Gendered Effects of Marriage on Health in Japan

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Under what conditions is marriage beneficial to health? Is marriage more beneficial for men than for women? Are the mechanisms linking the marriage and health similar for men and women?

The proposed research examines the effect of marriage on self-rated health among men and women in Japan. While the positive association between marriage and health is one of the most robust findings in sociology of health, studies tend to overlook the context of marriage outside the United States. Marriage in Japan is situated in the unique configuration of gender and family norms, providing a valuable opportunity to test the theoretical robustness of "marriage benefit" found in the United States. This research proposes that the traditional patriarchal family system and the gendered division of labor in Japan reduce the health benefit of marriage especially for employed married women. The work-family incompatibility, a lack of support in household labor, and the high prevalence of co-residence with parents are expected to lower the relative merit of marriage on Japanese women's health.

Using the nationally representative household samples of young adults (age 20-40) in Japan, I will test several hypotheses about the relationship between marriage and health, and examine reasons for differences between men and women.

Theoretical Background:

Marriage and Health in the United States

One of the most robust findings in health literature is the association between marital status and health (Ross, Mirowsky and Goldsteen 1990). A growing body of research has shown that family structure, especially being married relative to being single, has a positive and direct impact on health status and longevity (e.g. Schoenborn 2004). Longitudinal studies examining the impact of marriage on health largely confirm the positive influence of marriage on health for women and men even after controlling for selectivity into marriage (Wood et al. 2007; Wilson 2005).

The literature also suggests several explanations for the health benefit of marriage. First, the dual-earning potential of married individuals may provide greater access to health care and alleviate the stress associated with economic hardship (Ross, Mirowsky and Goldsteen 1990). Second, married individuals may experience greater emotional support and social integration from spouses (Umberson et al. 1996). Finally, married individuals may be healthier because they receive more support for maintaining healthy lifestyle (Umberson 1992). Married individuals are less likely to smoke and drink heavily (Umberson 1987), and more likely to see doctors for checkups and screening (Neale, Tilley, and Vernon 1986).

Marriage, Gender, and Health in the United States

The debate, however, remains as to the gendered effect of marriage on health. Some argue that men and women experience different marital roles, which in turn affects their health outcomes. Men tend to have lower levels of psychological distress because they often take on the role of economic providers both at work and within family. In contrast, women are more likely to assume the family role of care takers and providers of emotional support, which is more likely to contradict with their work obligations (Simon 1995; Umberson et al. 1996). As a result, women feel more strain in marriage because their work and family roles are in conflict. Umberson (1992) provides evidence that women are more likely to monitor and control the health of others upon marriage, while for men, marriage is associated with control of their own health. Furthermore, a review of gender relations in families by Thomson and Walker (1989) finds that women perceive less emotional support in marriage than men.

Other studies, however, suggest that men and women equally benefit from marriage in terms of physical and mental health (e.g. House et al. 1988; Waite and Gallagher 2000). According to these studies, married men and women are healthier than their single counterparts regardless of gender. Waite and Gallagher (2000), for example, explain that the seemingly greater marriage benefit for men is due to the fact that single men have worse overall physical health than single women. Single men are much more likely to engage in risky behaviors and maintain unhealthy lifestyles than single women, but upon marriage, researchers argue, they tend to control their behaviors and improve the overall health status (Umberson 1987; Waite 1995).

Part of the confusion in previous research may come from the fact that few studies have taken into account the context of marriage, gender, and family outside the United States. Marriage, family, and gender norms are vastly different across societies and time. Even within the US, the pooled data from 1972 to 2003 show that the self-rated health of the never-married individuals has improved over time and the gap between the married and the never-married narrowed for men but not for women (Liu and Umberson 2008). Subpopulation-level data in the US also show various gender effects on health (Read and Gorman 2006). They show that the magnitude of gender differences in self-rated health and life-threatening medical conditions varies considerably by racial/ethnic group and comparison category, even after controlling for socioeconomic and background factors. In other words, the gendered marriage benefit may hold true under certain contexts of gender and family norms Thus, it is important to ask under what conditions marriage benefit health of men and women. Similarly, the possible pathways linking the marital status and health may be different across societies.

Japan provides a valuable opportunity to examine the gendered effect of marriage on health. In a society where rigid gender roles and patriarchal family traditions are still considered normative, we may identify the gender difference in the marriage benefit on health. In the following section, I review the context of marriage and family formation in Japan in comparison to the United States.

Context of Marriage and Family Formation in Japan

Compared to the US and other industrialized countries, the Japanese marriage and family system have several unique characteristics. First, a strong norm of gendered division of labor makes it difficult for women to combine family and work (Brinton 1993). The difficulty comes from outside, i.e. the labor market, as well as inside a household. The Japanese labor market continues to be dominated by men. Because of gender and age discriminations, high level of job demands, and a lack of flexibility in work schedule, women are more likely to exit the labor market altogether upon marriage (Brinton 2001). Studies also argue that the pressure of having children and devoting oneself to motherhood makes it even more difficult for women to remain competitive in labor market (e.g. Takeda 2005). Second, little support from husbands and the government in household work may put strain on employed women. Data show

that, in 1994, married women in Japan spent 33.5 hours per week on household chores while their husbands spent only 2.5 hours on household labor (Tsuya and Bumpass 2004). This number is striking compared to the US where married women and men spent 19 hours and 10 hours a week on housework, respectively (Bianchi et al. 2006). The government assistance in household work and child rearing is also scarce in Japan, making it difficult to balance work and family (Rosenbluth 2007). The previous literature indicates that role conflicts may be more pronounced for married women in Japan. In other words, the marriage benefit may depend on the employment status for women.

Second, unlike the US and some of the European countries, it is common for single young adults to reside with their parents in Japan. According to Raymo (2003), approximately three-quarters of single women in Japan live with their parents, partly because the co-residence with parents often involves higher disposable income and less household tasks especially for women. Single individuals enjoy relatively advantageous life in Japan by co-residing with their parents. Given the overwhelming responsibilities posed on married women in Japan, some even argue that co-residence with parents is associated with the postponement of marriage (Raymo and Ono 2007). Thus, compared to singlehood, married life may pose little advantage for Japanese women, because it entails economic deprivation, greater household responsibilities, and adherence to traditional patriarchy which considered out-dated by many younger generations.

Marriage, Gender, and Health in Japan

There is little systematic research examining gendered impact of marriage on health in Japan. In the mental health literature, a cross-national survey conducted by International Consortium of Psychiatric Epidemiology (ICPE) shows no marital status differences in depression in Japan, while unmarried persons in Canada, Chile, the Netherlands, and the US showed significantly higher prevalence of depression (Andrade et al. 2003). A comparative study of mental health in Japan and the US further shows relatively small advantage of marriage for Japanese women (Inaba et al. 2005). Inaba and others show that while married women in Japan are slightly less likely to be depressed than single women, married women in the US are substantially less likely to have depressive disorders. Given the high

correlation between mental health and physical health, we may find evidence that self-rated health is influenced by both gender and marriage in Japan.

The relationship between marriage and physical health has received even less attention in Japan, mainly focused on older individuals (Kawakami et al. 2007). Although studies show that marriage is associated with a much lower risk of death for both genders (Goldman and Hu 1993; Ikeda et. al. 2007), selectivity into marriage may affect the health of elderly population in Japan. The prevalence of arranged marriage until the middle of the 20th century may have caused unhealthy men and women to stay single and raised the mortality risk among elderly single individuals (Goldman, Takahashi, Hu 1995). A study that focuses on younger individuals, therefore, may minimize the possible selection bias and contribute to the understanding of health and marriage disparities among the working-age population in Japan.

Hypotheses:

Based on the findings in the US and the contexts of marriage in Japan, I propose the following hypotheses about the relationship between marriage and health for men and women in Japan. First, based on the previous findings from American literature, I test whether marriage is associated with better health (H1), and assess the gender difference in the effect of marriage (H2).

H1: Married individuals are, overall, healthier (i.e. indicate better self-rated-health) than single individuals in both Japan.

H2: Health benefit of marriage is generally smaller for women than men in Japan.

While marriage itself would be beneficial for men and women, its effect may depend on the degree of role conflict that the marriage imposes on the couple. To further examine the gendered benefit of marriage on health, I test whether the combination of marriage and employment is detrimental for women's health (H3).

H3: The combination of employment and marriage reduces the self-rated-health especially for women.

Furthermore, to examine the mechanisms linking marriage and health in, I will add social support (i.e. co-residence with parents) and health-related behaviors to the baseline model. The purpose here is to see if these factors "explain" the positive effect of marriage on health (H4 and H5).

H4: Co-residence with parents reduces the gross and net effect of marital status on health.

H5: Smoking, excessive alcohol, and a lack of exercise are associated with worse health and reduce the overall effect of marriage on health.

Methods:

Data

To examine the gender difference in health, it is important to compare both men and women in the age range most likely to be affected by family formation. Data for the proposed study are nationally representative household samples of adults aged 20 to 40 years from Japanese Life Course Panel Survey (JLPS). Japanese data come from the 2007 wave of JLPS (n=4,800) conducted by the University of Tokyo's Institute of Social Science. The questionnaires include physical and mental health measures, health behaviors, marital status, family structure, and employment in addition to various demographic characteristics of individuals interviewed, providing sufficient information to test various hypotheses about marriage, gender, and health.

Measures

Dependent Variable. The individual health condition will be measured by survey responses to the question "*Would you say that in general your health is excellent, very good, good, fair, or poor?*" This question has been asked in various health surveys including the Behavioral Risk Factor Surveillance System by the Centers for Disease Control and Prevention (Centers for Disease Control and Prevention 2009). Self-rated health is a robust indicator of general health status that predicts morbidity and mortality (Ferraro and Yu 1995; Idler and Benyamini 1997). The concept also appears to be robust across different languages and cultures (Chandola and Jenkinson 2000; Shibuya, Hashimoto, and Yano 2002). Response categories will be collapsed into a binary outcome, where good health represents excellent/ very good/ good, and poor health represents fair/ poor self-rated health.

Independent Variables. I operationalize marital status as three dummy variables representing *married, never married* (reference category), and *separated, widowed, or divorced*. I also include several important control variables that are likely to influence health, i.e. age (House, Kessler, & Herzog 1990), educational

attainment, income, and employment (Mirowsky, Ross, and Reynolds 2000). *Age* is analyzed as a continuous variable measured in years. I create four categories of *educational attainment* from years of education, because the rate of return to education is not linear (Backlund et al. 1999). Four categories include: less than a high school education (0-11 years); high school graduate (12 years); some college or college graduate (13-16 years); and beyond college (17+ years, reference category). Logged annual household income and binary employment status will be included as control variables. In addition, the presence of *dependents under age 18* and *family size* will be included to control for the characteristics of households: being married without young children in the home is considered to be most beneficial to one's health (Schoenborn 2004; Umberson and Williams 1999).

Furthermore, I will use *co-residence with parent(s)* as a measure of social support that may explain the health benefit of marriage (Umberson et al. 1996). Given the prevalence of co-residence in Japan (Rindfuss et al. 2004), this variable may capture the concept of social support relevant in a Japanese culture. I also use frequencies of *smoking*, *drinking alcoholic beverages*, and *light exercise* to measure the degree of healthy behaviors. The link between marriage and better self-rated health may be explained by these individual behavioral characteristics (Umberson 1992).

Analytic Strategies

Data are analyzed using the SAS software. In the multivariate analyses, I will test hypotheses 1 through 5 using a series of logistic regressions. To examine the gendered benefit of marriage on health, I will divide the sample into men and women, and conduct analyses separately.

I anticipate creating 4 models for to test hypotheses 1 through 5. In Model 1, self-rated health is regressed on marital status to compare the bivariate association between marriage and health for men and women in Japan. Model 2 includes the demographic information and socioeconomic status to control for the major confounding factors. Hypotheses 1 and 2 will be tested by comparing the magnitude of marriage effect on health across men and women. Model 3 adds an interaction term marriage and employment to test hypothesis 3. Model 4 adds the co-residence with parents and three measures of health behaviors to test hypotheses 4 and 5. The purpose of Model 4 is to check if the association between

marriage and health found in Model 1 is explained by social support and/or healthy behaviors. Odds ratios and p-values will be calculated for interpretations.

Results

Table 1. % distributions and mean of variables in the analyses, stratified by good vs. poor health: JLPS 2007

	Total Sample (N=4775)		Excellent, Very Good, or Good Health (N=4224)	Fair or Poor Health (N=551)
Variable	N	%	%	%
Marital Status				
Single	2382	49	49	56
Married	2255	47	48	39
Widowed/Divorced	163	3	3	5
Male	2365	49	48	54
Mean Age (s.d.)		31 (6)	31 (6)	31 (6)
One or More Children	1955	40	42	33
Co-Residence with Parent(s)	2135	45	45	47
Education				
high school or less	1452	30	30	32
vocational school, 2-year college	1548	33	32	35
college or above	1762	37	38	33
Employment				
Unemployed	1130	23	24	25
Employed (Full-time/Traditional)	2332	49	49	49
Employed (Part-time/Untraditional)	1300	27	27	26
Household Income per Family Member				
Less than 1 million JP yen	1290	27	26	30
1-1.7 million JP yen	1380	29	29	26
1.7-2.5 million JP yen	1318	27	28	27
Mare than 2.5K million JP yen	812	17	17	16

Note: 1 million Japanese yen is approximately 10,730 U.S. dollars

Table 2: Anticipated model estimation and hypotheses on self-rated-health among Japanese men and women

	Model 1	Model 2	Model 3	Model 4
Hypotheses 1 - 5		H1, H2	H3	H4, H5
Marital status	+			
Age		−		
Educational attainment		+		
Employment		+		
Income		+		
Dependent under age 18		−		
Household size		−		
Employment * Married			−	
Co-residence with parent(s)				+
Frequency of smoking				−
Frequency of drinking				−
Frequency of light exercise				−

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