004; Weinstein et al. 2004)
- **Economic resources** (Miech and Shanahan 2000)
- **Cognitive functioning** (Kales et al. 2006).

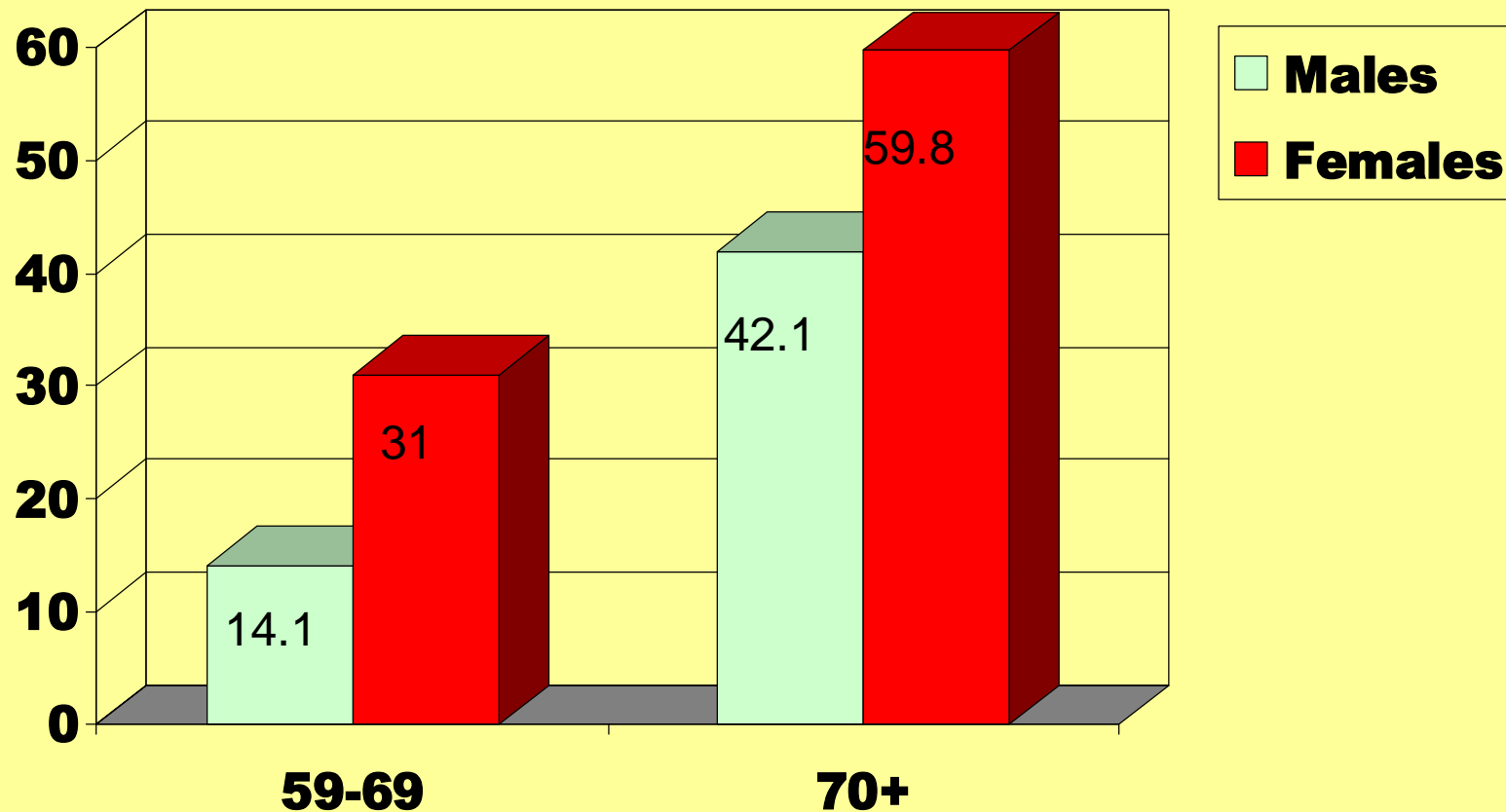
Aging, Disability, and Health in Singapore

- Age differences
- Gender differences
- Ethnic differences
- Some evidence of marital status effects

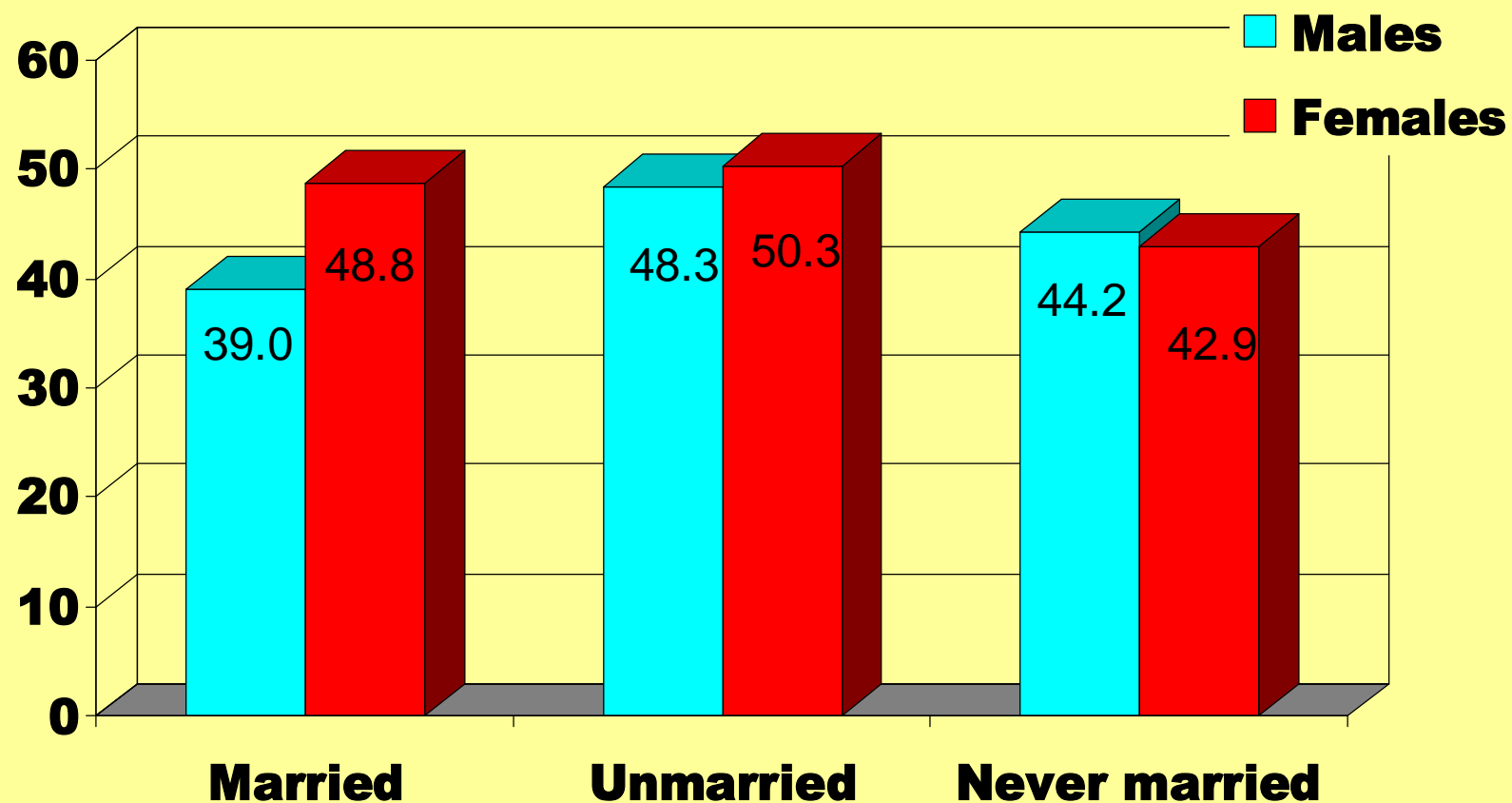
Percent with a chronic limitation, by age and gender



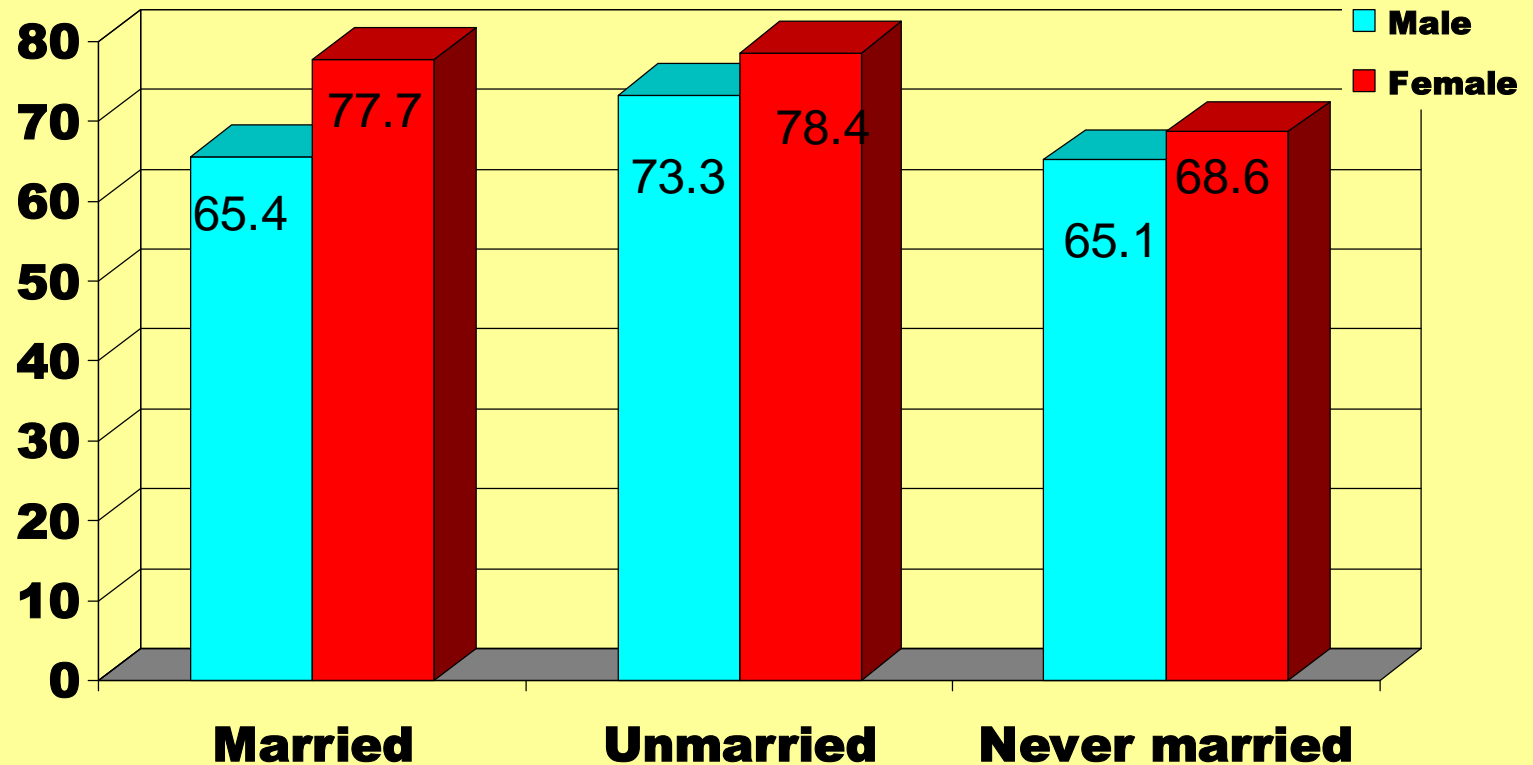
Percent with a disability, by age and gender



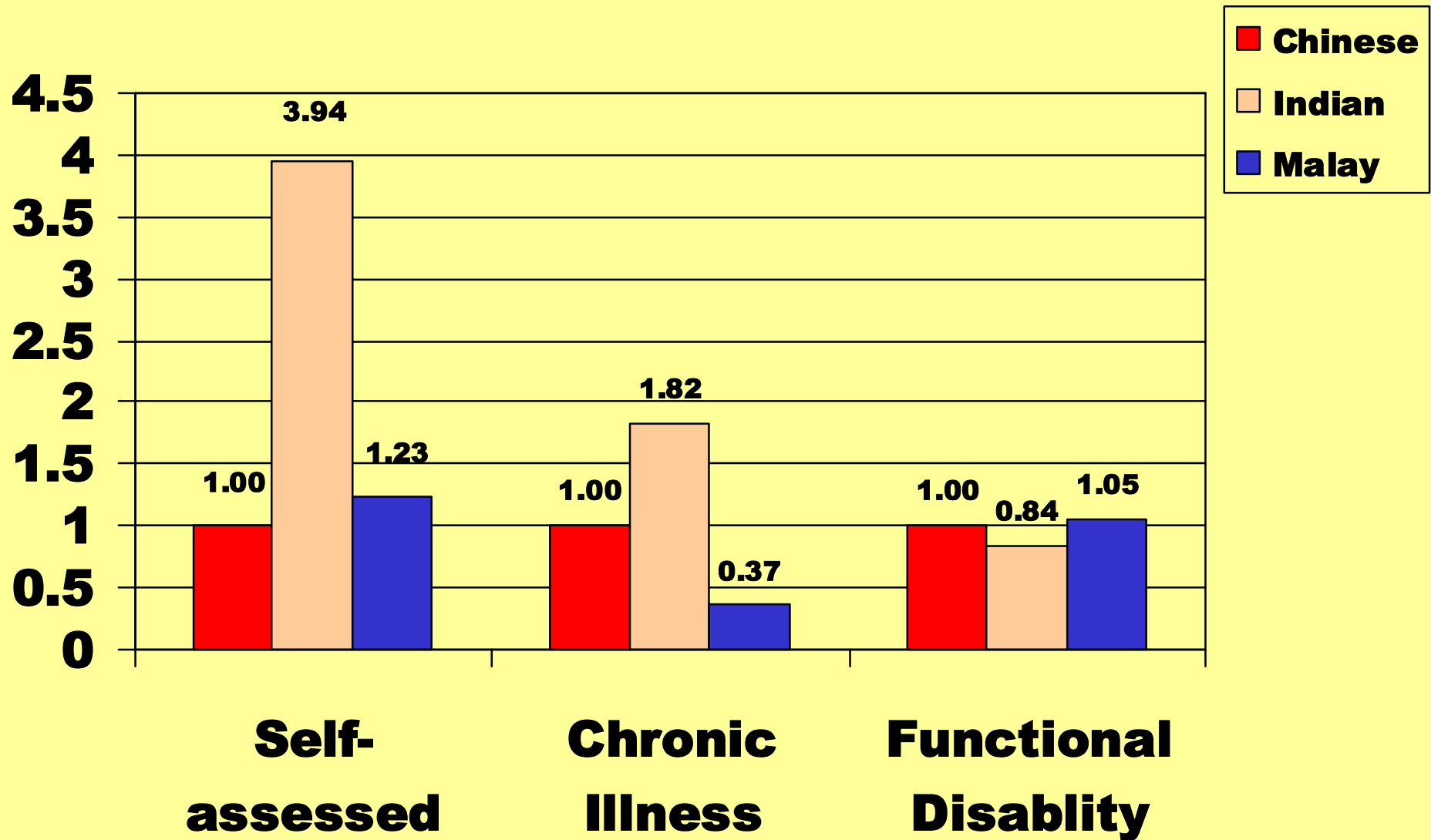
Percent reporting poor self-assessed health, by gender and marital status



Percent reporting a chronic limitation, by gender and marital status



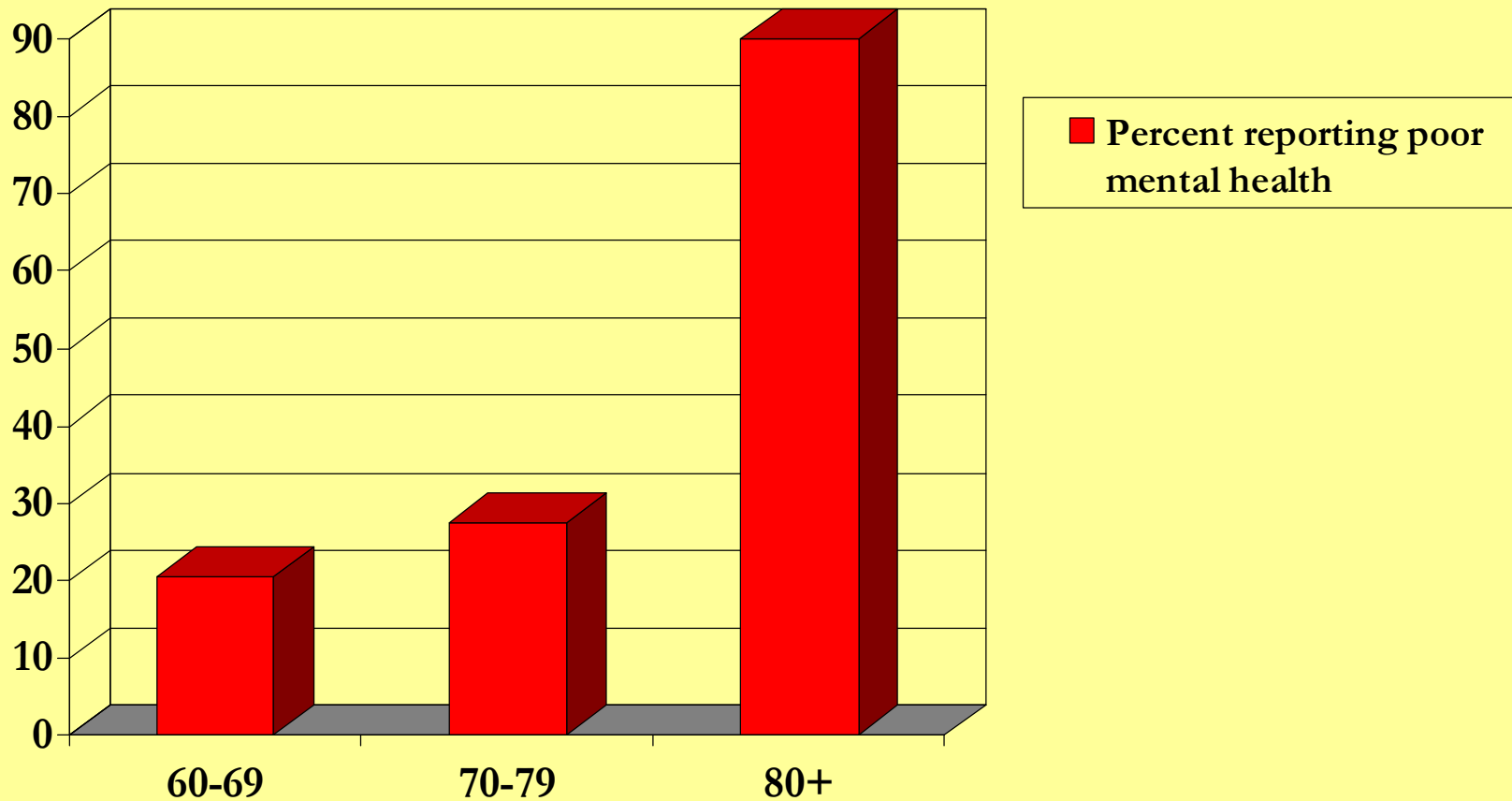
Odds ratios for ethnicity



Mental Health: Depression as a chronic condition

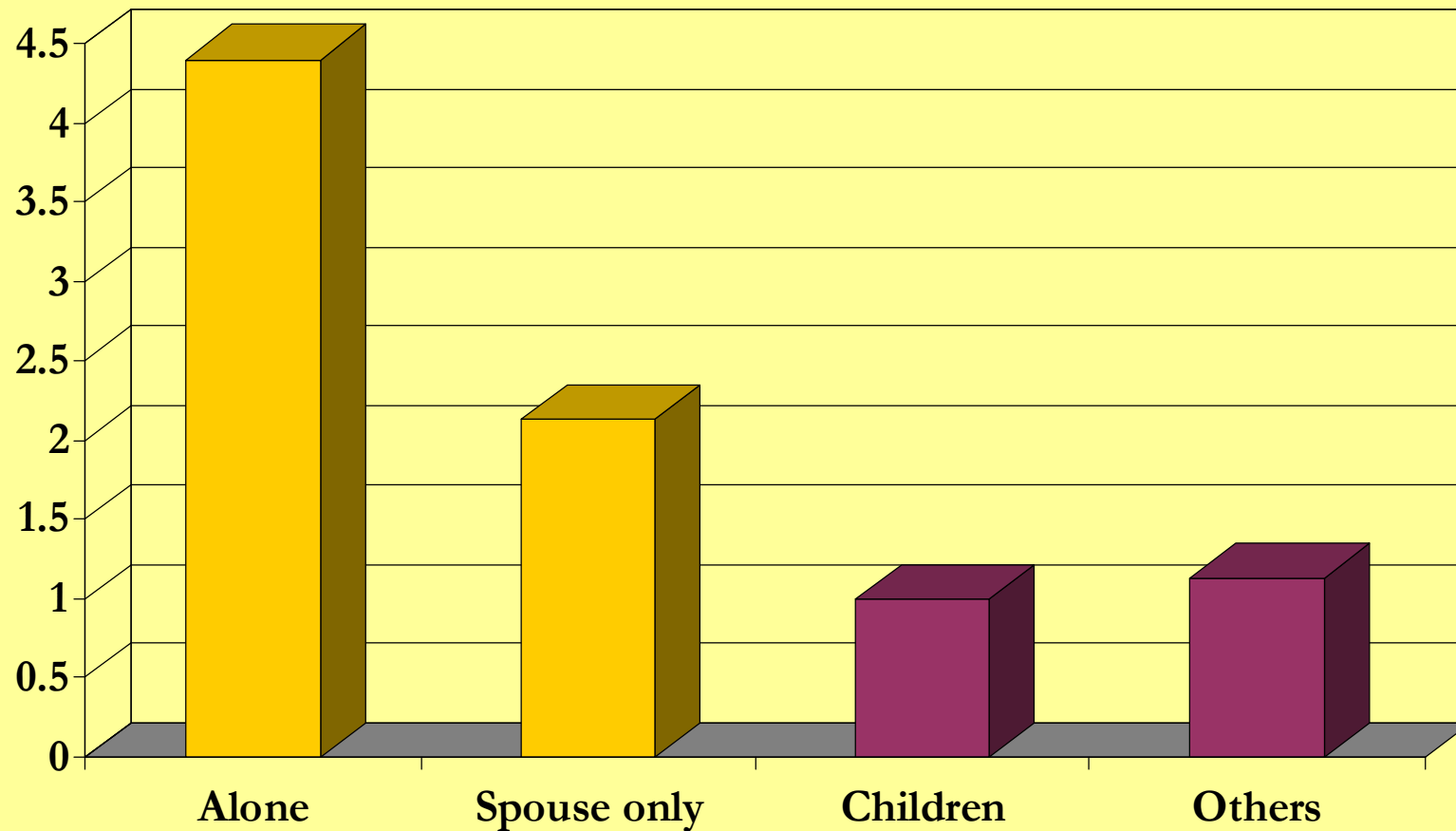
- In 1995 older Chinese Singaporean males had one of the highest suicide rates in Asia: 52 per 100,000 (Kua et al. 2003).
- Ultimate expression of anomie and symptomatic of postmodern societies (Durkheim 1867; Smelser 1966)?
- Old age is often a “role-less role” (Riley 1994).
- Changing norms, migration, and smaller family sizes mean a decrease in levels of social support available to older parents.

Growing older associated with poorer self-rated mental health

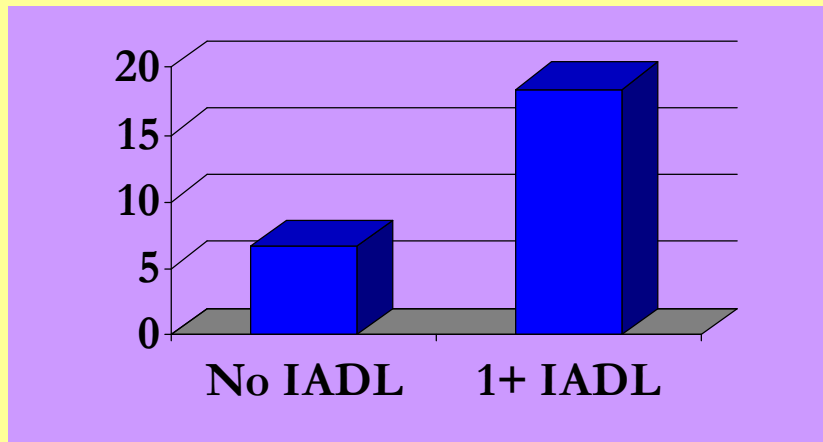
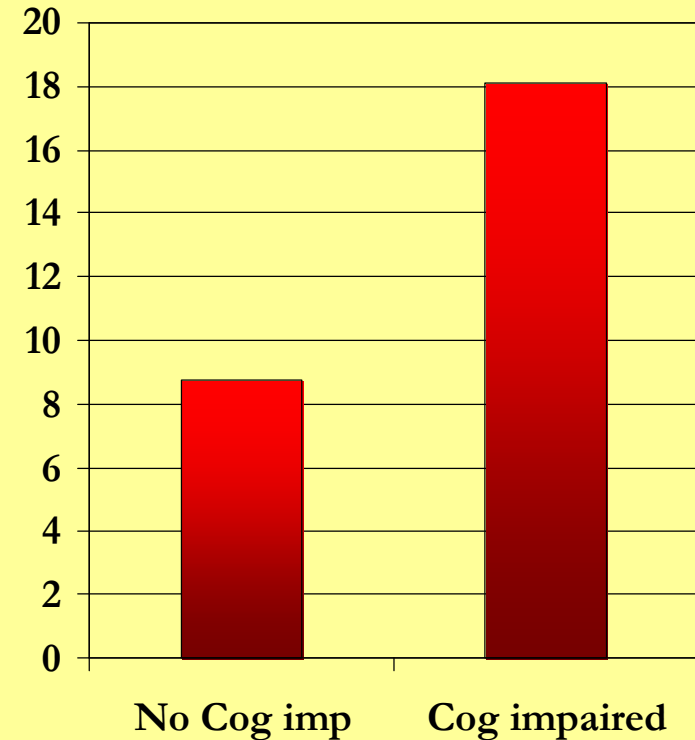
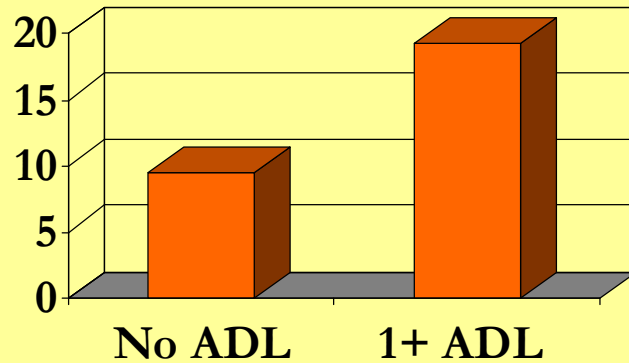


Chi-square = 10.07, $p < 0.05$

Living alone or with spouse only significantly associated with poor mental health



Disabled and cognitively impaired elderly more likely to report poor mental health



Disability transitions

- Estimated using panel data from 1995 and 1999.
- 3,625 individuals aged 55+ starting without disability in 1995.
- Multinomial logistic regression
- Outcomes: Become disabled, Died, Loss to follow-up. Reference group = no disability at Time 2.

Results

- Individuals significantly more likely to be disabled at second wave:
 - Women
 - Older adults
 - Unmarried at Time 1
 - Cognitively impaired at Time 1
 - Ethnic minorities
 - Not working at Time 1

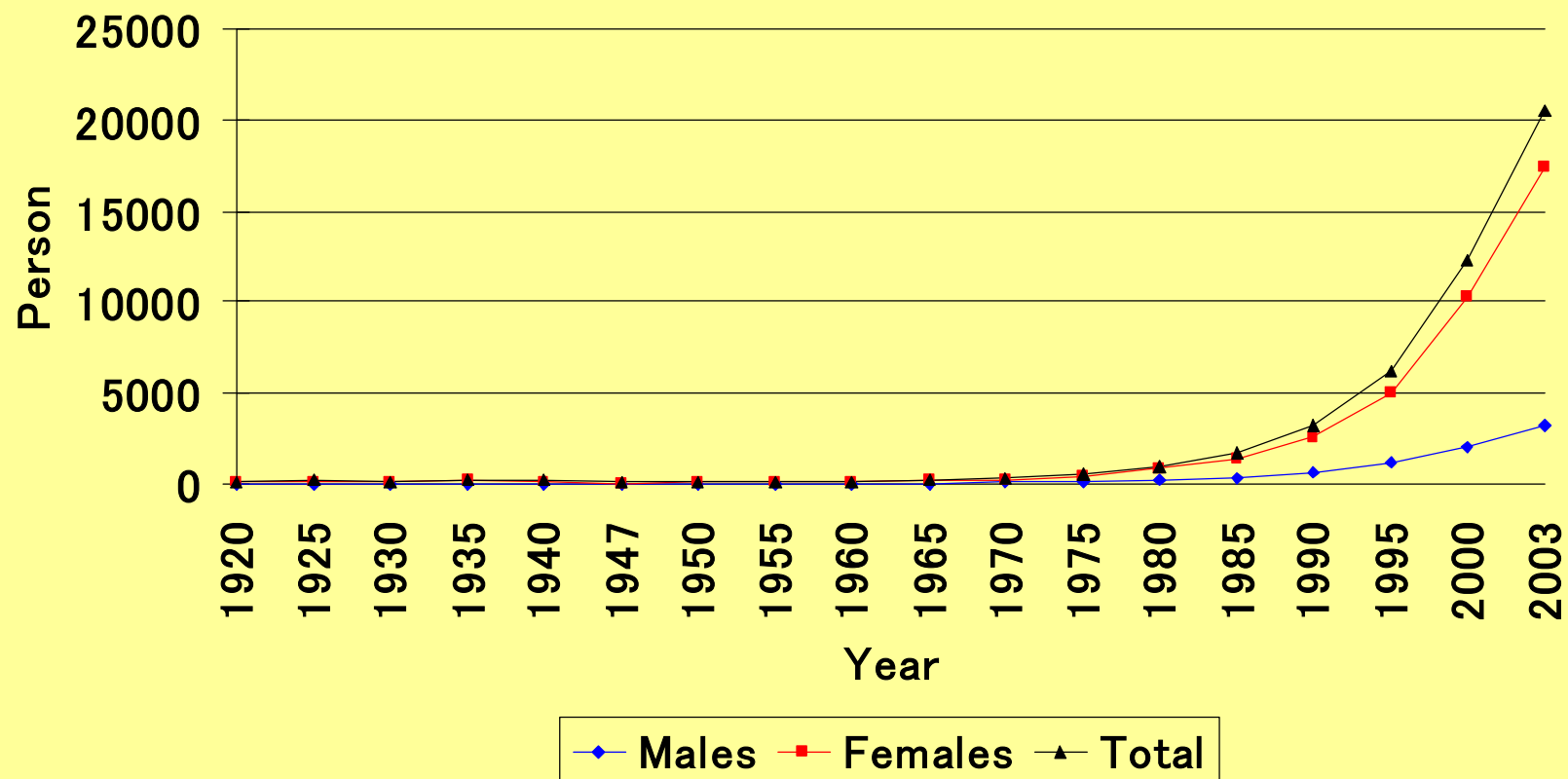
Managing disability in the Singapore family context

- Children pay for most older parents' health expenses.
- Adult children negotiate Singapore health care system for older parents.
- May explain why education and income levels of elderly have insignificant effects on health outcomes for this cohort of older adults.

Aging, Disability, and Health in Japan

- Japan has the oldest population in Asia.
- Co-residence rates have fallen from by 50%.
- Expectations of support from children have also dropped dramatically in the last 30 years.

Trends in Number of Centenarians



Data

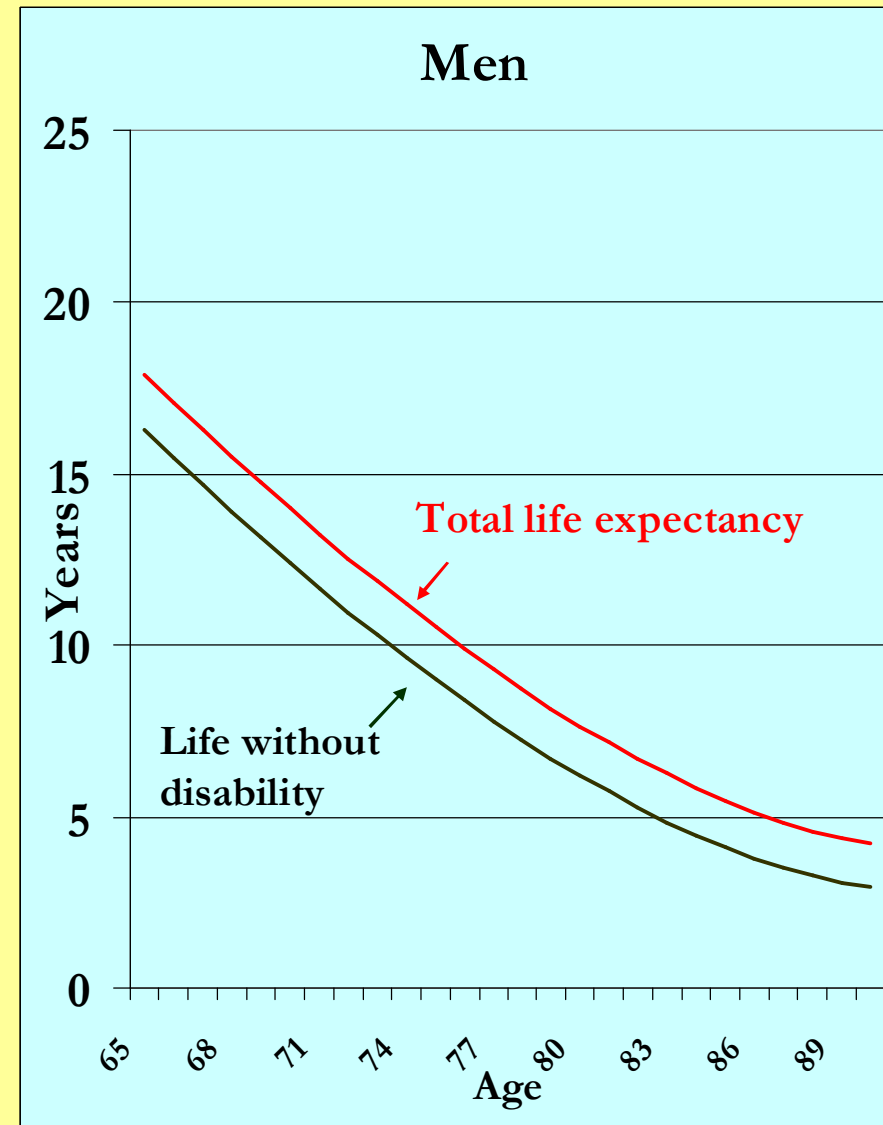
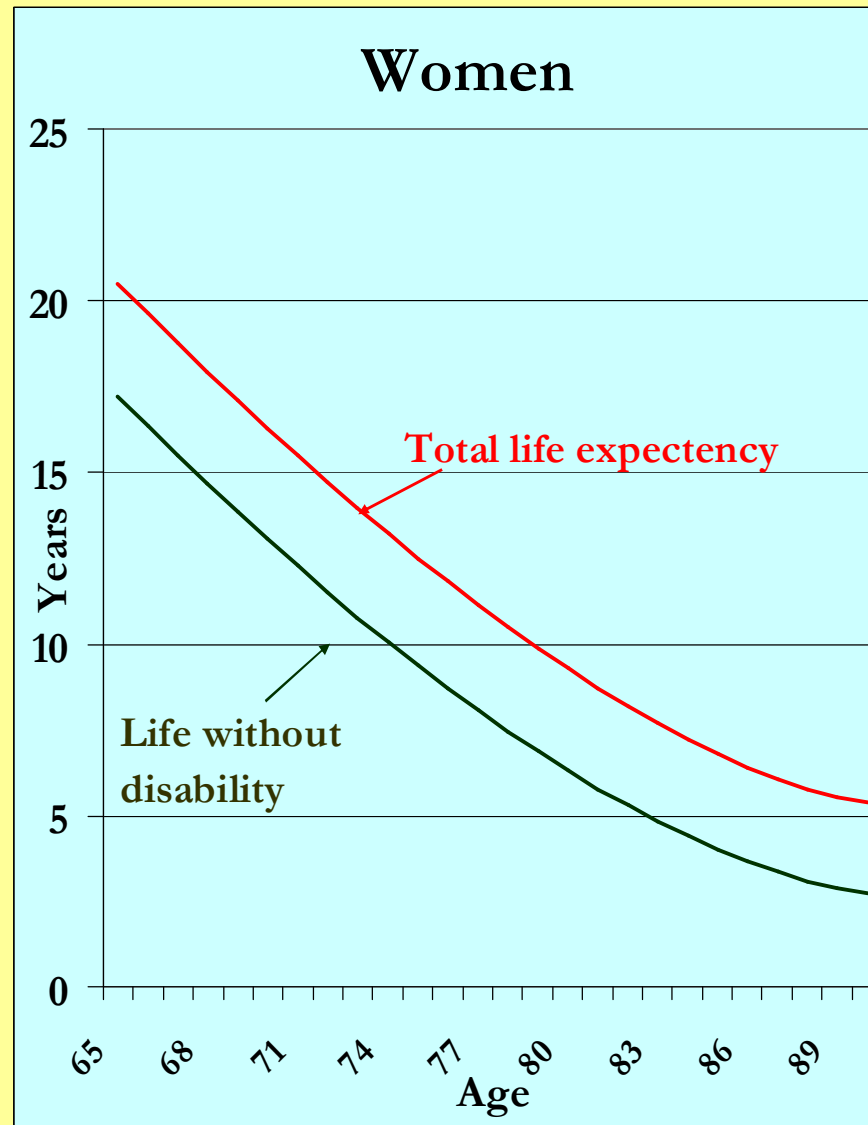
- Nihon University Longitudinal Japanese Study on Aging (PI: Yasuhiko Saito)
- Nationally representative sample aged 65+
- Data collected in 1999, 2001 and 2003

N= about 5,000 per wave

Follow-ups included add-ons

<http://www.usc.edu/dept/gero/CBPH/nujlsoa/>

Estimates of active life expectancy



Additional covariates

Domain	Covariates
Social support:	Marital status Living with children Living with others Receiving support from children
Behaviors:	Smoking Exercise
Socioeconomic characteristics:	Occupation Education Income
Disease profile:	Life threatening conditions Debilitating conditions

Parsimonious model

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Some policy implications arising out of the research shown today (1)

- Family management of older adult health needs to be further studied and evaluated.
- The situation will be dramatically different for baby boomers who have smaller family sizes, longer life expectancy, better health knowledge, and more resources. Individual reliance will be more key in future.
- Gender and ethnic differences in disability and chronic illness need to be addressed in policy making decisions.
- Living arrangements do not appear to be particularly important in predicting disability transitions.

Some policy implications arising out of the research shown today (2)

- Policies that recognize the emotional and financial burdens on adult children who are managing older parents health.
- Such policies should focus on emotional, financial and time constraints faced by caregivers.
- Poor mental health status of older adults is highly correlated with the presence of disability or chronic illness and this area is not well addressed currently.
- Move beyond prevalence data to data on transitions.