Older Singaporeans at a Crossroads

Findings from a National Study on Active and Productive Ageing among Older Singaporeans

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CARE Overview

Vision

*To achieve **health, social inclusion** and a **high quality of life** for our ageing population.*

Mission

- Provide an environment that enables **interdisciplinary** research and education on ageing
- Implement and evaluate **best practices** to **improve health** and **function** of older adults
- **Inform policy** and **practice** agenda on ageing

Key Research Themes

- Healthy ageing
- Caregiving/Long-term care
- New models of integrated care
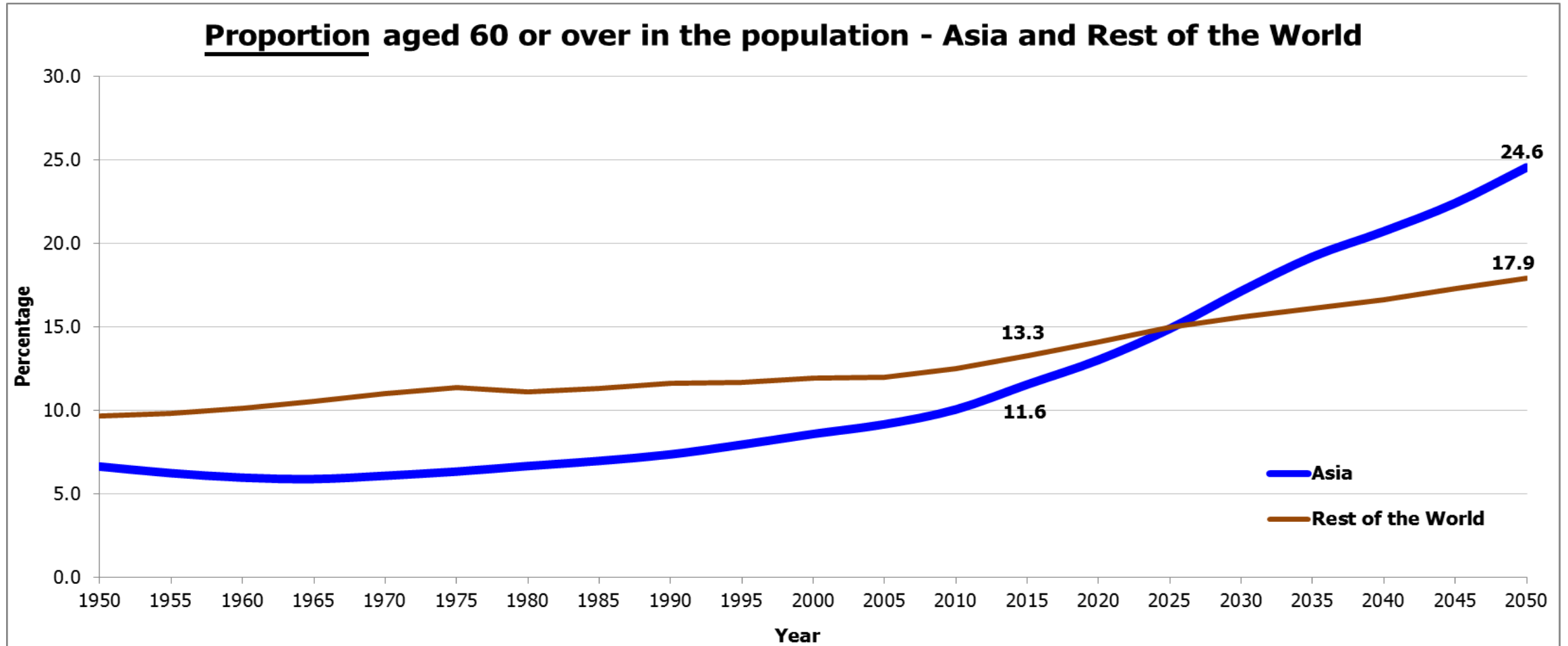- Retirement and well-being

Types of Research

- Foundational surveys
  - Panel on Health and Ageing of Singaporean Elderly (PHASE), 2009, 2011, 2015
  - Caregiving Transitions among Family Caregivers of Elderly Singaporeans (TRACE), 2019-
  - THE SIGNS Study, 2016-2017, 2019

- Evaluation studies
  - National Silver Academy
  - Care Close 2 Home

- Implementation research
  - Steps to Avoid Falls in the Elderly (community exercise programme)

Education – CARE Translation Platform

- Signature conferences
- Expert programmes
- Seminars
- Research methods workshops
- Policy briefs (Series 1-6: available on CARE's website)
- Closed-door roundtables
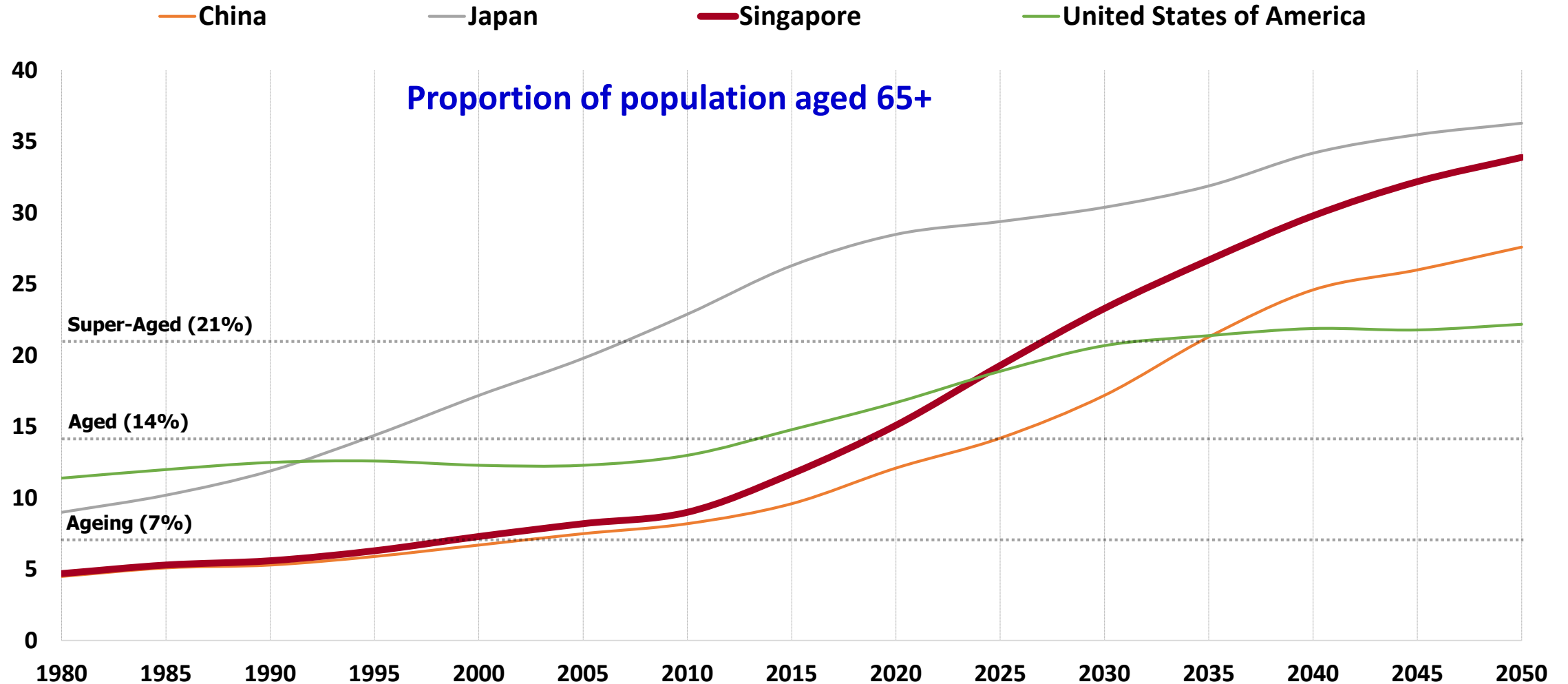- Internship programme
- Film screenings

Transitions in Health, Employment, Social Engagement, and Intergenerational Transfers in Singapore Study
(THE SIGNS Study) – I

Population Ageing

Proportion aged 60 or over in the population - Asia and Rest of the World

- 24.6
- 17.9
- 13.3
- 11.6

Asia

Rest of the World

Year

Percentage

Singapore, an 'Ageing' Society

Proportion of population aged 65+

Legend: China — Japan — Singapore — United States of America

Reference lines:
- Super-Aged (21%)
- Aged (14%)
- Ageing (7%)

Demographic Highlights

- Pace of ageing in Singapore faster than European nations, Japan
  - Proportion of older adults aged 60 and older projected to increase to 31% in 2030
  - Median age of the population was 18 years in 1965, increased to 30 years in 1990, and 40.5 years in 2017
- Decline in total fertility from 4.66 in 1965 to below replacement in 1975 to "lowest-low" levels of below 1.2 since 2002
- From 1970 to 2017, life expectancy at birth increased from 65 years to 81 years for men, and 69 years to 85 years for women
  - Healthy life expectancy at birth in 2016 is 74.7 years for men and 77.6 years for women
- In 2017, life expectancy at the age of 60 is 27 years for women, and 23.2 years for men

Transitions at older ages…

- Ages 60 years and older, a period of major life transitions
  - Full-time work to part-time work or retirement
  - Children moving out, setting up independent households
  - Increasing healthcare utilisation, preventative and curative
  - Higher prevalence of functional limitations
  - Onset of chronic physical ailments
- At the same time, greater opportunities for:
  - Rekindling or pursuing new interests
  - Social and community involvement
  - Generativity

THE SIGNS Study

- Longitudinal study to understand patterns and determinants of successful aging from a social and health perspective among older Singaporeans
  - Wave 1 was conducted in 2016-2017, and wave 2 is currently underway
- THE SIGNS Study – I assesses baseline status of successful ageing in the domains of physical health, healthcare utilisation, psychological wellbeing, social engagement, work, lifelong learning, volunteering, and intergenerational relationships

Study Aims

- Evaluate how (i) social factors, (ii) health behaviours, and (iii) healthcare use affect health outcomes and social engagement, and vice versa, in a longitudinal perspective
  - For example, does social engagement influence health outcomes over time
- Longitudinal data will also be used to estimate the probability in transition across health states in order to calculate healthy life expectancy
  - Assess for evidence in support of compression of morbidity among older Singaporeans

THE SIGNS Study – I

- Nationally-representative sample of 9736 potential respondents aged 60 years and older, was drawn based on the estimated mid-2015 population distribution

- Final sample size in THE SIGNS Study – I: 4549
  - Survey response rate of 50.1% based on all eligible potential respondents
  - Successful interview rate of 65.7% based on all eligible potential respondents who could be contacted at least once

Survey Methodology

- Face-to-face interview at respondents' residence by trained interviewers during July 2016-September 2017

- Conducted using Computer-Assisted Personal Interview (CAPI)

- Survey material in English, Chinese, Malay, Tamil

- Approved by National University of Singapore Institutional Review Board (NUS IRB)

Survey Components

- Screener to determine whether the potential respondent himself/herself, or a proxy respondent should respond to the survey
  - Conducted using the Abbreviated Mental Test-Singapore, a cognitive status test
- Proxy respondent selected if the potential respondent (i) received a score of less than 5 on the 10-item AMT-Singapore or (ii) was unable to respond due to health reasons
  - 464 (10.2%) proxy respondents out of 4549
- Written informed consent
- Main questionnaire, and optional anthropometry and performance measurements

Split Questionnaire Design

- Two versions of the main questionnaire were developed, based on feedback received on length of a single questionnaire during a pilot study
  - Stratified block randomization used to assign respondents to either version
- Anthropometry and performance measurements conducted at the end
  - Blood pressure, height, weight, hand grip strength, walking speed
  - 4484 out of 4549 (98.6%) opted in for at least 2 of 5 measures

Survey Modules

Both questionnaires	Questionnaire A	Questionnaire B
Basic attributes	Physical activity	Religiosity
Family makeup	Medication use	Loneliness
Social networks	Health literacy	Depressive symptoms
Quality of life	Health behaviours	Personal mastery
Volunteering		Provision and receipt of transfers
Lifelong learning		
Employment		
Physical health, ADLs, IADLs		
Healthcare utilisation		
Anthropometry Measurements		

Measures of Wellbeing

- Social networks: Lubben Social Network Scale – Revised (12 items)
  - *How many* …relatives/friends do you see/hear from at least once a month; …feel at ease with to talk about private matters; …feel close to to call on them for help
  - *How often* …do you see/hear from relatives/friends with whom you have the most contact; …do they talk to you when they have an important decision to make; …is one of them available for you to talk to

- Loneliness: UCLA Loneliness Scale (3)
  - *How often do you feel* …that you lack companionship; …left out; …isolated from others

Measures of Wellbeing

- Depressive symptoms: Centre for Epidemiologic Studies (CES)-Depression Scale (11)
  - *To what extent has… been true for you during the past week*: appetite was poor; felt everything I did was an effort; sleep was restless; felt people were unfriendly; enjoyed life; felt hopeful about the future…

- Personal mastery: Pearlin Mastery Scale (5)
  - *How strongly do you agree or disagree with*: have little control over things that happen to me; little I can do to change many of the important things in my life; often feel helpless in dealing with problems in life…
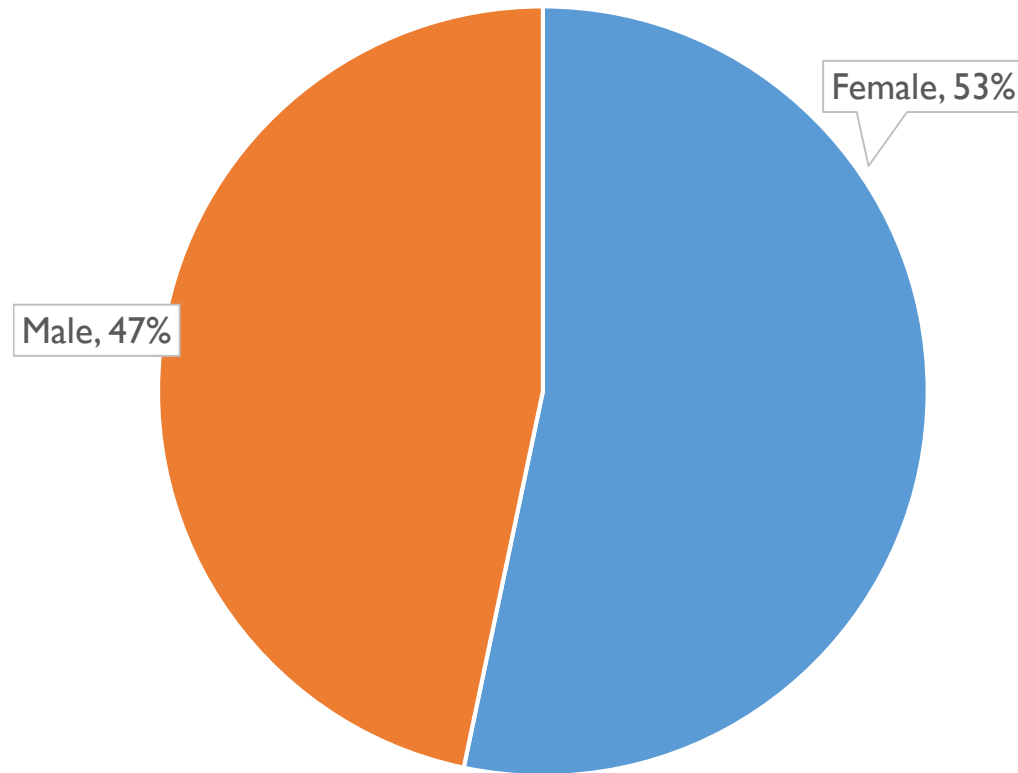
Measures of Wellbeing

- Quality of life: CASP (Control, Autonomy, Self-realization, and Pleasure) (12)
  - *How often you have felt*: age / health prevents me from doing things I would like to do; what happens to me is out of my control; can do as I please; life has meaning…
- Activities of Daily Living
  - *Difficult to perform without the assistance of a person or assistive device due to health or physical condition*: take a bath or shower; dress; eat; stand up from a bed/chair; walk around the house…
- Physical activity: WHO Global Physical Activity Questionnaire
  - Time spent in a typical week/day in travel, vigorous-, and moderate-intensity and sedentary activities
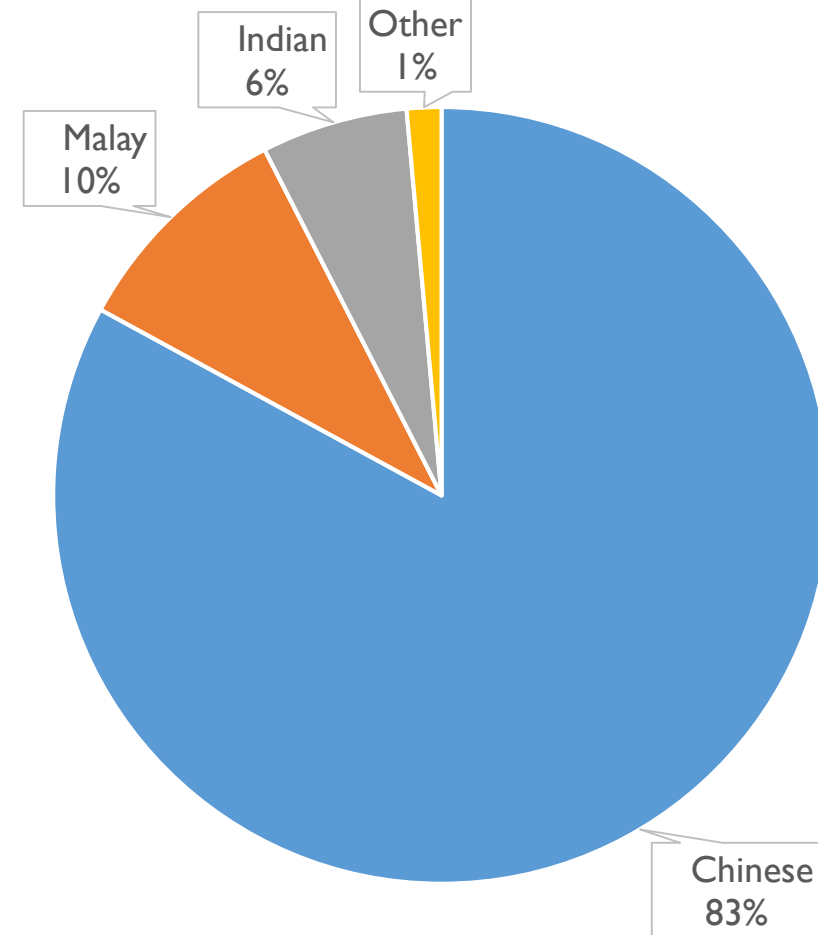
Sample Characteristics

- Age range 60 to 106 years
  - 122 respondents aged 90-99, and 4 aged 100+!
  - Median of 71 years
- 97.4% Singapore citizens and 2.6% permanent residents
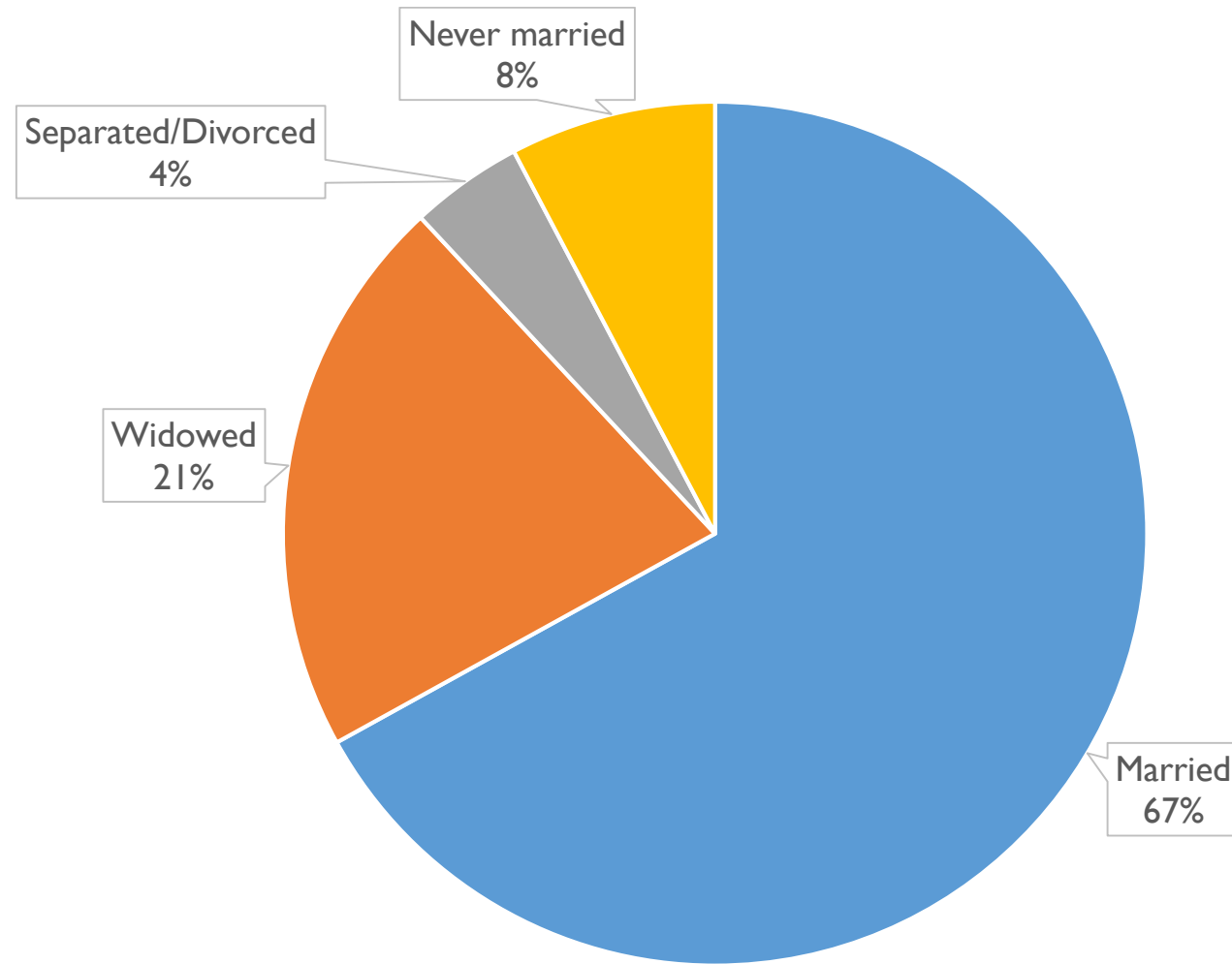
Sample Characteristics

Gender
- Female, 53%
- Male, 47%

Ethnicity
- Chinese 83%
- Malay 10%
- Indian 6%
- Other 1%

Centre for
Ageing
Research &
Education

DukeNUS
Medical School

Marital Status

Changing Profile of Older Adults

	2009 (PHASE – I)	2016-2017 (THE SIGNS Study – I)
		(weighted %)
Highest Educational Attainment		
No formal education	30.8	27.5
Primary	36.4	30.6
Secondary/Vocational/ITE	23.6	29.2
Junior College / Polytechnic	5.5	7.7
University and above	3.4	4.9
Employment Status		
Working full-time	17.6	24.3
Working part-time	8.9	12.5
Retired and/or not working	47.0	54.8
Homemaker/never-worked	26.5	8.3
Living With…		
Alone	6.2	7.3
Spouse	18.7	22.8
Child	26.3	19.6
Spouse and child	43.3	42.4
Foreign domestic worker only	0.9	1.4
Others	4.7	6.4
N	4990	4549

Research Team

- Co-Principal Investigator: Rahul Malhotra

- Co-Investigators: David Matchar, Truls Østbye

- Development of study questionnaires: PI, Co-PI, Co-Is, Grand Cheng, Yasuhiko Saito (Nihon University)

- Data collection supervision: Shannon Ang, Shweta Ajay, June Lee

- Data quality checks: Abhijit Visaria, Sumithra Suppiah, Yi Wen Tan, June Lee

- Dataset management: Veronica Goh, Bridget Seng

Funding

Programme for the Symposium

Topic	Presenter
How Healthy are Older Singaporeans?	Assistant Professor Rahul Malhotra, Head of Research
Healthcare Use of Older Singaporeans	Ms June Lee May Ling, Research Associate
The Ties that Bind – Social Connectedness among Older Singaporeans	Dr Peter Tay, Research Fellow
Volunteering and Support Provision to Family Members among Older Singaporeans	Assistant Professor Grand Cheng
Work or Leisure: A False Dichotomy in the Case of Singapore's Older Persons	Dr Abhijit Visaria, Research Fellow
Are Older Singaporeans Learning?	Ms Veronica Goh Shi Min, Research Associate
The Road to Learning is Paved with Good Intentions: Identifying Barriers to Older Persons Learning in Singapore	Dr Ad Maulod, Research Fellow

Thank you!

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