Original Research

Self-rated health and its determinants in Japan and South Korea

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S U M M A R Y

Objective: To compare self-rated health and its determinants between Japanese and South Koreans.
Study design: A cross-sectional study was conducted on 2496 and 1576 adults (aged $\geq$20 years) in Japan and Korea, respectively, who completed the 2010 East Asian Social Survey.
Methods: Ordinal logistic regression was conducted to identify significant factors for self-rated health in the two nations.
Results: Japan has a lower level, and a smaller variance, of self-rated health than Korea. This study confirmed traditional results by finding that socio-economic status, daily activity and physical exercise had positive effects on self-rated health; and chronic disease, overweight/obesity and smoking had negative effects on self-rated health. In addition, this study found that: middle-aged (40s/50s) Japanese have lower self-rated health than younger (20s/30s) Japanese; living with a spouse has a negative impact on self-related health in both Japanese and Koreans in their 20s/30s; and mental factors (i.e. happiness, hopelessness and mental health problems) have a greater impact on self-rated health in Japanese than in Koreans, whereas the reverse is true for physical health problems.
Discussion: This study found that many health dynamics depend on the unique context of each nation. Moreover, this study may help to inform the direction of future research on self-rated health and its determinants in other Asian nations.

Introduction

As life expectancy rises and chronic disease becomes more prevalent, increased importance is being placed on quality of life and self-rated health by health professionals. In fact, self-rated health is reported to be a valid indicator of mortality and objective health.[1,2] Previous studies have shown that this subjective indicator depends on various determinants, including: living with/without a spouse;[3] socio-economic conditions;[4–6] health behaviour;[7,8] and social capital.[9–12]

Self-rated health can also be affected by the unique context of each nation,[5,8,11] and cross-national comparison presents

valuable opportunities to analyse different health dynamics between nations. Such comparisons can be made between Japan and South Korea (Korea hereafter); their similarities and disparities are summarized in Table 1.

Both Japan and Korea achieved rapid industrialization with strong government intervention during the post-1945 era [e.g. 26% vs 37% industrial shares of gross domestic product (GDP) in 2009].[13–16] Both countries have universal health insurance programmes and high living standards comparable with their Organisation for Economic Co-operation and Development (OECD) peers (GDP per capita in 2010 of $33,753, $29,004 and $37,470 for Japan, Korea and OECD countries, respectively).[16–18] Japan is foremost an aging society, with Korea still catching up (i.e. 8.5 vs 9.0 births per 1000 people per year, 83 vs 80 years of life expectancy at birth, 22% vs 11% of population aged ≥65 years in 2009).[16] Japan was exposed to Western influences earlier than Korea, characterized by stronger Confucian cultures and educational hierarchies, suggesting that intergenerational gaps in self-related health may exist in Japan and Korea due to the rapid economic growth and great social transition during the post-1945 era.[19]

Despite the similarities and disparities, no analysis has been undertaken on self-rated health and its determinants beyond socio-economic status in Japan and Korea. As such, this study compared self-rated health and its determinants in these nations, including demographic factors, socio-economic status and other health-related determinants. This study used ordinal logistic regression to explore these associations for separate age groups in both nations. This study adds to the understanding of self-rated health and its determinants, and helps prepare for future transitions and improvements in the quality of life and subjective health in East Asia.

Methods

Data

The data used in this study were obtained from the 2010 East Asian Social Survey (EASS) Data Archive, designed for cross-national comparisons between China, Japan, Korea and Taiwan. The EASS has a common module, like the US General Social Survey, providing unusual and invaluable opportunities to conduct comparative analysis of health outcomes and their determinants between East Asian nations. The samples in the EASS data are nationally representative, based on multistage stratified random sampling (http://eass.info). The EASS data include: demographic factors (i.e. age, gender and living with/without a spouse); socio-economic status (i.e. education, household income and employment status); and health-related determinants [i.e. activities of daily living, body mass index (BMI), chronic disease, drinker, happiness, hopeless-ness, mental and physical health problems, physical checkup, physical exercise and smoker]. The sample population was adults aged 20–89 years in Japan and those aged ≥20 years in Korea. The sample size/response rate was 2496/62% for Japan and 1576/63% for Korea.

Self-rated health (dependent variable)

The EASS question on self-rated health was 'How would you rate your health?'. Possible answer choices were: 'very good' (1), 'good' (2), 'neither good nor poor' (3), 'poor' (4) and 'very poor' (5). Items were recoded as 'very good' (5), 'good' (4), 'neither good nor poor' (3), 'poor' (2) and 'very poor' (1).

Demographic factors and socio-economic status

Data were recoded and dummies were created for age groups, gender, education and employment. Age groups were divided into three categories: 20s/30s, 40s/50s and 60s/older. The 20s/30s age group was used as the referent age category.

Years of education, which was a continuous variable, was divided into four categories: elementary school or lower (0–6 years of education), junior high school (7–9 years of education), senior high school (10–12 years of education), and college or higher (≥13 years of education). College or higher was used as the referent education category. Household income, which was a continuous variable for Korea, was separated into 19 categorical values for Japan. For consistency between the two nations, both variables were converted into income quartiles. First, the median was taken for each category of Japan's household income. Then, for both nations, groups were categorized as: 'being below/at the first quartile'; 'being above the first quartile and below/at the median'; 'being above the median and below/at the third quartile'; and 'being above the third quartile'. Employment status was dichotomized into 'being employed' and otherwise.

Health-related determinants

The EASS question on activities of daily living was 'Each of the following items is about your daily activity. Please rate how

Table 1 – Japan vs Korea, 2009.			
	Japan	Korea	OECD
Economy			
Industrial share of GDP (%)	26	37	23
GDP per capita (PPP, current international Dollars)[a]	33,753	29,004	37,479
Demography and health status			
Crude birth rate (births per 1000 people per year)	8.5	9.0	11.0
Life expectancy at birth			
Female	86	84	83
Male	77	77	77
Total	83	80	80
Population (%)			
Age (years)			
0–14	13	17	17
14–64	65	72	67
≥65	22	11	16

OECD, Organisation for Economic Co-operation and Development; GDP, gross domestic product.
a For 2010.
Source: World Bank. *World development indicators*. Washington. Available at: http://databank.worldbank.org/ddp/home.do (last accessed 17 August 2012).