

Why are international comparative studies important for understanding the social determinants of health?

Tarani Chandola

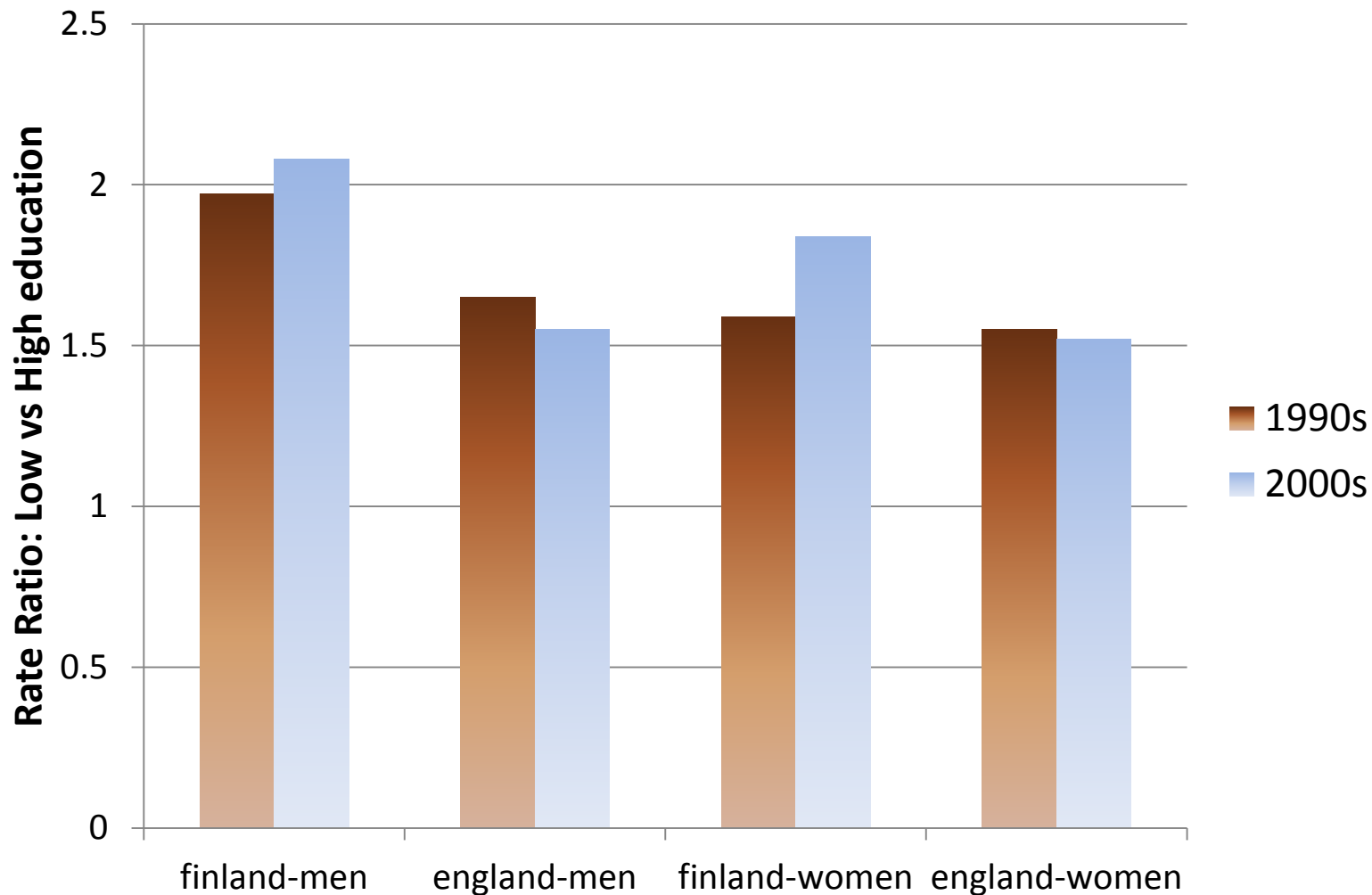
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The Nordic puzzle

- Relatively generous and universal welfare provision of the Social Democratic Nordic countries, especially when contrasted to the Anglo-Saxon welfare states
- Higher life expectancy, but...
- The Nordic welfare states do not have the smallest health inequalities

Changes between the 1990s and 2000s in rate ratios by education for all-cause mortality, by country and sex



Bambra JECH 2011

- Need to move beyond health inequalities debates around the “failure” of the Nordic welfare state model
- Acknowledge the common epidemiological risk factors that the poor in different countries face
- Acknowledge the progress of other welfare states such as Japan in creating healthy environments
- Move focus from overall population health studies and focus on conduct comparisons of more precise policy areas and specific social determinants (such as the work environment) instead

Health inequalities and welfare state regimes:
theoretical insights on a public health ‘puzzle’

Britain, Finland and Japan civil servant cohort studies



UK

National civil servants
N= approx. 7000



Finland

Local civil servants
N= approx. 8000



Japan

Local civil servants
N= approx. 5000



Britain, Finland and Japan civil servant cohort studies

- Similar populations
- Not deprived
- In relatively stable working conditions
- Hierarchical organisations
- Similarities in associations between risk factors could reveal common aetiological factors
- Socio-economic differences in common risk factors like smoking and obesity are unlikely to be the sole explanation

Why compare civil servants in Britain, Finland and Japan?

- Japan's labour market was characterized by lifetime employment, seniority-based wages/promotion, and low unemployment
- Social cohesion and solidarity were strong
- However, since the 1990's bubble burst, a sharp increase in job insecurity, income inequality, and privatization of public services
- Comparing workers in a country with constantly higher inequalities (i.e., Britain), a country with constantly lower inequalities (i.e., Finland), and a country with increasingly higher inequalities (i.e., Japan)

What we learn from British, Finnish, and Japanese civil servants study and the role of social democracy in reducing socioeconomic inequalities in health: A response to Bosma

Michikazu Sekine^{a,*}, Tarani Chandola^b, Pekka Martikainen^c, Michael Marmot^b, Sadanobu Kagamimori^a

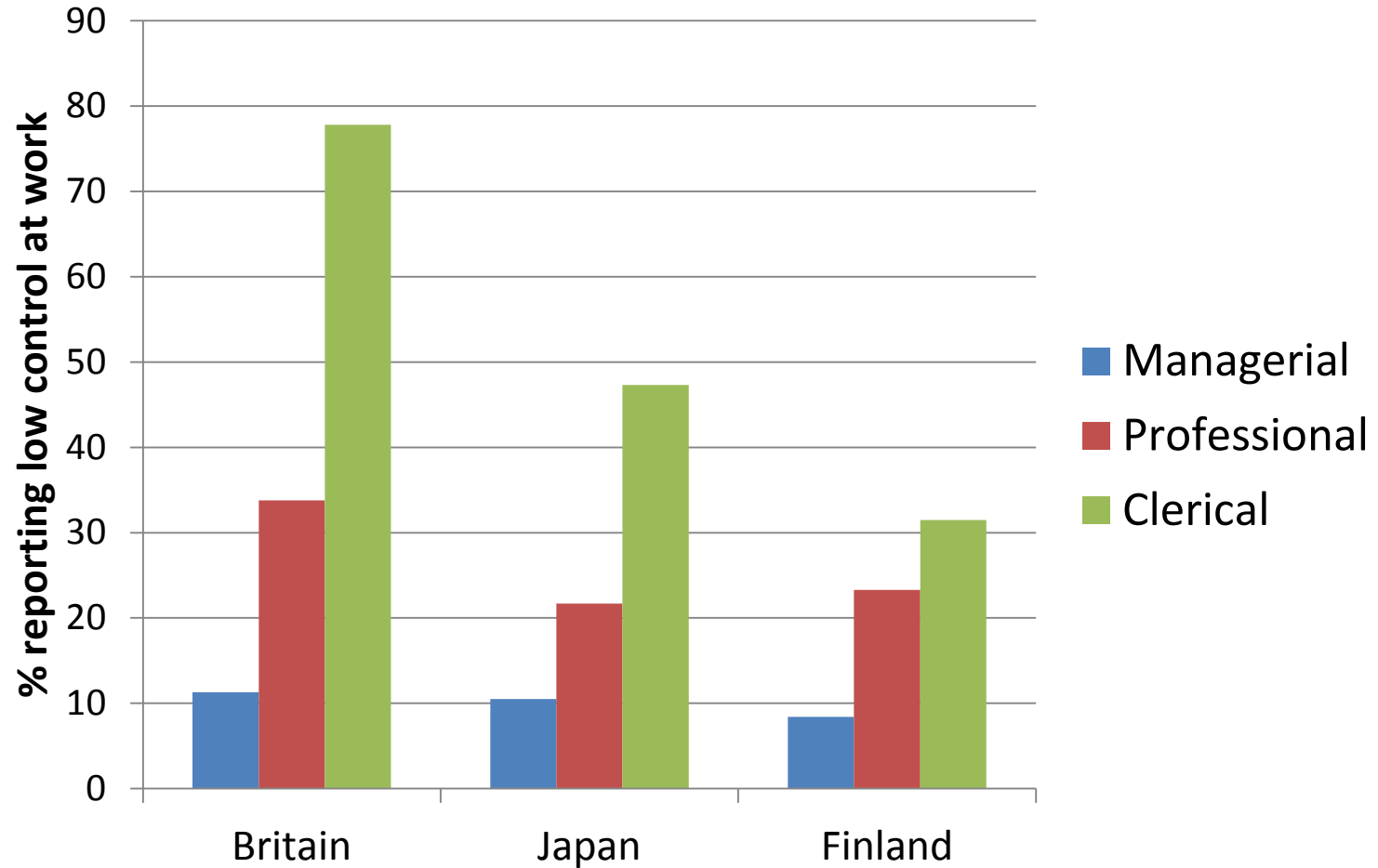
Hypotheses

- Social class differences in disadvantaged work conditions would be smaller in the Finnish cohort than in the British and Japanese cohorts
- Leading to smaller social class differences in health in the Finnish civil servants compared to British and Japanese civil servants

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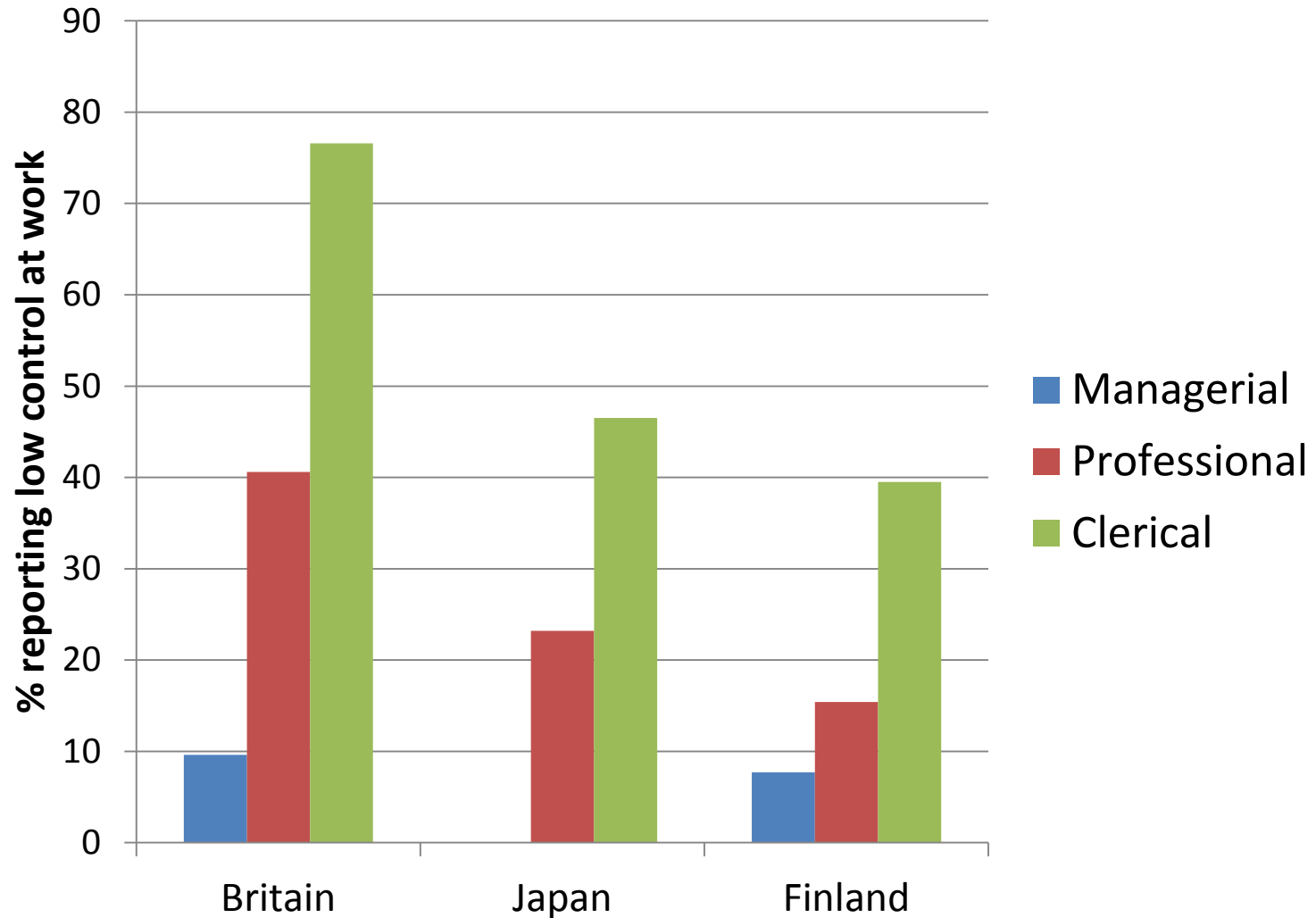
Age-standardized employment grade differences in low job control: Male civil servants



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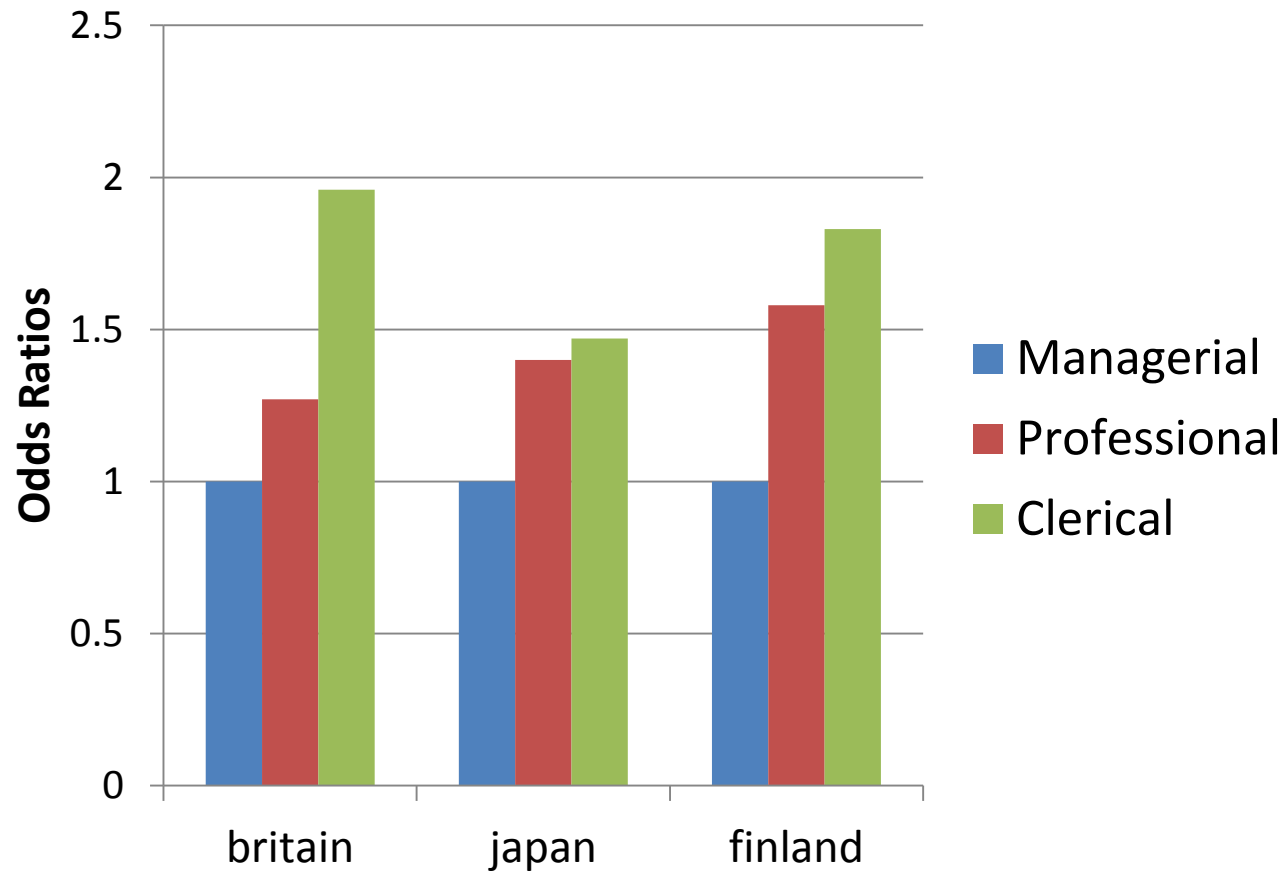
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Age-adjusted odds ratios of poor physical functioning by employment grade: Male civil servants



Social Science & Medicine 59 (2004) 1287–1295

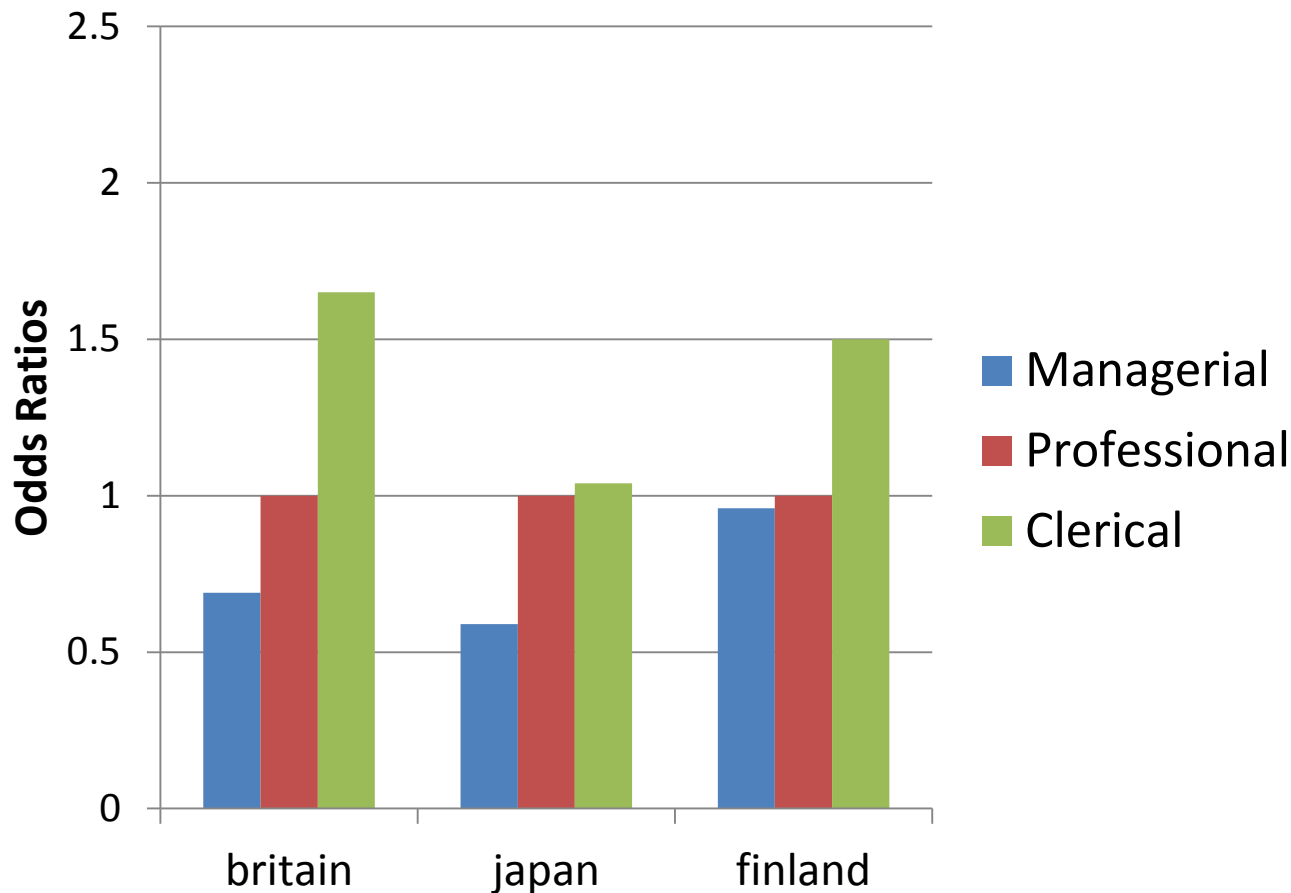
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A comparison of socioeconomic differences in physical functioning and perceived health among male and female employees in Britain, Finland and Japan

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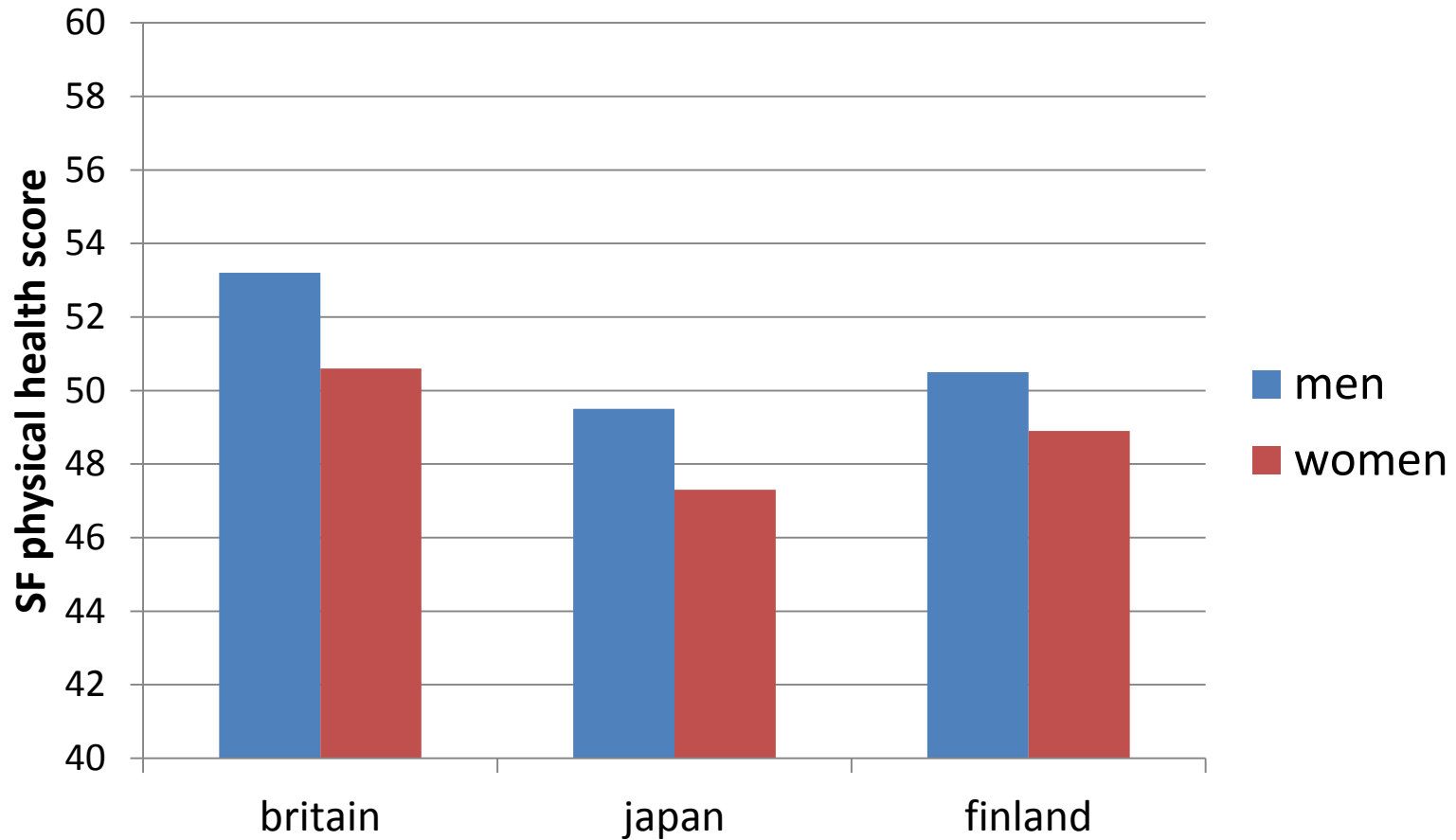
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Story so far

- Poorer working conditions among lowest employment grade could be common aetiological risk factor for poor physical health
- British civil servants in clerical grades have the highest levels of low job control
- They also have higher risks of poor physical health
- But there are important differences between the cohorts...

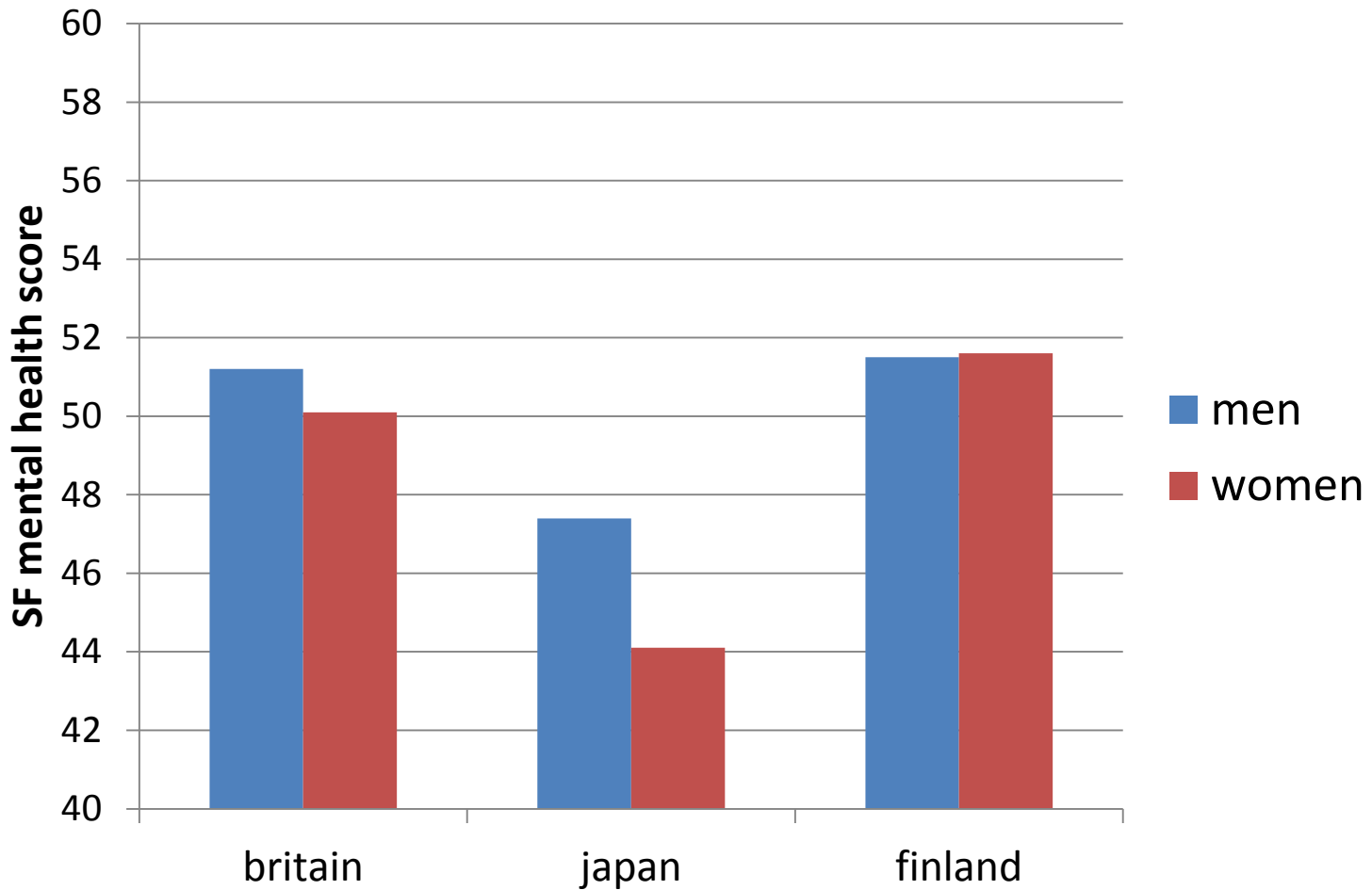
Mean SF physical health score: Britain, Japan and Finland civil servants



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SF-36 measures of physical and mental health functioning

SECTION 2 - This section is about your health

Q20. In general would you say your health is:

(Please tick one)

MGENHLTH

Excellent

1

Very good

2

Good

3

Fair

4

Poor

5

Q21. COMPARED TO ONE YEAR AGO, how would you rate your health in general now?

(Please tick one)

MHLTHNOW

Much better now than one year ago

1

Somewhat better now than one year ago

2

About the same as one year ago

3

Somewhat worse than one year ago

4

Much worse than one year ago

5

Cross-national measurement issues SF-36

International Quality of Life Assessment Project (IQOLA)

1) Multiple Forward and Backward translations

Qualitative and quantitative methods to evaluate quality of translation

2) Psychometric tests of scaling and scoring assumptions

3) Clinical trials and other studies for validity and comparability across countries

4) Informative data in general population surveys

Validation studies of SF-36

Hagman E. (1996). SF_36 terveystarkastus koettujen terveyden ja toimintakyvyn mittarina (in Finnish). Suomen Lääkärilehti 51, 3534_3540.

Japan- Fukuhara (1998)

- All reasonable translations of ***fair*** were indistinguishable from the translations of ***good***. Term used- ***amari yokunai (somewhat not good)***

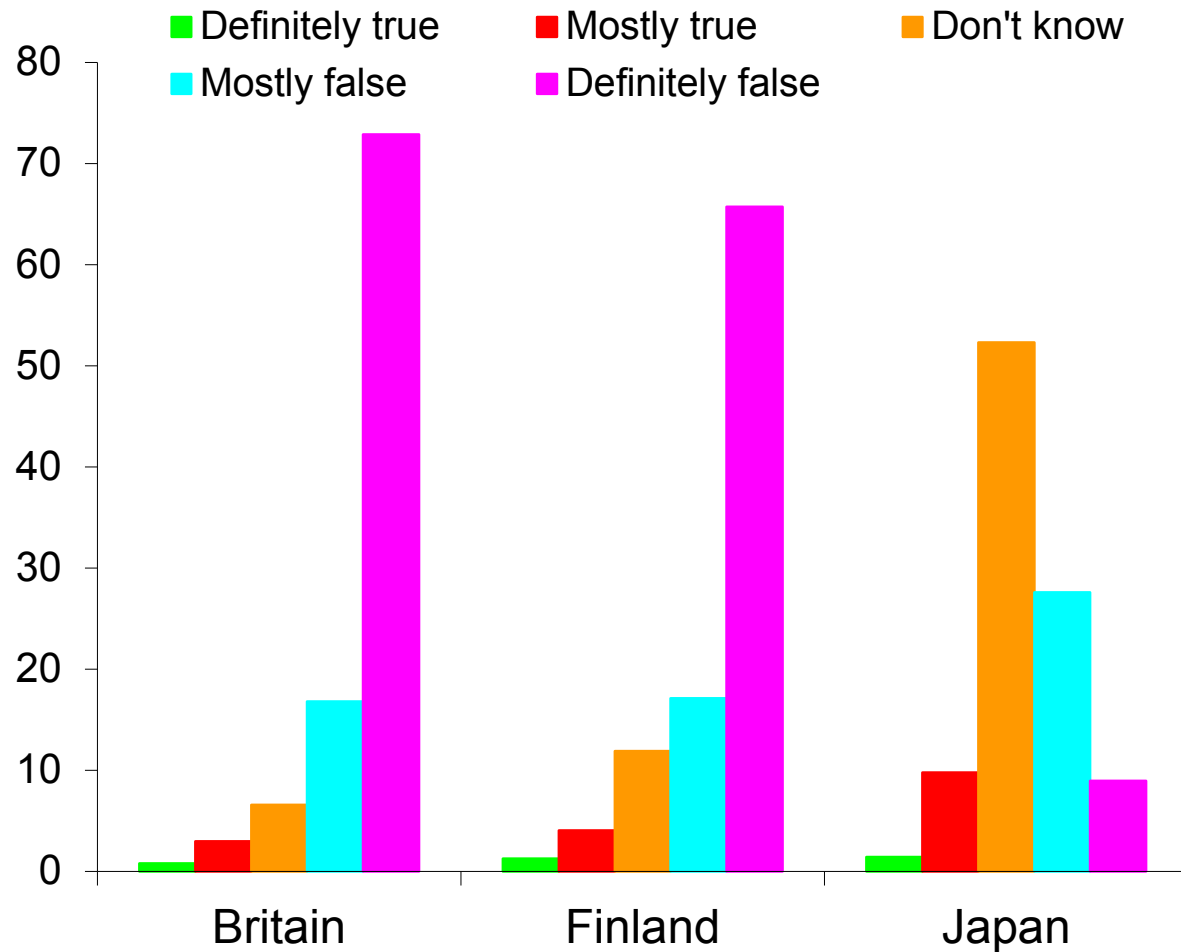
- ***Poor*** is not the same as ***qarui (bad or terrible)***- not appropriate.

Yokunai (not good) - used instead

Measurement problems SF-36

- Cultural norms

Percentage distribution of responses to
'I seem to get sick a little easier than other people'

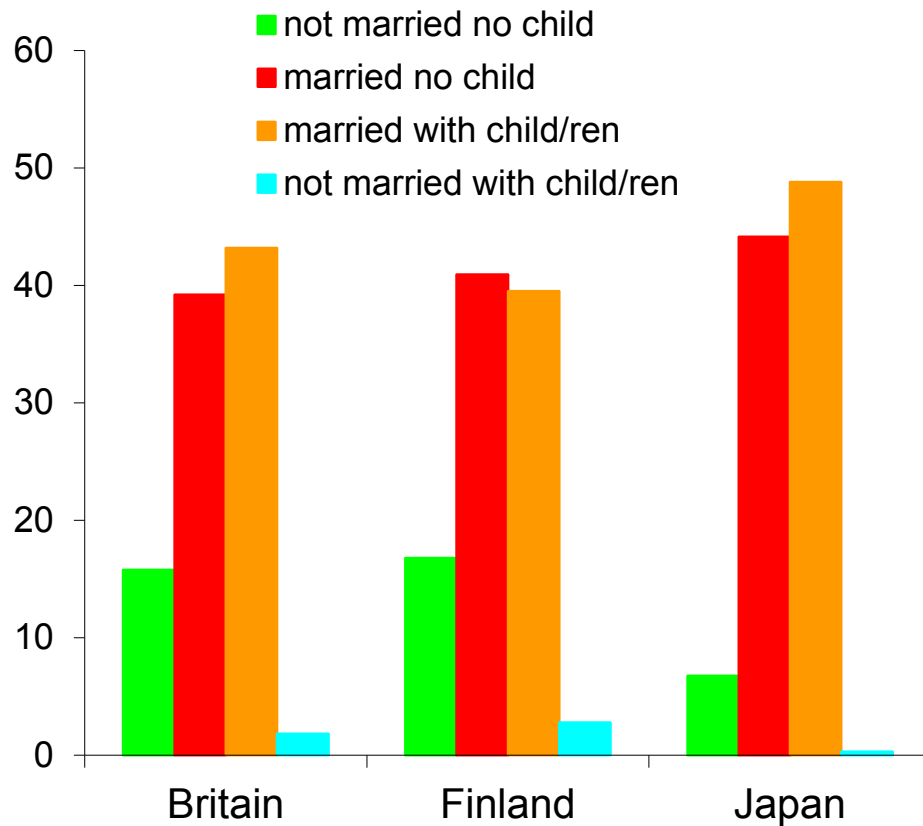


Interpretation problems

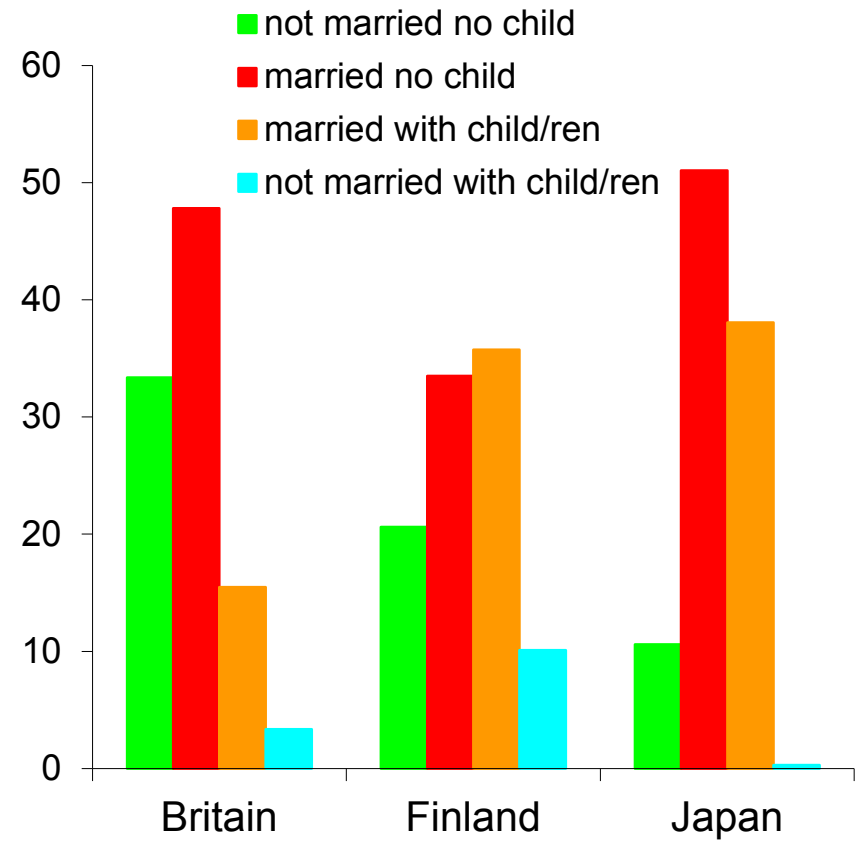
- Can the study infer which country has better mental health functioning?
- Inferring causality from cross sectional analyses
- To what extent can the differences between countries in health be attributed to differences in working and family conditions?

Percentage distribution of domestic roles by gender and country

Men



Women



Work-to-Family Interference Questions

Q133 To what extent do your job responsibilities **interfere with** your family life?

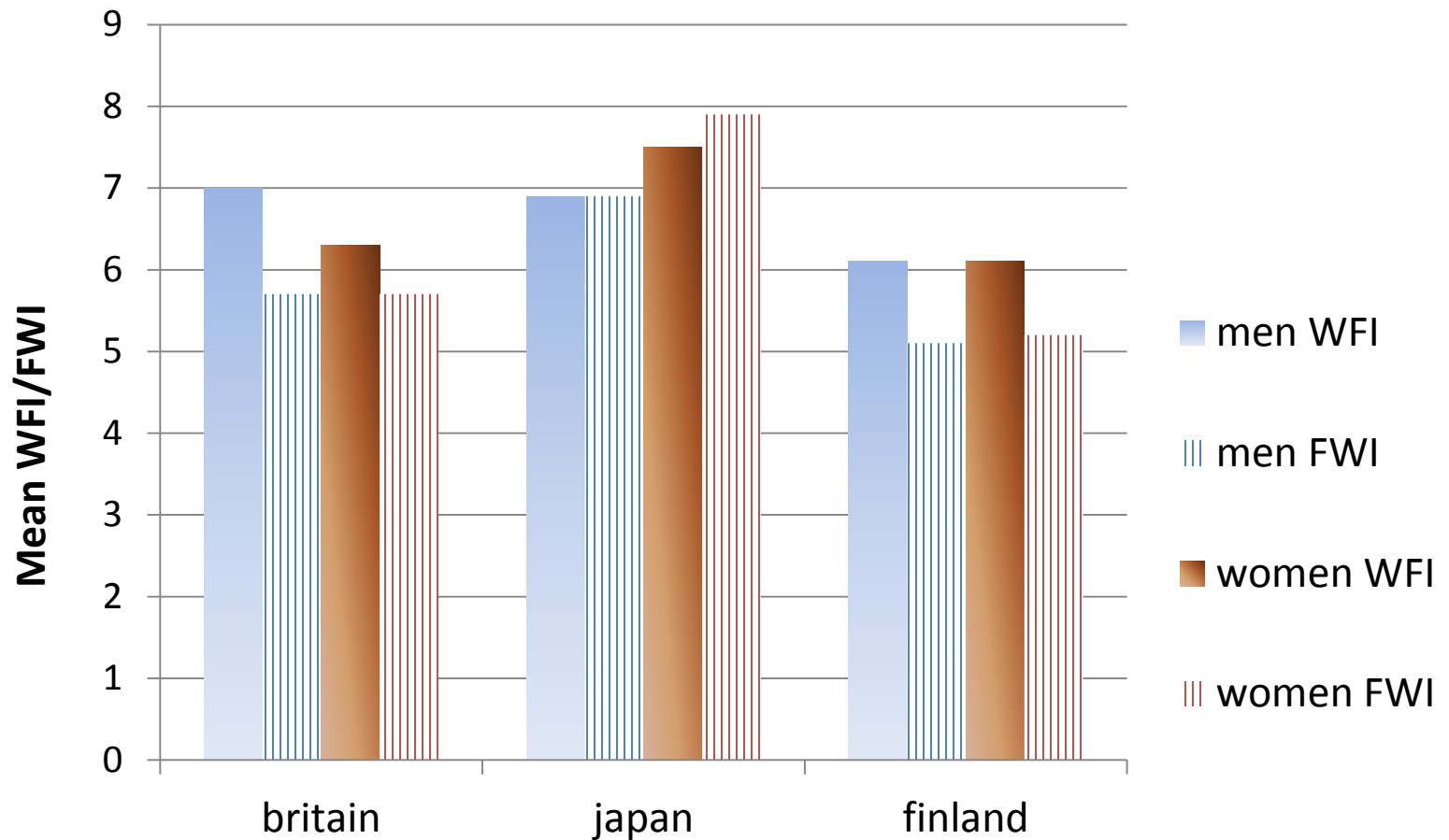
Would you say:-		Not at all	To some extent	A great deal	Not Applicable
MJOBINT1	a. Your job reduces the amount of time you can spend with the family	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="3"/>	<input type="text" value="4"/>
MJOBINT2	b. Problems at work make you irritable at home	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="3"/>	<input type="text" value="4"/>
MJOBINT3	c. Your job involves a lot of travel away from home	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="3"/>	<input type="text" value="4"/>
MJOBINT4	d. Your job takes so much energy you don't feel up to doing things that need attention at home	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="3"/>	<input type="text" value="4"/>

Family-to-Work Interference Questions

Q132 To what extent do your family life and family responsibilities **interfere with** your job?

Would you say:-		Not at all	To some extent	A great deal	Not Applicable
	a. Family matters reduce the time you can devote to your job	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="3"/>	<input type="text" value="4"/> MFAMINT1
	b. Family worries or problems distract you from your work	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="3"/>	<input type="text" value="4"/> MFAMINT2
	c. Family activities stop you getting the amount of sleep you need to do your job well	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="3"/>	<input type="text" value="4"/> MFAMINT3
	d. Family obligations reduce the time you need to relax or be by yourself	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="3"/>	<input type="text" value="4"/> MFAMINT4

Mean Work-to-Family-Interference (WFI) and Family-to-Work-Interference (FWI): Britain, Japan and Finland civil servants



Does conflict between home and work explain the effect of multiple roles on mental health? A comparative study of Finland, Japan, and the UK

Tarani Chandola,¹ Pekka Martikainen,^{1,2} Mel Bartley,¹ Eero Lahelma,³ Michael Marmot,¹ Sekine Michikazu,⁴ Ali Naseri,⁴ and Sadanobu Kagamimori⁴

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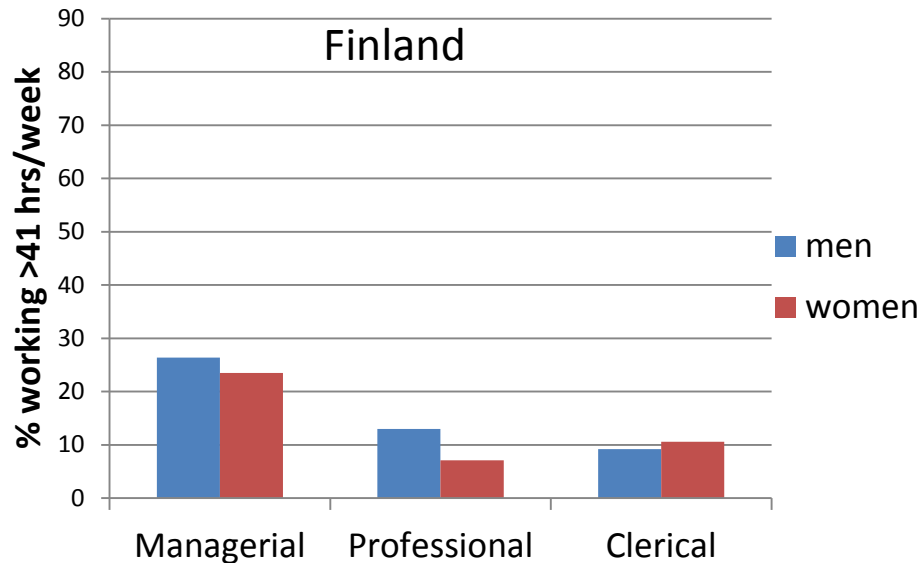
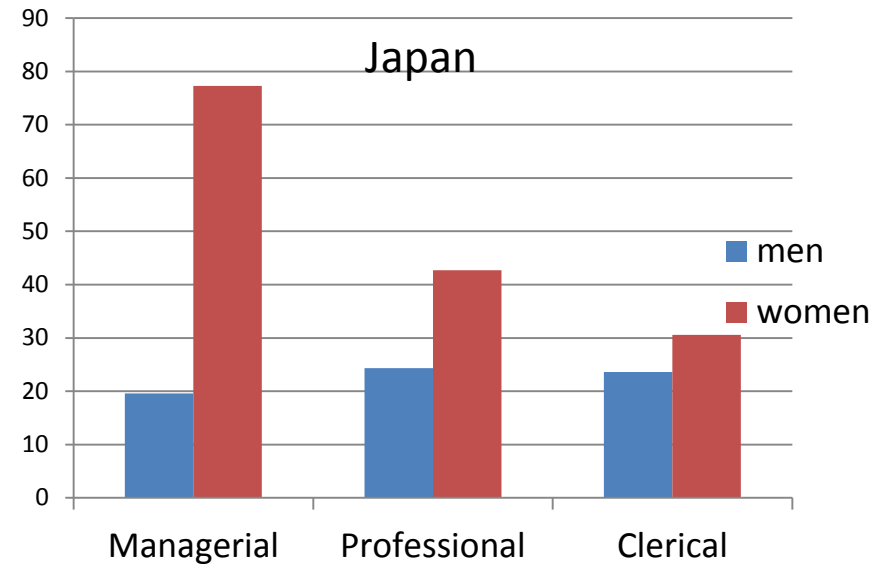
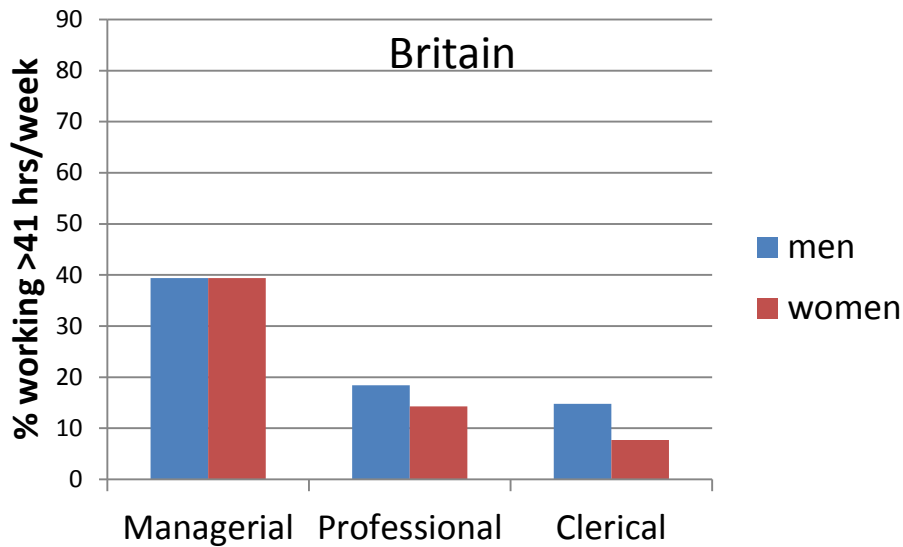
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Gender differences in psychosocial working conditions by country

- Gender and country differences are important
- Female civil servants in Japan have much poorer mental health, poorer psychosocial working conditions, and longer working hours
- What about occupational grade differences in psychosocial risk factors and mental health?

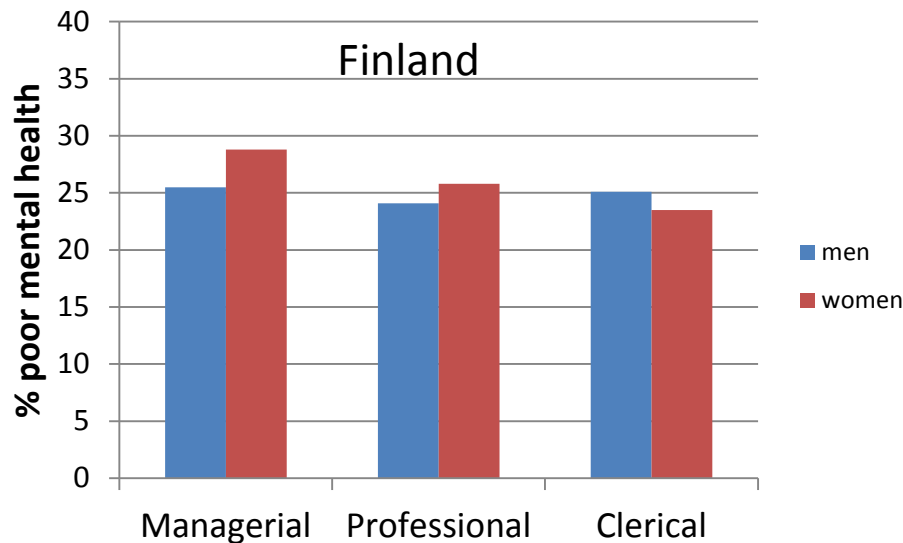
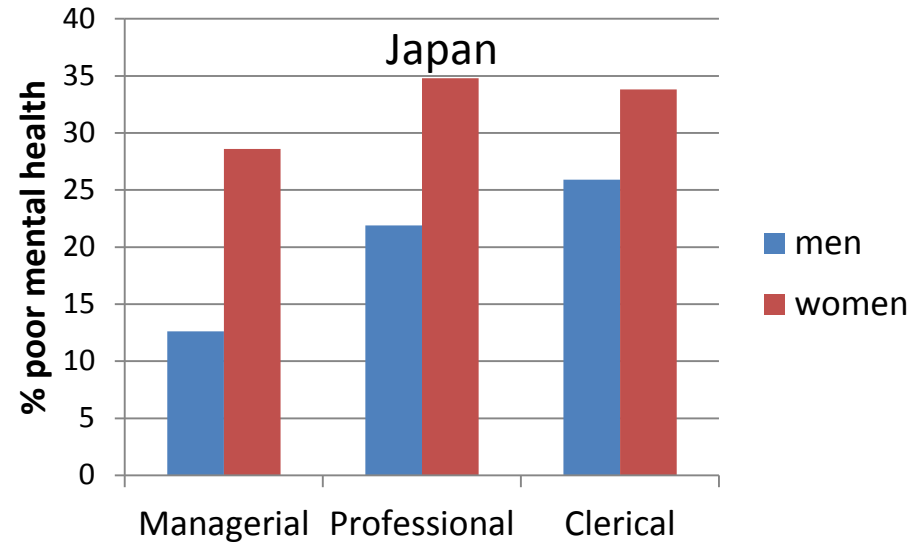
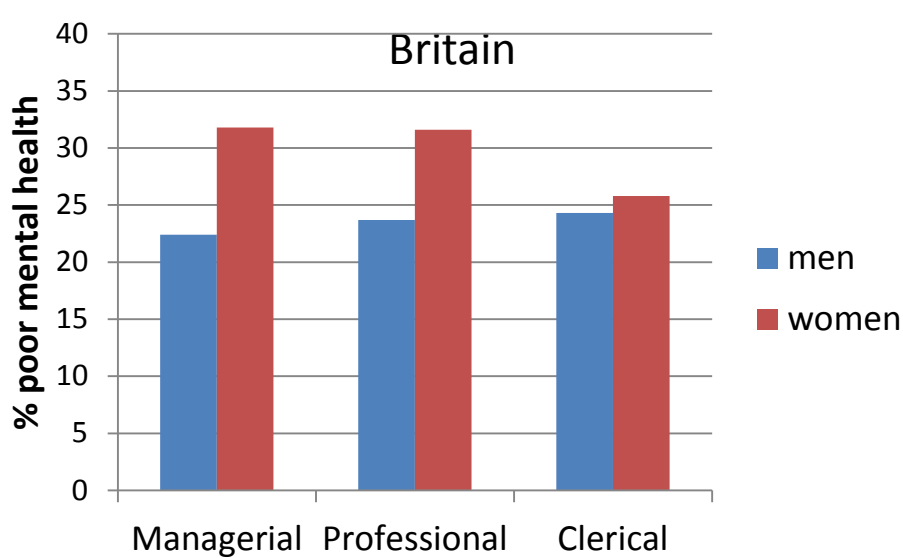
Long working hours (>41 hrs/week) by employment grade and gender: Britain, Japan and Finland civil servants



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% with poor mental health by employment grade and gender: Britain, Japan and Finland civil servants



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What have we learnt from these studies?- 1

- Employment grade differences in physical health show expected socio-economic gradients in all three cohorts
- Employment grade differences in mental health only among male Japanese civil servants
- Poorer working conditions of lower grade and female Japanese civil servants explain some of the employment grade and gender differences in mental health

What have we learnt from these studies?- 2

- Previous comparative studies have looked at population health differences by socio-economic group, leading to the “Nordic puzzle”
- Less of a “Nordic puzzle” when considering comparative studies of occupational cohort studies
- Finland- gender equity pioneers
- Japan- highly unequal gender workplace conditions

Future directions

- World of work is changing
- Stable and secure employment conditions are decreasing
- Impact of such changes on health and wellbeing are unknown
- Need for more studies on work and health
- Need for more comparative studies on work factors and mental health