SPIRITUALITY, RELIGIOSITY, AND HEALTH IN GLOBAL PERSPECTIVE

Zachary Zimmer (Mount Saint Vincent University)

Global Aging & Community Initiative

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Review Article

Spirituality, religiosity, aging and health in global perspective: A review

Zachary Zimmer [a,b,*], Carol Jagger [c], Chi-Tsun Chiu [d], Mary Beth Ofstedal [e], Florencia Rojo [a], Yasuhiko Saito [f]

[a] University of California, San Francisco, USA
[b] Mount Saint Vincent University, Canada
[c] Newcastle University, UK
[d] Academia Sinica, Taiwan
[e] University of Michigan, USA
[f] Nihon University, Japan

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ABSTRACT

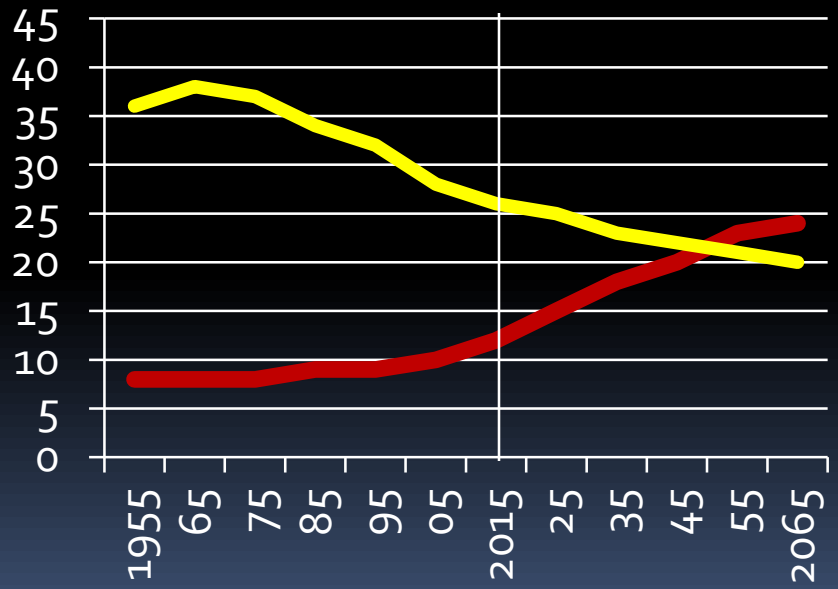
Persistent population aging worldwide is focusing attention on modifiable factors that can improve later life health. There is evidence that religiosity and spirituality are among such factors. Older people tend to have high rates of involvement in religious and/or spiritual endeavors and it is possible that population aging will be associated with increasing prevalence of religious and spiritual activity worldwide. Despite increasing research on religiosity, spirituality and health among older persons, population aging worldwide suggests the need for a globally integrated approach. As a step toward this, we review a subset of the literature on the impact of religiosity and spirituality on health in later life. We find that much of this has looked at the relationship between religiosity/spirituality and longevity as well as physical and mental health. Mechanisms include social support, health behaviors, stress and psychosocial factors. We identify a number of gaps in current knowledge. Many previous studies have taken place in the U.S. and Europe. Much data is cross-sectional, limiting ability to make causal inference. Religiosity and spirituality can be difficult to define and distinguish and the two concepts are often considered together, though on balance religiosity has received more attention than spirituality. The latter may however be equally important. Although there is evidence that religiosity is associated with longer life and better physical and mental health, these outcomes have been investigated separately rather than together such as in measures of health expectancy. In conclusion, there is a need for a unified and nuanced approach to understanding how religiosity and spirituality impact on health and longevity within a context of global aging, in particular whether they result in longer healthy life rather than just longer life.

Global 'Population aging'

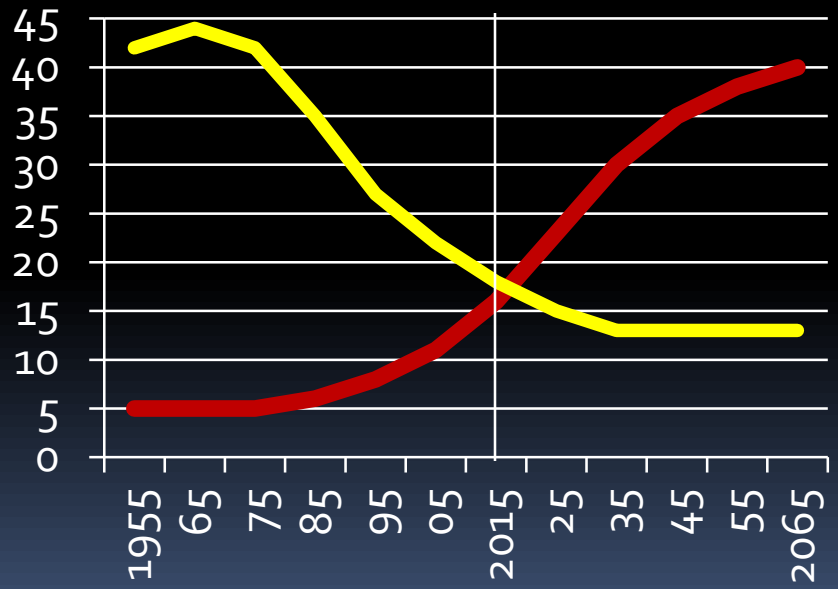
'Population aging' is 'growth' in the older segment of a population

'Population aging' is occurring throughout the world

Percent of global population 60+ and 0-14 by year



Percent of Thai population 60+ and 0-14 by year

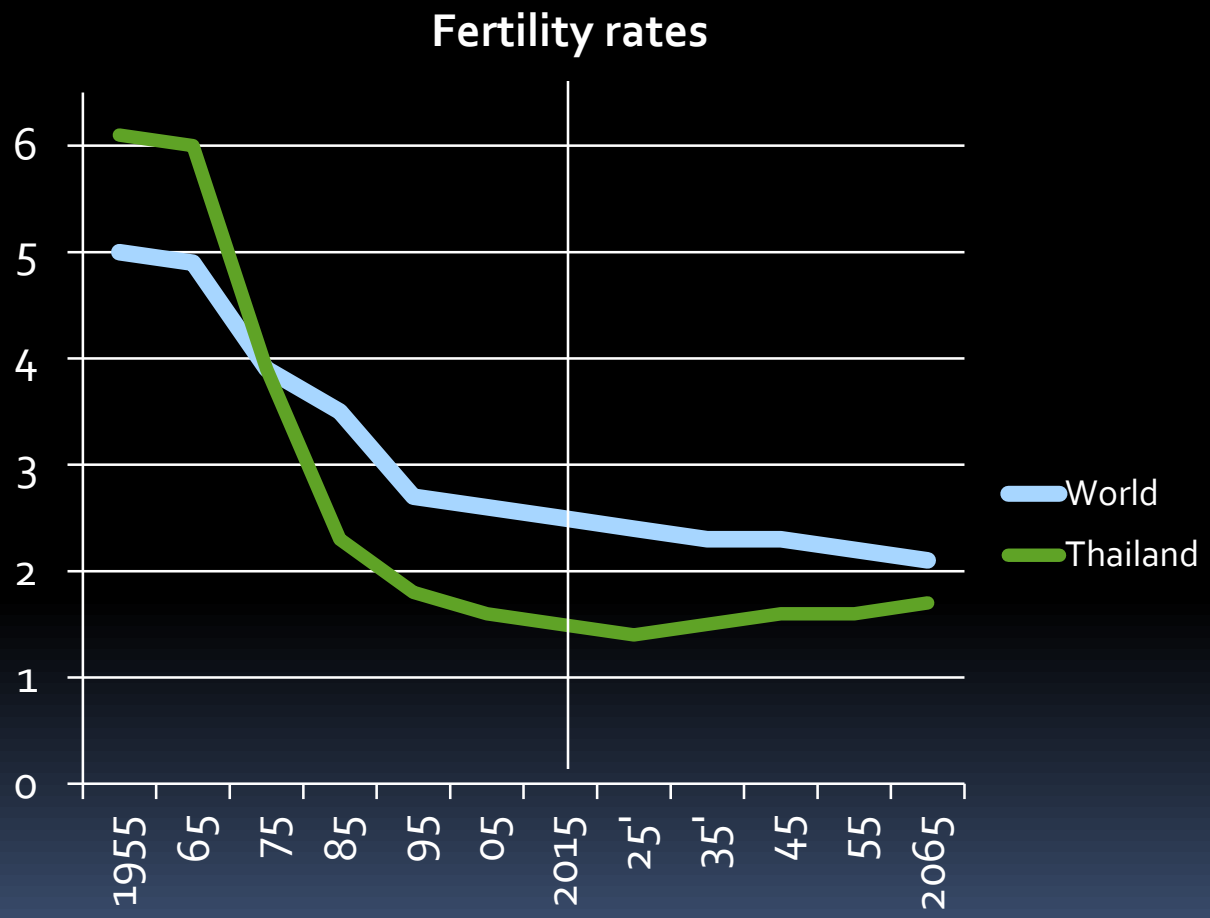


0 to 14

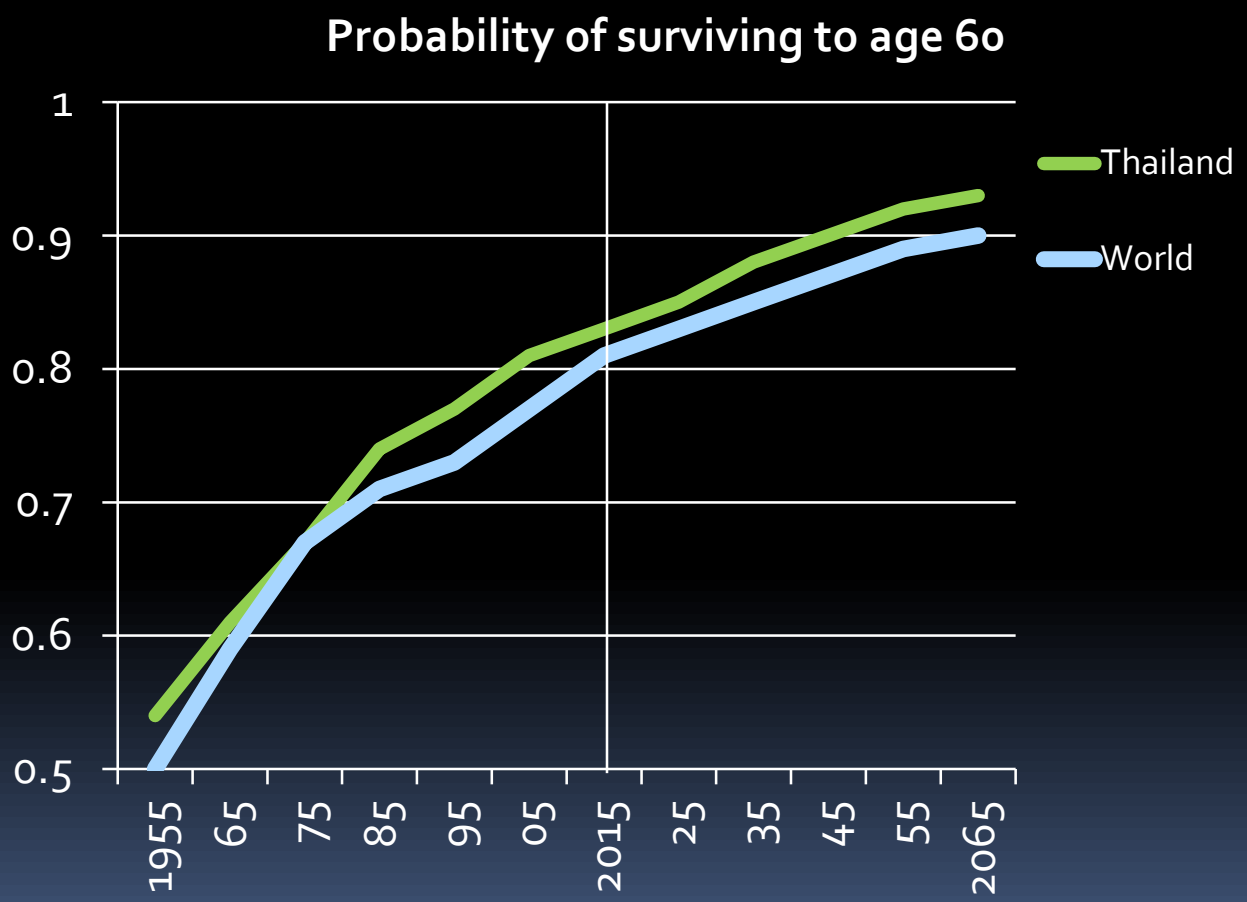
60 +

Reason 1: Drop in fertility

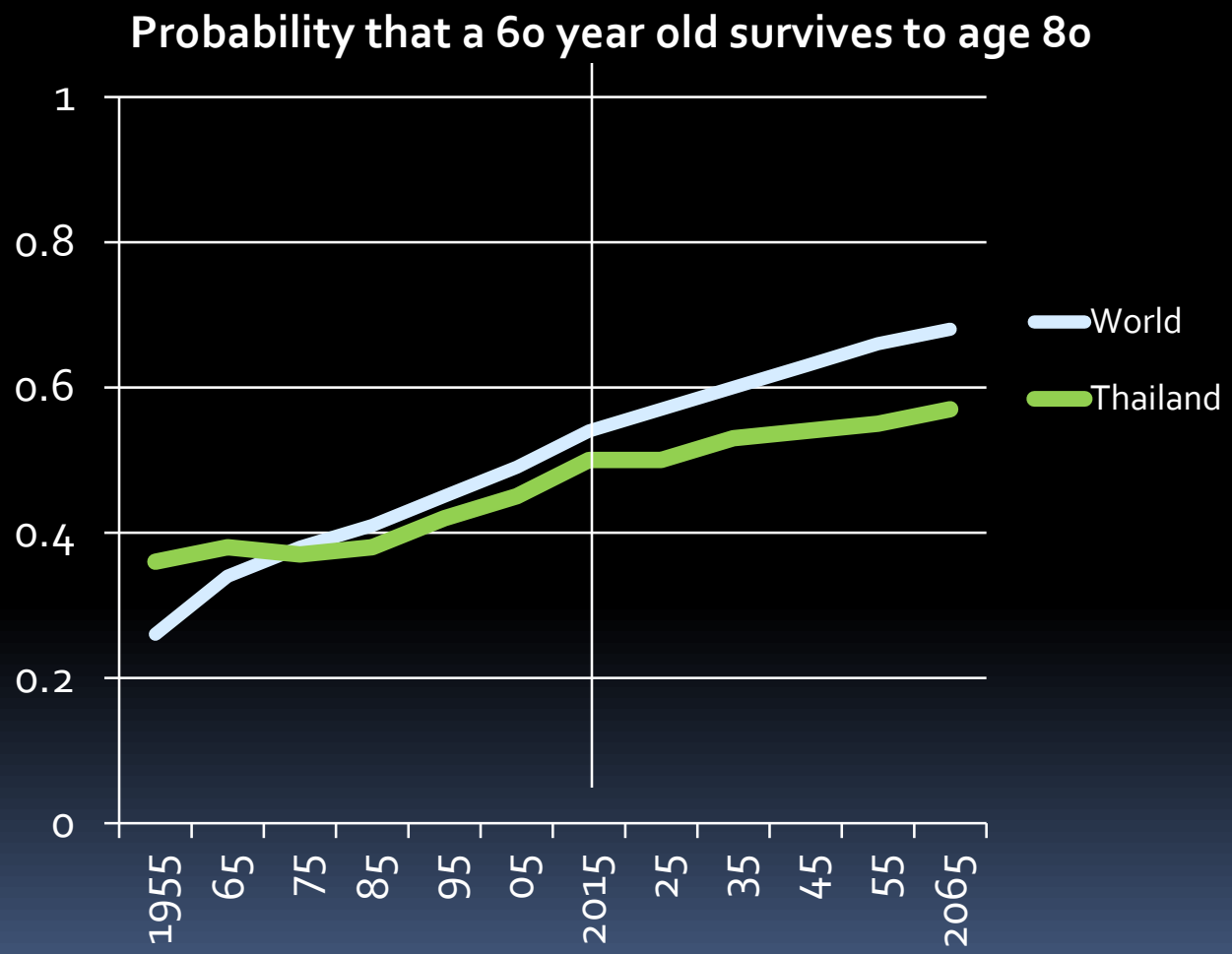
When fertility declines, 'older' generations are large relative to 'younger'.



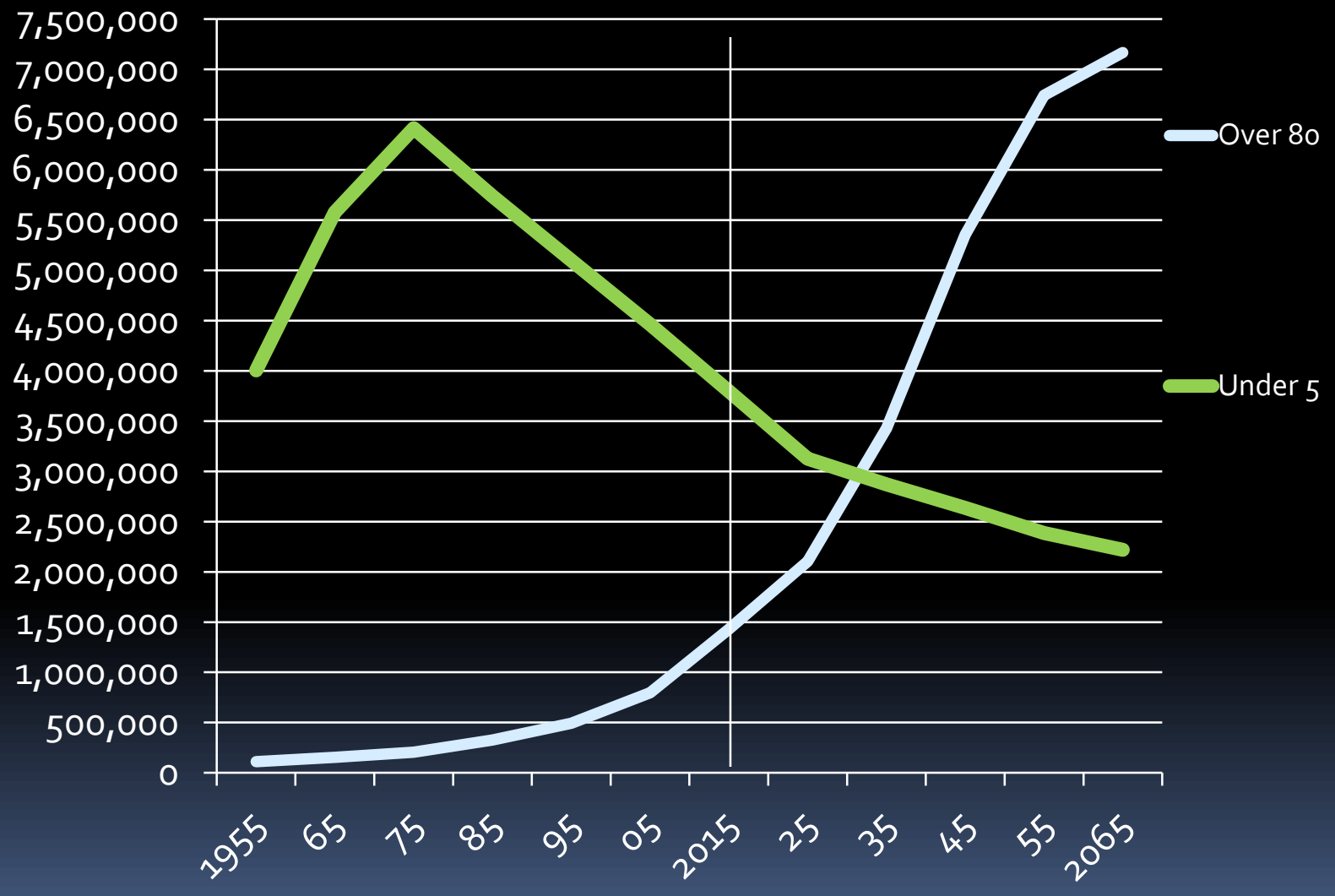
Reason 2: Chance of living to old age increasing



Old people are more likely to live to advanced ages

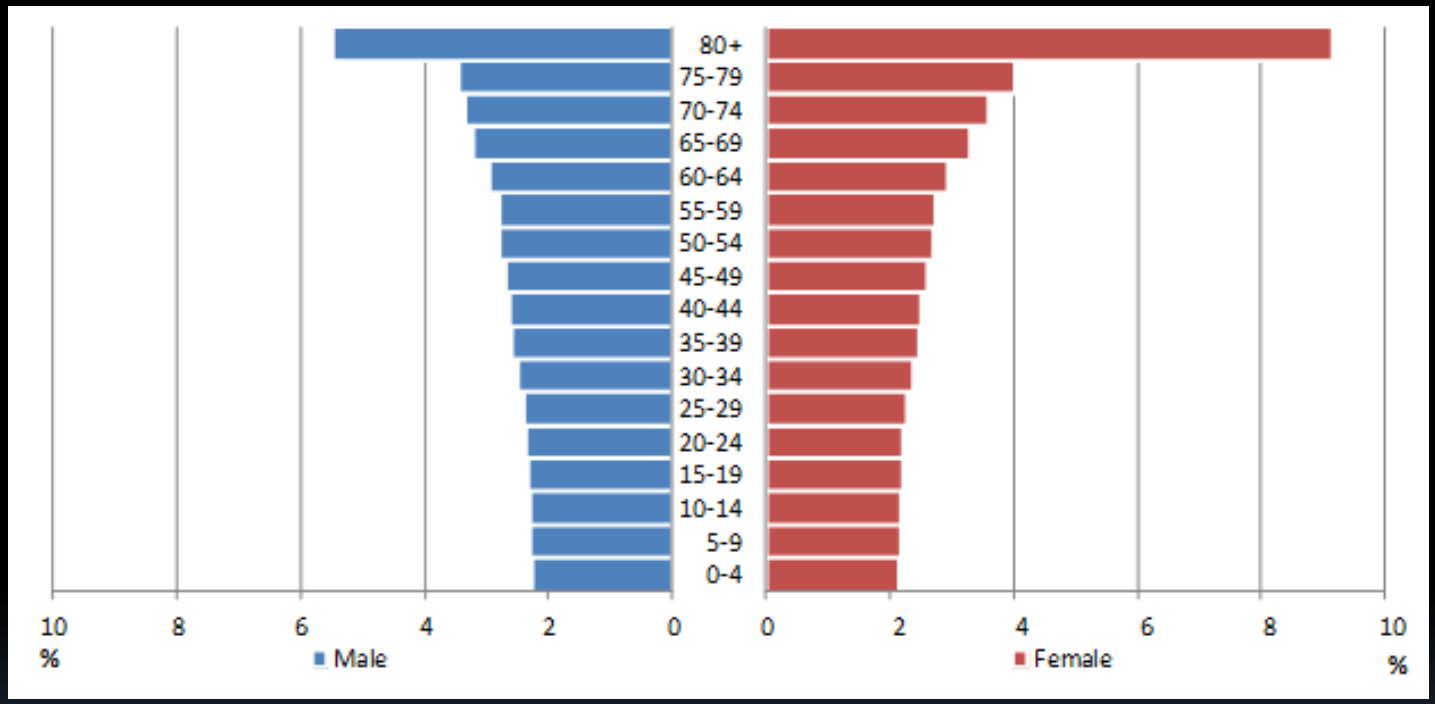


Number of Thais over 80 and under 5



These combined forces have quite extreme effects on population composition

Japan 2050



Summarizing the demographics

- Globally, the population is aging and old people are living to ever advanced ages.

- This is a function of:

  - Fertility decline
  - Greater likelihood of surviving to old age
  - Once old, good chance of living to a very old age

What is the impact of population aging and increasing longevity on quality of life and costs of care?

* Demographically, the impact depends on:

* Whether extra years of life are lived healthy or unhealthy

* Compression versus expansion of morbidity

* Heterogeneous compression

  Idea that compression is occurring for subsets of the population

Where does religion factor in?

* Based on past evidence, religion may be one characteristic influencing heterogeneous compression

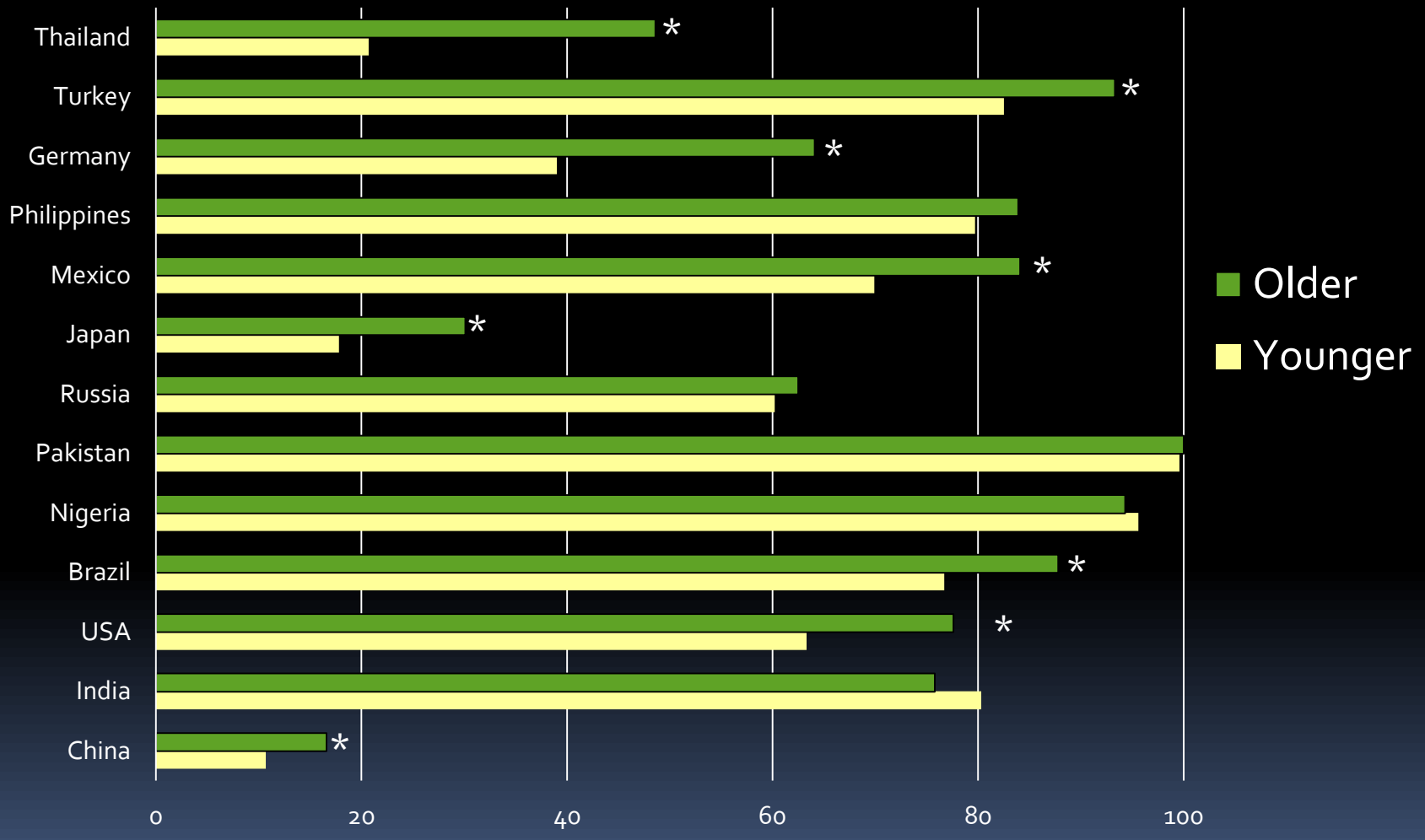
* Research in the U.S. has indicated religious people live longer and healthier lives than others

* Mechanisms
  - Support
  - Behaviors
  - Stress
  - Other psychosocial factors
  - Selectivity
  - Reverse causality

* Religion has some negative effects on health
* People near the end of life may turn to religion for support and meaning

Older people tend to be more 'religious' than younger

Percent saying they are religious in selected countries,
WVS data, younger versus older persons



*** Older significantly different from younger**
Note: Older = 60+ Younger = 18-39

Our project is addressing some unanswered questions

1) Does religion associate with 'healthy' life expectancy?

'Healthy' life expectancy is number of years people in a population live on average in a healthy state.

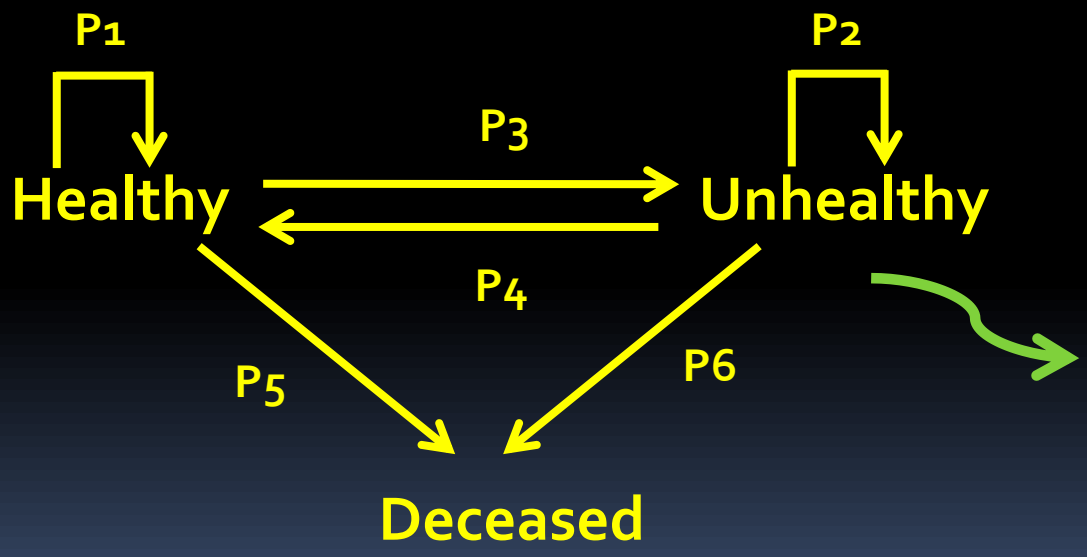
Combines mortality and morbidity.

Can help us to determine if religion is influencing quality in addition to quantity of life.

Models for calculating healthy life expectancy

1. Prevalence models (e.g., Sullivan Method)

2. Multistate life table models (e.g., IMaCh or SPACE)



Current Age	survivors	deaths	% survivors	% deaths	Midpoint		Expectancy	Age + expectancy
X	n	d	l	q	L	T	e	
0	101	3	1.00	0.03	0.99	8.78	8.78	8.78
1	98	0	0.97	0.00	0.97	7.79	8.03	9.03
2	98	1	0.97	0.01	0.97	6.82	7.03	9.03
3	97	3	0.96	0.03	0.95	5.86	6.10	9.10
4	94	3	0.93	0.03	0.92	4.91	5.28	9.28
5	91	4	0.90	0.04	0.88	4.00	4.43	9.43
6	87	6	0.86	0.07	0.83	3.11	3.61	9.61
7	81	5	0.80	0.06	0.78	2.28	2.85	9.85
8	76	20	0.75	0.26	0.65	1.50	2.00	10.00
9	56	20	0.55	0.36	0.46	0.85	1.54	10.54
10	36	24	0.36	0.67	0.24	0.40	1.11	11.11
11	12	6	0.12	0.50	0.09	0.16	1.33	12.33
12	6	3	0.06	0.50	0.04	0.07	1.17	13.17
13	3	2	0.03	0.67	0.02	0.02	0.83	13.83
14	1	1	0.01	1.00	0.00	0.00	0.50	14.50
15	0	0	0.00		0.00	0.00		
		101						

Minimum data requirements

1. Prevalence models (e.g., Sullivan Method)

Table 1. Life table for the total population: United States, 2008

Spreadsheet version available from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/61_03/Table01.xls.

Age (years)	Probability of dying between ages x and $x+1$	Number surviving to age x	Number dying between ages x and $x+1$	Person-years lived between ages x and $x+1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0–1	0.006593	100,000	659	99,425	7,812,389	78.1
1–2	0.000461	99,341	46	99,318	7,712,964	77.6
2–3	0.000281	99,295	28	99,281	7,613,646	76.7
3–4	0.000219	99,267	22	99,256	7,514,365	75.7
4–5	0.000172	99,245	17	99,237	7,415,109	74.7
5–6	0.000155	99,228	15	99,221	7,315,872	73.7
6–7	0.000139	99,213	14	99,206	7,216,651	72.7
7–8	0.000126	99,199	12	99,193	7,117,445	71.7
8–9	0.000110	99,187	11	99,181	7,018,252	70.8
9–10	0.000093	99,176	9	99,171	6,919,071	69.8
10–11	0.000081	99,167	8	99,162	6,819,900	68.8

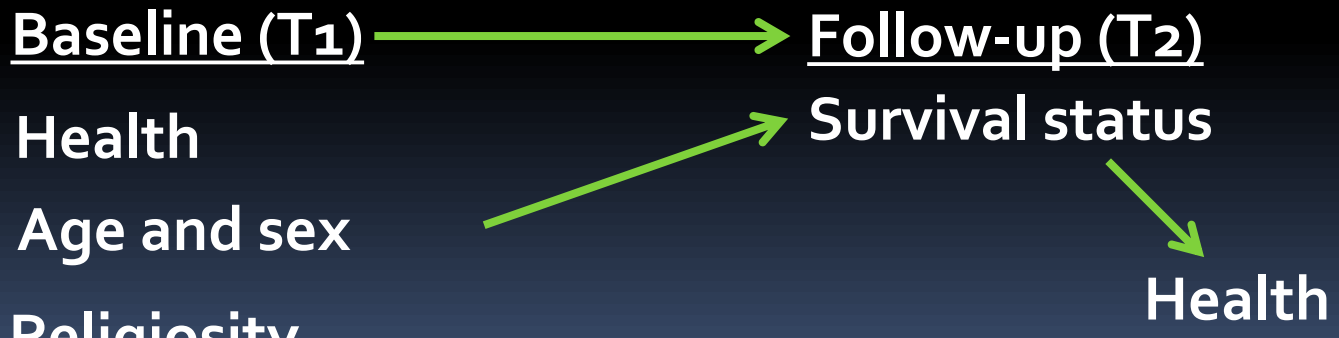
Cross-sectional data

\+

Age and sex specific health prevalence - not so easy to incorporate religion

2. Multistate life table models

Longitudinal panel data



Another unanswered question

2) How universal is the association between religion and health?

The universality is very uncertain.

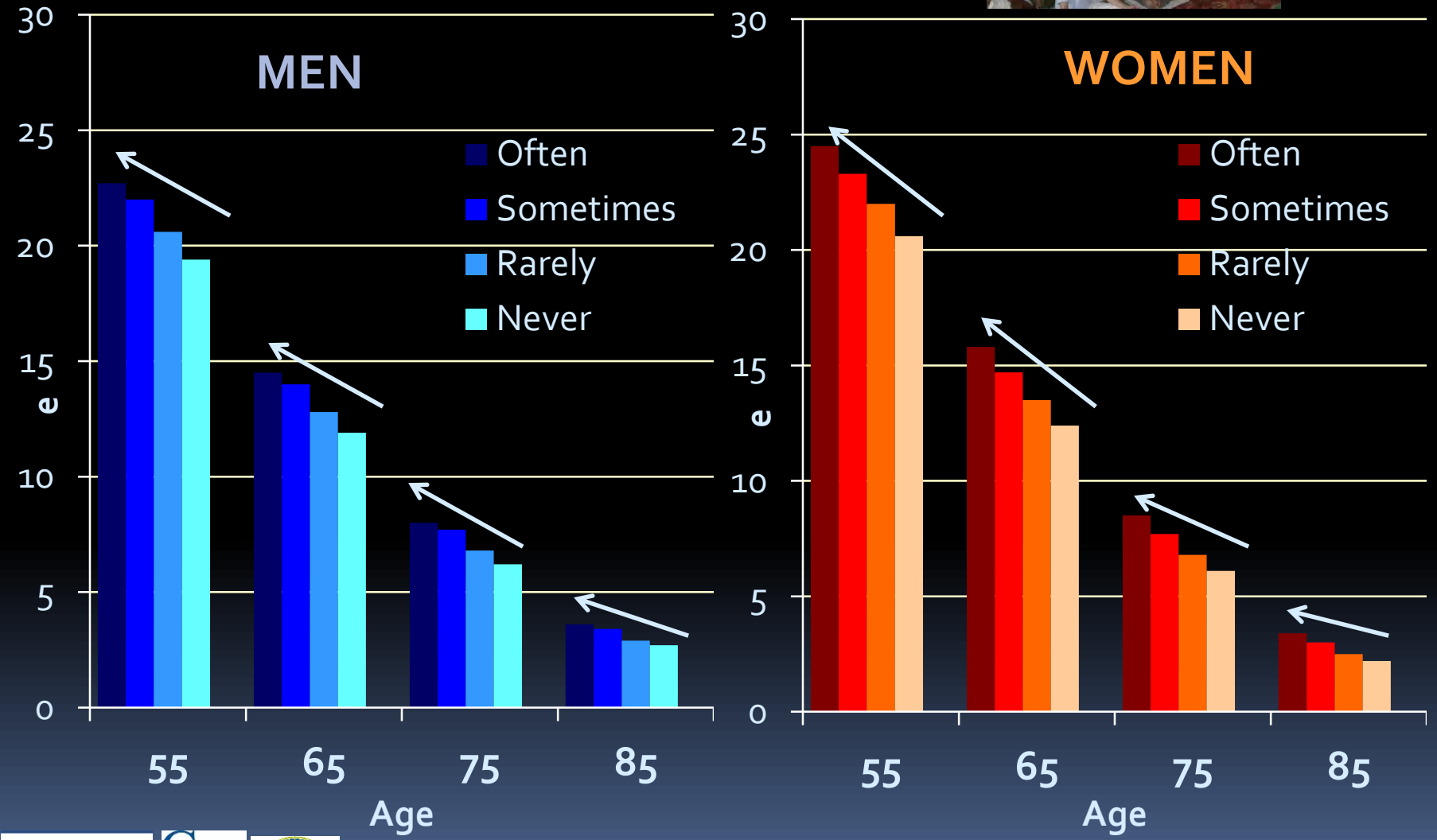
Examples:

Do associations exist across religious expressions, norms, geo-political circumstances and epidemiological histories?

Do associations differ across public and private expressions?

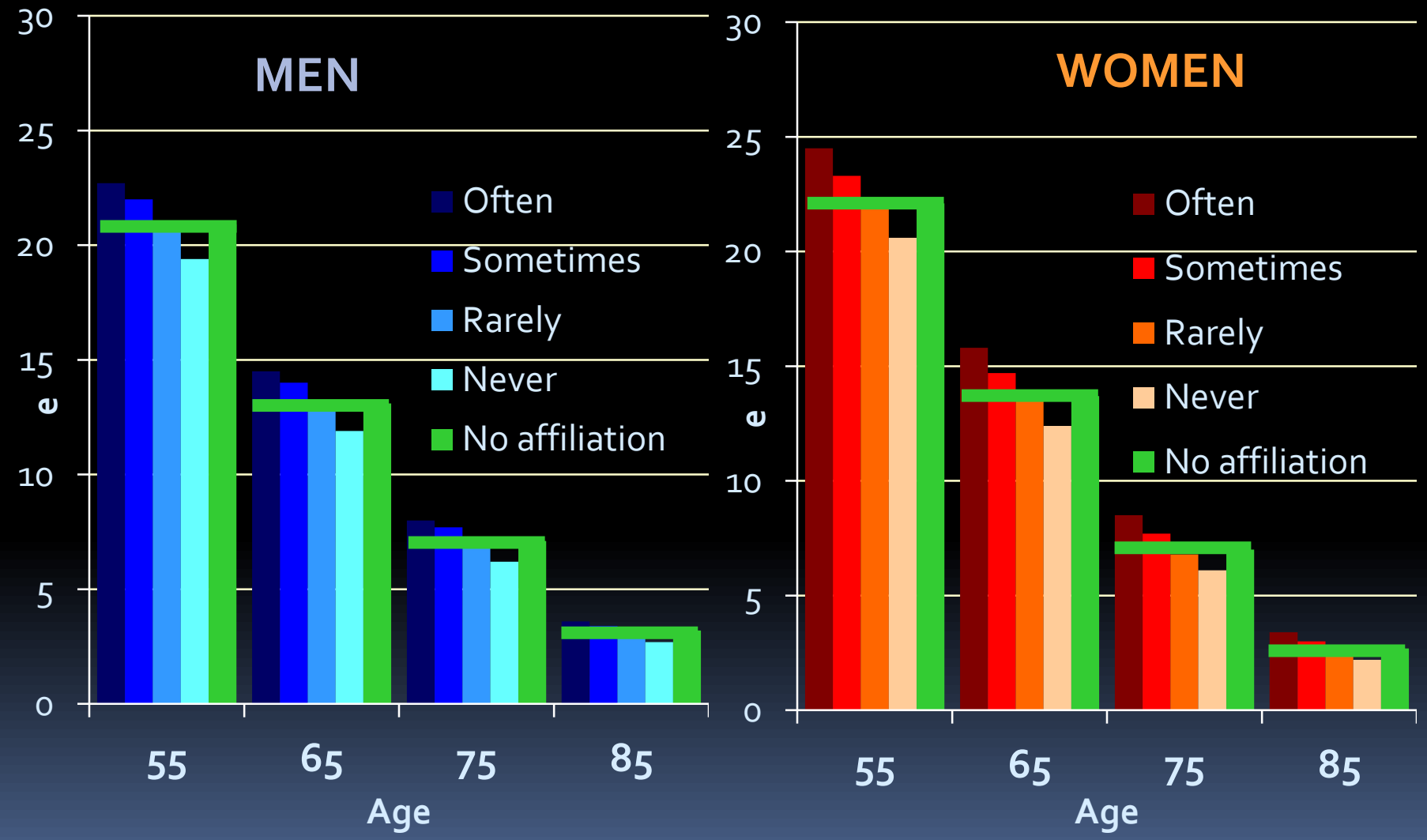
Study name	Countries
Health and Retirement Study (HRS)	USA
English Longitudinal Study on Aging (ELSA)	England
Study of Health and Aging in Europe (SHARE)	19 European
Mexican Health and Aging Study (MHAS)	Mexico
The Irish Longitudinal Study on Ageing (TILDA)	Ireland
WHO Study on Global Ageing and Adult Health (SAGE)	6 Global
Panel on Health and Aging of Singaporean Elderly Survey (PHASE)	Singapore
Survey of Aged in Kerala (KERALA)	India
Costa Rican Longevity and Healthy Aging Study (CRELES)	Costa Rica
Chinese Longitudinal Healthy Longevity Study (CLHLS)	China
Korean Longitudinal Study of Aging (KLOSA)	South Korea
Taiwan Longitudinal Study on Aging (TLSA)	Taiwan
World Values Survey (WVS)	94 Global
European Values Study (EVS)	47 European

Disability-free expectancy by 'public' religious expression in Taiwan



Mira Hidajat, Zachary Zimmer, Yasuhiko Saito and Hui-Sheng Lin. 2013. Religious engagement, life expectancy and disability-free life expectancy in Taiwan. *European Journal of Ageing*. 10(3): 229-236.

Adding the 'unaffiliated'



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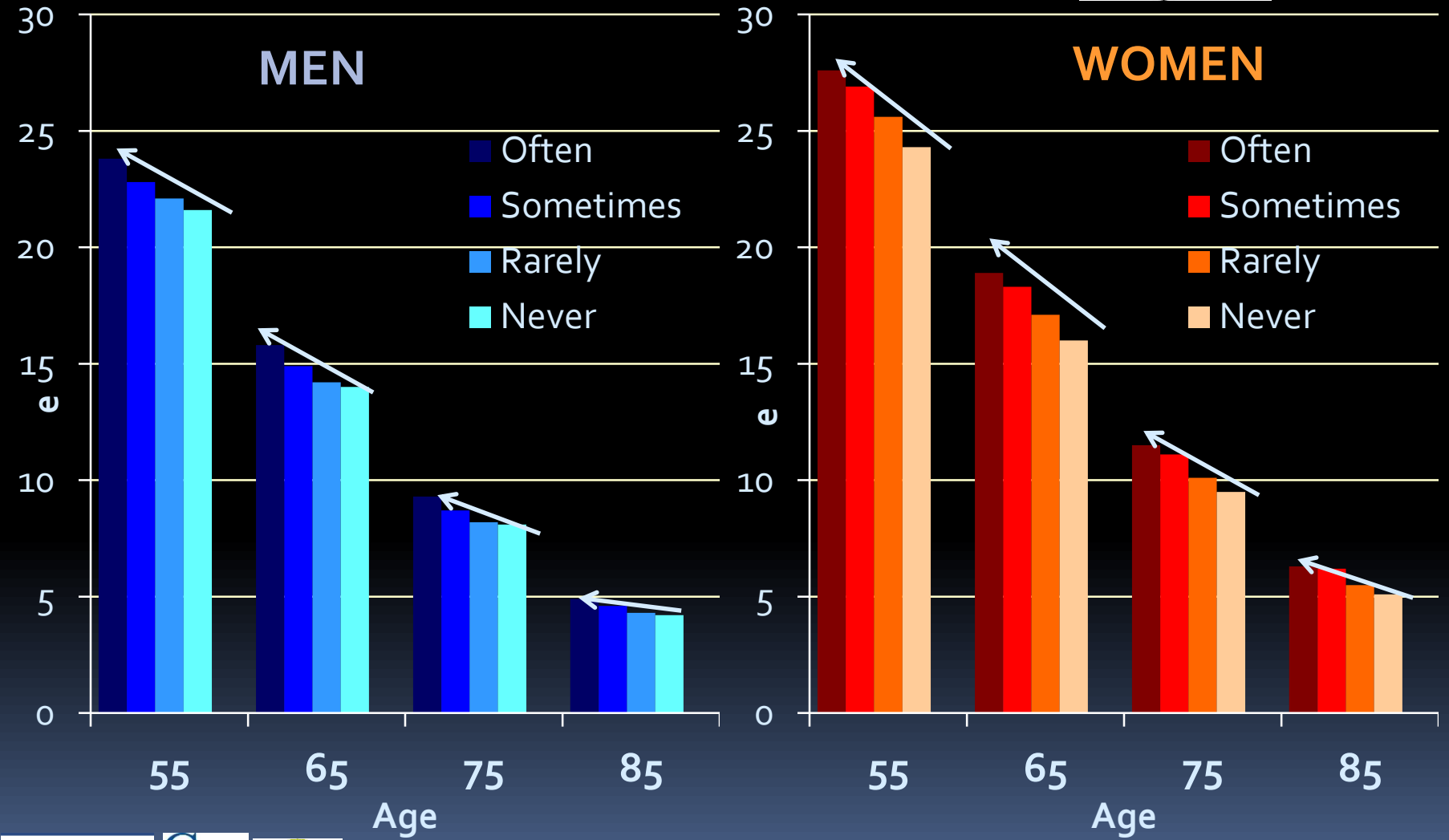
Disability-free expectancy by 'private' religious expression in Taiwan



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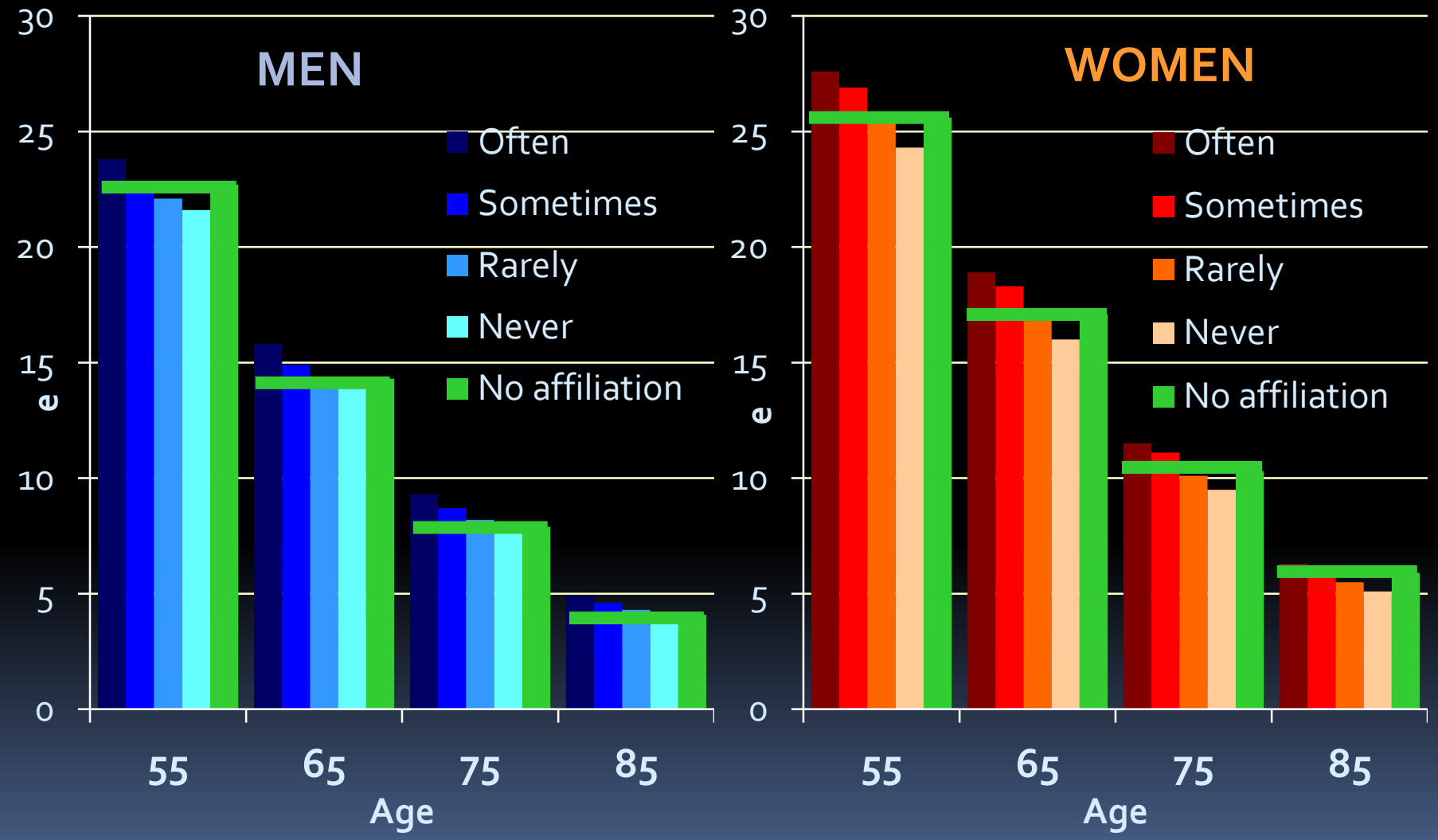

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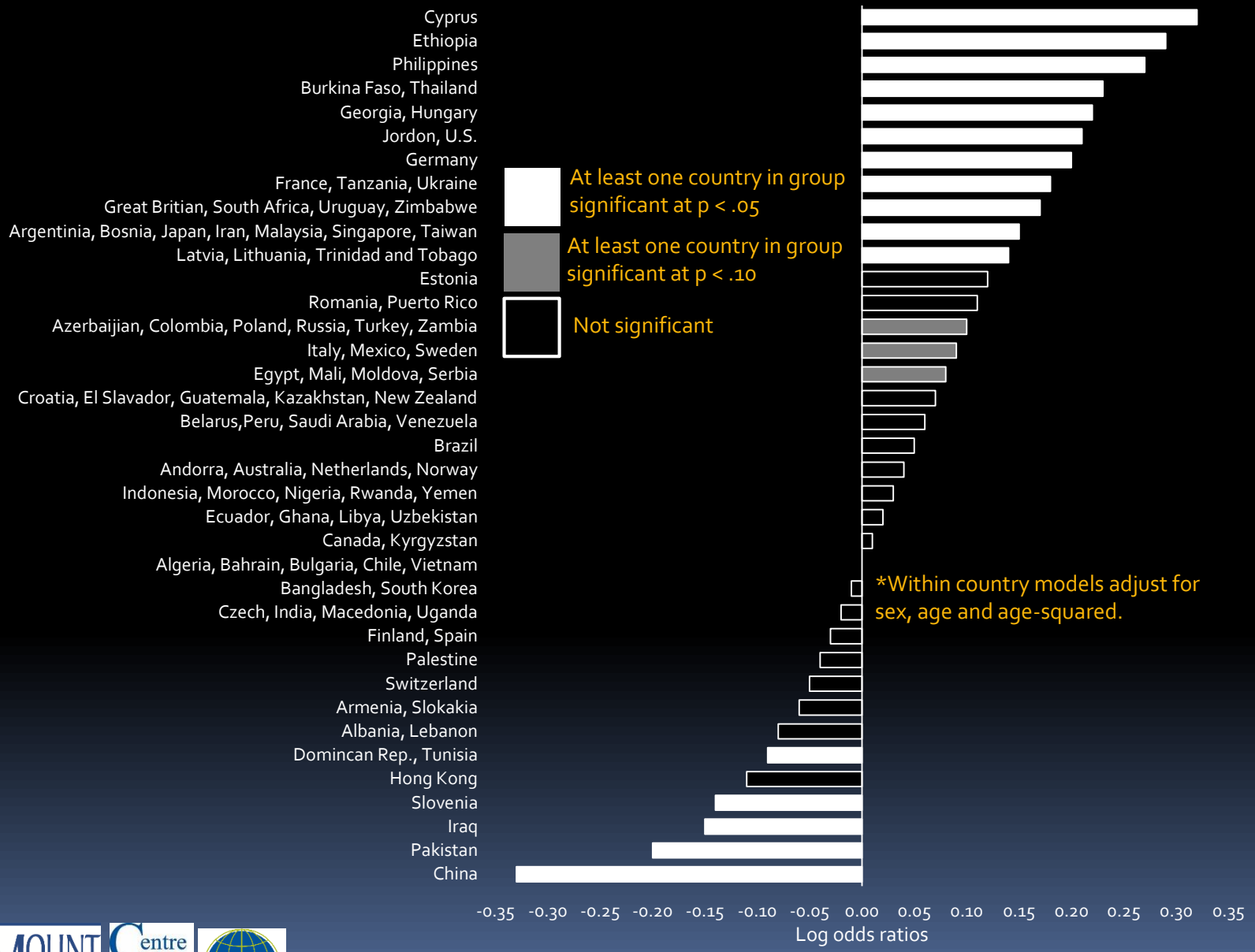
Ordered regression log odds ratios showing 94 within country relationships between religious attendance and self-assessed health*



One hypothesis

Though the fundamental relationship between religious participation and health is positive the magnitude is stronger within national contexts that offer tolerance and choice in whether and which religious practice to pursue and how often to participate.

Proxies for tolerance and choice:

1. **Human Development Index**
2. **Religious homogeneity**
3. **Current or former communist regime**

Multi-level model of religious attendance and self-assessed health

4 components:

1. **Individual-level effects, e.g., religious attendance**

2. **Country-level effect, e.g., religious homogeneity**

3. **Cross-level interaction,**
   e.g., religious attendance X religious homogeneity

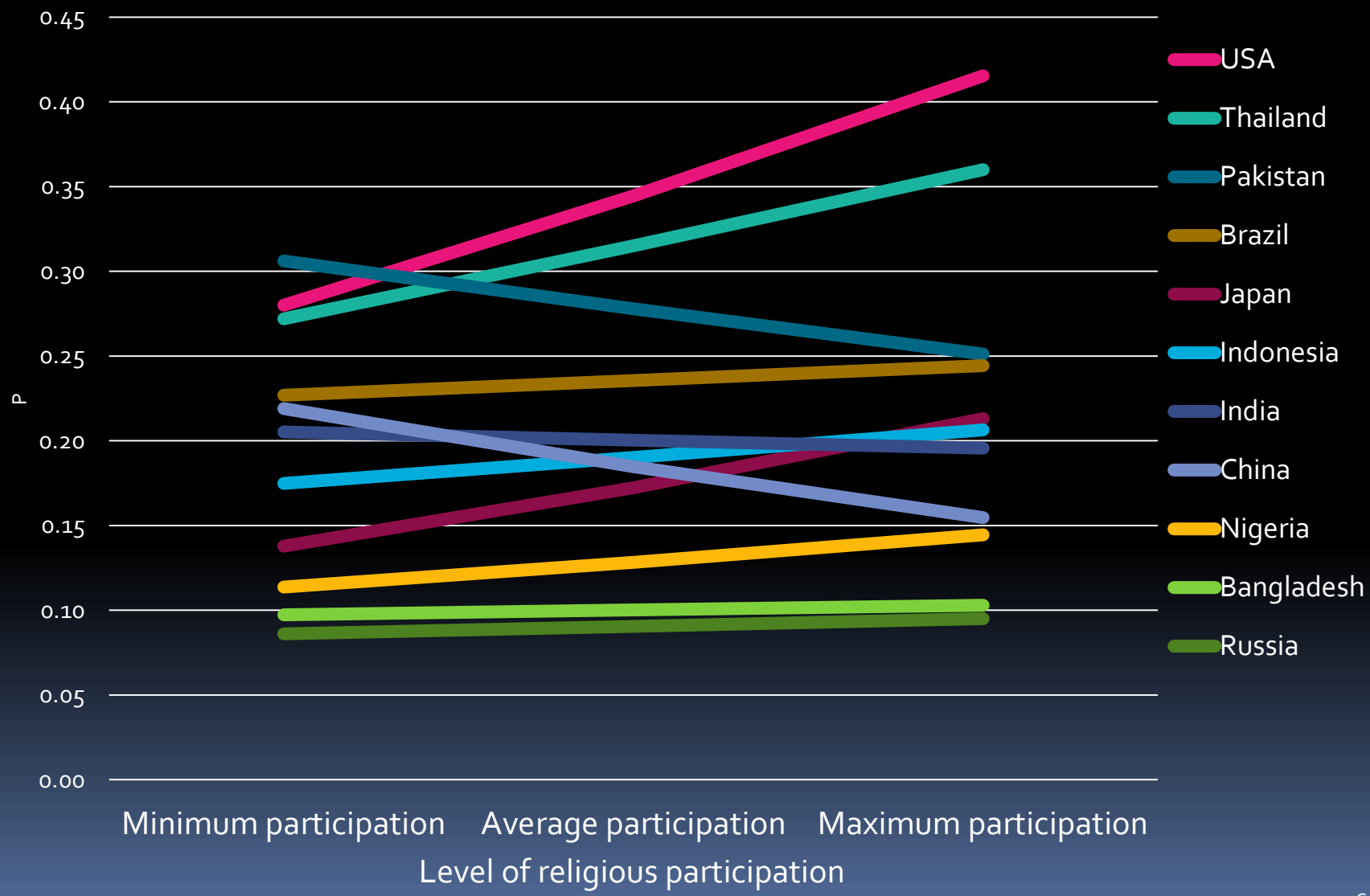
4. **Random effect, that is, idiosyncratic effect specific to each country not explained by the first three effects**

Quick results summary
What associates with self-assessed health?*

	Model 1	Model 2
1. Individual effects		
Religious participation (RP)	*+ve*	*+ve*
2. Country effects		
Human development index (HDI)		*+ve*
Religious homogeneity (RH)		*-ve*
Communist system of governance (CG)		*-ve*
3. Cross-level interactions		
RP X HDI		*Not significant*
RP X RH		*-ve*
RP X CG		*-ve*
4. Random slope	*.0075***	*.0056****

*Models control for age and sex.

Estimated probability of excellent health, eleven countries, by level of religious participation, based on mixed effects model



More unanswered questions

3) What about non-religious expressions of spirituality?

Religion is complex.

Distinguishing between religiosity and spirituality is difficult in a single culture let alone cross-nationally.

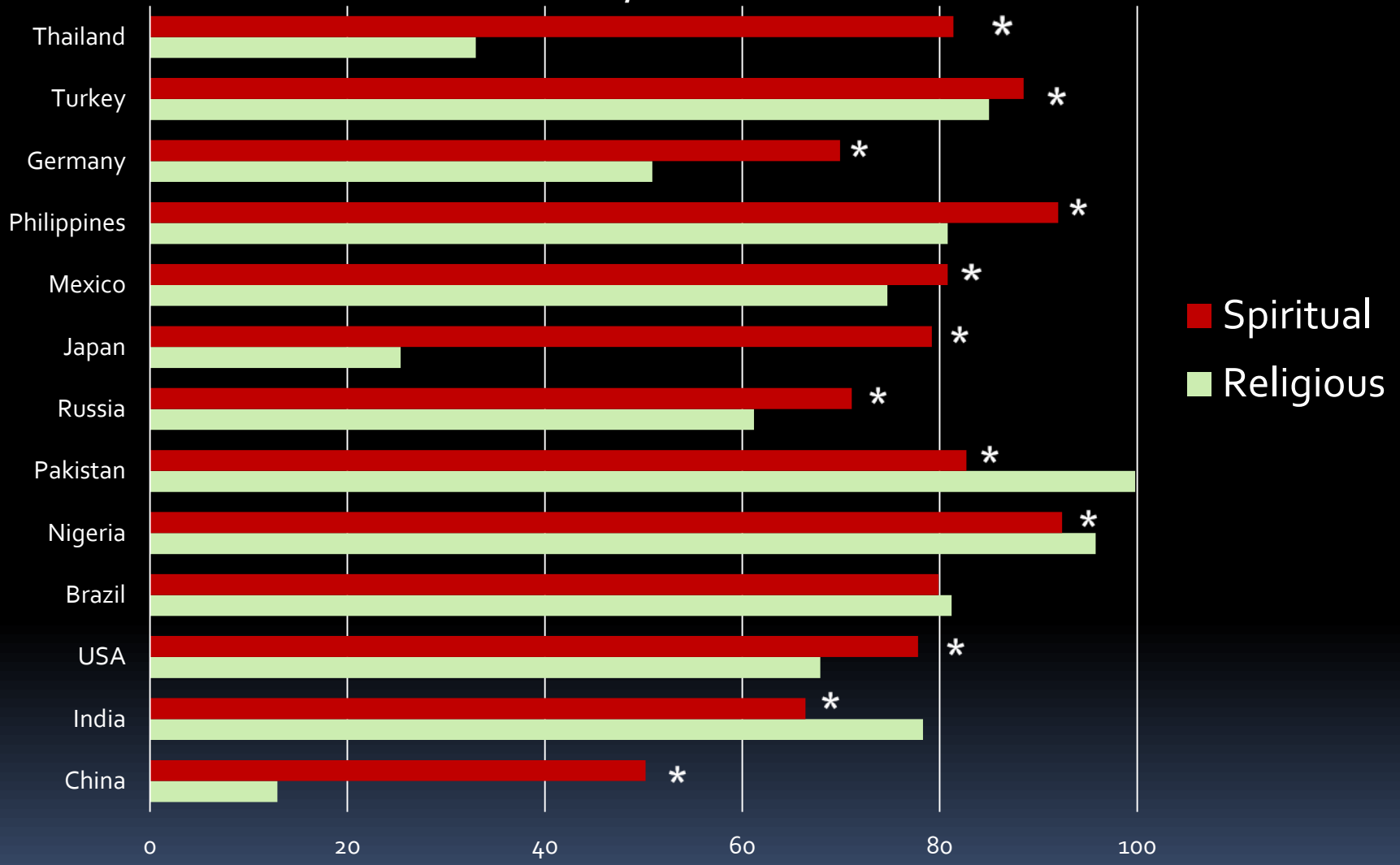
Religion – "specific principals organized around specific systems of beliefs, practices and rituals."

Spirituality – "a notion of things sacred and transcendent."

Religious person likely to define themselves as spiritual.

A spiritual person not as likely to define themselves as religious.

Percent that say they are religious and/or spiritual in selected countries, WVS data



*** Spiritual significantly different from religious**

Note: Spiritual based on question about thinking about meaning of life

Second last slide

* My study aims to provide a broad examination of how religiosity and spirituality link with health expectancy in the context of global population aging.

https://globalagingandcommunity.com/

https://globalagingandcommunity.com/religion-and-health-expectancy/

Thank you

Global Aging & Community Initiative

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