Gendered Effects of Marriage on Health in Japan: Structures and Gender Roles

Abstract

One of the most robust findings in health literature is the association between marital status and health (Ross, Mirowsky and Goldsteen 1990). The debate, however, remains as to the gendered effect of marriage on health (Carr and Springer 2010). Using the nationally representative sample of Japanese young adults (aged 20-40, N=4800), this paper examines the distributions of self-rated health by gender and marital status from the perspectives of gender roles and structural advantages of marriage. Results indicate that, unlike findings in the United States, women benefit more from marriage, but the positive effect of marriage depends on their work status: combining full-time work and marriage is found to deteriorate women's health. Mechanisms linking the marriage and better health are also found to be different and gendered in Japan.

Introduction

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 being married, relative to being single, has a positive and direct impact on various health outcomes even after controlling for the selectivity into marriage (Wood et al. 2007; Wilson 2005). Three structural mechanisms are identified to explain the link between marriage and better health, i.e., increased economic resources, social integration and support, and regulation of health behaviors through spouse (Waite and Gallagher 2000; Waite and Lehrer 2003).

The debate, however, remains as to the gendered effect of marriage on health (Carr and Springer 2010). Early sociologists of gender argued that women benefit lees from marriage because their work and family roles are often in conflict (Bernard 1972; Gove 1972). Recent examination of this claim, however, finds that having multiple roles can be beneficial to both

sexes, by providing greater self-esteem, prestige, wealth and social support (Barnett and Hyde 2001). Another line of research focuses on structural aspects of marriage and suggests that both men and women benefit from marriage, but through different aspects of marriage. Studies generally find that men gain health benefit through social support and regulation of health behaviors, while women improve their health through increased economic resources (Waite and Gallagher 2000).

Although the relationship between marriage and health has received an increasing attention from the broader public in the United States (Parker-Pope 2010; Saslow 2011), we know surprisingly little about this relationship outside the U.S. and Western Europe. Japan shares a number of socio-demographic similarities with the U.S., but at the same time preserve distinct gender ideology and family relationships that are relevant to the theoretical understanding of marriage and health. Strong gendered division of labor, long work hours, and commitment to jobs, for example, may dilute the protective mechanisms of marriage for men and lead to their deteriorated health. On the other hand, the work-family incompatibility may lower the relative merit of marriage for employed women. Furthermore, the prevalence of co-residence with parent(s) among Japanese single individuals may alleviate the health disadvantages that single individuals experience in the U.S. Using nationally representative sample of men and women aged 20-40 in Japan, this paper examines both gendered structures and role experience of marriage in influencing health status. By doing so, the current paper examines the generalizability of "marriage benefit" found in the United States.

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 being married, relative to being single, has a positive and direct impact on general health status (Koball et al. 2010; Williams & Umberson, 2004), longevity (Carr 2010; Schoenborn 2004), mental health (Marks and Lambert 1998), and various health conditions, including arthritis, hypertension, and heart disease (Lorenz et al. 2006; Prigerson, Maciejewski, and Rosenheck 2000; Zhang & Hayward 2006). Although selection of psychologically and physically healthier individuals into marriage cannot be entirely ruled out, longitudinal studies examining the impact of marriage on health largely confirm the positive influence of marriage on health for both women and men even after controlling for selectivity into marriage (Wood et al. 2007; Wilson 2005).

The literature suggests that health differences by marital status are largely explained by greater economic resources, social integration and support, and regulation of health behaviors conferred by marriage (Ross, Mirowsky and Goldsteen 1990; Waite and Lehrer 2003). Frist, the economic resources hypothesis suggests that 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). Married couples improve per-capita economic status through more income, pooling of wealth and income (Waite 1995; Lerman 2002), and greater efficiency of family consumption (Becker 1981). Economic resources enhance health by improving nutrition, providing care in case of illness, and allowing purchase of medical care or other health enhancing resources (Lillard and Panis 1996), whereas economic hardship is detrimental to health by increasing stress (Mirowsky and Ross 2003).

Second, married individuals may experience greater emotional support and social integration from spouses (Umberson et al. 1996; Horwitz, White and Howell-White 1996; Lamb, Lee and DeMaris 2003). Emotional support, a sense of purpose in life, and increased social security are known to buffer stress and benefit immune, endocrine, and cardiovascular functions. (House, Landis and Umberson 1988; Ross, Mirowsky and Goldsteen 1990; Ross and Mirowsky 2002; Seeman et al. 2002; Uchino 2004). Continuously married individuals experience a lower risk of cardiovascular disease in part due to the psychosocial supports provided by marriage (Zhang and Hayward 2006; Kiecolt-Glaser and Newton, 2001; Bloom 1990).

Third, marriage provides external regulation and facilitates self-regulation of healthy behaviors, both of which can affect physical health, mortality, and well-being (Umberson et al. 2010). Marriage can instill a sense of responsibility and obligation to the partner, which often encourage healthy behaviors and reduce risky behaviors in order to take care of family (Mirowsky and Ross 2005). Married individuals are less likely to smoke, drink heavily, and die from accidents and suicide (Chilcoat and Breslau 1996; Umberson 1987; Rogers 1995), more likely to eat nutritious meals, and more likely to see doctors for checkups and screening (Neale, Tilley, and Vernon 1986). In the case of chronic or sever health problems, married individuals are more likely to adhere to treatment regiments (Goodwin et al 1987; Lee et al. 2005).

Marriage, Gender, and Health

While the positive effect of marriage on health is consistent and strong, the debate remains as to the gendered effect of marriage on health (Kiecolt-Glaser and Newton, 2001; Simon 2002). Since the early 1970s, sociologists of gender have emphasized that marriage benefits the health of men more than women, because women and men experience family roles differently (Bernard 1972; Gove 1972, 1973). According to Gove and colleagues, married women are at greater risks

of mental illness because they are confined to the role of housewife which is often perceived as more demanding and less rewarding than men's roles and that their life lacks structure and social contacts. Even when they enter the labor force, researchers argued that wives are likely to experience role conflict because their family role as care takers is likely to contradict with their work obligations (Gove and Tudor 1973). This conflict is less likely to occur among men because they take on the role of economic providers both at work and within family (Simon 1995; Umberson et al. 1996).

Recent evidence in gender role theory suggests that multiple roles are beneficial for women's health as long as their total work load does not exceed a certain threshold (Barnett and Hyde 2001; Walsh, Sorensen, & Leonard 1995; Waldron et al. 1998). There are several explanations for this finding. Frist, the role-expansion theory (Thoits 1983) explains that the costs of added roles are offset by the rewards multiple roles bring, such as prestige, self-esteem, social support, financial stability, and greater control and power within the family. This explanation assumes that the change in gender ideology (toward egalitarianism) has facilitated the ease of combing multiple roles in more recent years (Barnett and Hyde 2001). In a society where dual-earner family is a norm and majority of women work throughout their career (White and Rogers 2000), women's employment may be less in conflict with household tasks, and therefore married women may receive the above-mentioned benefits of occupying multiple roles. Second, the health benefit of role accumulation is explained by the increase in income when women enter the labor market (Barnett and Hyde 2001). This explanation suggests the importance of linking role analysis and structural advantages, although few studies of role analysis attempt to examine all dimensions of structural mechanisms that bring about better health (Greenhaus 1991).

The second development in gendered effects of marriage on health points out that the health benefit of marriage differs by gender because men and women are structurally situated at different positions, and thus benefit from different aspects of marriage. Among the three mechanisms that link marriage and health, women are more likely to receive economic advantages from marriage (Ross et al. 1990; Lerman 2002; Waite and Gallagher 2000; Wood et al. 2007), while men benefit more from the social and emotional support and health regulation offered by marriage (Umberson 1992; Lillard and Waite 1995; Zick and Smith 1991;Waite 1995; Thomson and Walker 1989). For instance, husbands are more likely to list their spouse as their emotional confidant and tend to receive more social support from their spouse in the marriage (Vanfossen 1981). Also, single men are much more likely to engage in risky behaviors and maintain unhealthy lifestyles than single women, but upon marriage, they tend to control their behaviors and improve the overall health status (Umberson 1987; Waite 1995). On average, studies conclude that men and women both benefit from marriage in terms of physical and mental health (e.g. House et al. 1988; Waite and Gallagher 2000).

Marriage in Japan

Although the relationship between marriage and health is robust in the United States, the meaning of marriage may differ across societies. Contemporary marriage in Japan has been characterized by the rigid gendered division of labor and women's close identification with motherhood (Brinton 1993, Takeda 2005). While men work as a "family wage" earner for the entire family (Nagase 2003), women are expected to become nurturers of their husbands and children upon marriage (Brinton 1993).

For men, life-time employment with fringe benefits and overtime work are often times part of the regular employment contract in Japan (Ogasawara 1998). Comparison using the Japanese

and U.S. time-use surveys indicates that after adjusting for demographic compositions, Japanese full-time male workers spend on average 53 hours per week on paid work, whereas in the U.S., the average hours worked per week was 43 hours among male full-time workers (Kuroda 2009). Hours spent on household chores also reflect the gendered time allocation in Japan. Recent data show that on average, married women spend 27 hours per week on household tasks while married men spent only 3.4 hours on house work (Tsuya et.al. 2011). Observing the expectation of overtime work and commitment to work-related social activities in Japan, a cultural anthropologist, Allison (1994) points out that the separate realms of family and work further facilitate men's commitment to the work place.

A lack of flexibility and long hours of work make it difficult for married women, especially with children to work full-time. In contrast to men, women are more likely to reduce work hours or exit the labor market altogether upon marriage (Brinton 2001). According to the Ministry of Health, Labour, and Welfare's longitudinal surveys, 28% of women who got married between 2002 and 2008 quit their jobs, while only 1% of newly-married men terminated their job. Among the continuously-single individuals between 2002 and 2008, only 3.2% and 2.9% of women and men quit their jobs, respectively (Ministry of Health, Labour, and Welfare 2010).

Japanese business and tax policies also encourage married women to stay at home. Japanese companies have traditionally provided "family wage" to its employees. About four-fifths of Japanese companies provide various allowances for the spouse whose annual income is below a certain amount (Higuchi 1997, 105). They include pension coverage and health care for full-time housewife, the marriage bonus for newly married employees, and housing subsidies (Sechiyama 2000). The Japanese health insurance and social security system also treats the spouse as dependent of the primary earner (usually husbands) if the spousal income does not

exceed 1.3 million yen, or $ 15,640[1] (Social Insurance Agency, 2000). Japanese income tax legislations also allow spousal deductions if the spouse's annual income is below the threshold of 1.3 million yen. These legislations are often considered to reflect the gendered family roles in Japan and the ideology behind it (Akabayashi 2006).

Taken together, work hours can be another mechanism through which marriage influences health in Japan, in addition to the previously established mechanisms that link marriage and health, i.e., economic resources, social support, and health behaviors. Work hours are associated with various health consequences (Kleiner and Pavalko 2010). Working long hours prolongs the exposure to work-related stressors, decreases time for leisure activities and family, and reduces time available for recuperation. Studies have shown associations between long periods of work time and increased stress as well as stress-related diseases such as elevated blood pressure and heart rate, poor sleep quality and subjective fatigue, as well as poor health behavior (Dahlgren et al 2006; Hayashi et al 1996; Nakamura et al 1998; Shields 1999). Because Japanese women are more likely to reduce their work hours upon marriage, women's health is, on average, expected to benefit from marriage through reduced work hours. On the other hand, Japanese men's commitment to their work as a bread winner is likely to increase their health problems and dilute the protective effects of marriage.

Research Hypotheses

The following hypotheses summarize the relationship between marriage, gender, and health for the purpose of our study. H1 and H2 summarize the general relationship between marriage, gender, and health in Japan. H3 though H5 concern the structural mechanisms of marriage and health and are based on findings in the United States. H6 identifies Japanese contexts of marriage and health as they relate to work hours.

[1] As of February 2011.

H1: Married individuals are, overall, healthier than single individuals in Japan.

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

H3: Higher levels of economic resources mediate the positive association between marriage and health especially for women.

H4: Presence of supportive networks mediates the positive association between marriage and health especially for men

H5: Healthy behavior mediates the association between marriage and health especially for men.

H6: Work hours mediate the association between marriage and health especially for men.

In addition, I include the co-residence with parents as an important control for the link between marriage and health. Unlike the US and some of the European countries, it is common and accepted for single young adults, especially daughters, to reside with their parents in Japan. According to Raymo (2003), approximately three-quarters of single women in Japan live with their parents, because the co-residence with parents often involves higher disposable income and less household tasks. Mothers are likely to take care of the health of their single children by preparing meals and conducting household chores. By living with their own family, single individuals are likely to be integrated to their family network with social support. Therefore the relative marriage benefits for health through social support may not be so strong especially for women.

Turning to the gender role theory of marriage and health, the meaning of combining work and family is likely to be gendered in Japan. Because of the strong gendered division of labor, the multiple roles are expected to be detrimental to Japanese women's health. Previous research by Kawakami et al (2006) demonstrates that sleep deprivation is greater for women with full time job and co-residing with parents. While working full-time may pose a risk of role conflict

for married women, combining part-time work and marriage may benefit women, if the role accumulation hypothesis holds true. Because it is culturally acceptable and prevalent for Japanese women to work part-time while being married and raising children, it is most likely that the accumulating multiple roles under this condition will lead to better health for women. In contrast, it is expected that men's distress will increase if they do not have full-time employment, since men are culturally expected to be a breadwinner of the family. Not combining marriage and a full-time work would then decrease men's well-being.

H7: The combination of full-time employment and marriage reduces the health benefit of marriage for women.

H8: The combination of part-time employment and marriage increases the health benefit for women.

H9: Not combing full-time employment and marriage reduces the health benefit for men.

Methods

Data

To examine the gender difference in health, this paper compares both men and women in the age range that is most likely to be affected by family formation. Data for this study come from nationally representative household samples of adults aged 20 to 40 years from Japanese Life Course Panel Survey (JLPS). I use the first wave of JLPS (n=4,800) conducted in 2007. Using the electoral and resident registry, JLPS utilized a stratified sampling of 20 to 34 year olds and 35 to 40 year olds who reside in japan in November 2006. The sample was stratified by gender, age group, geographical region, and the size of the city. The respondents were initially contacted by mail to participate in the survey. Questionnaires were sent to those who agreed to participate in the survey by mail. The completed questionnaires were then collected by the staff from a

survey company. The response rates were 34.5% for the 20-34 year old sample, and 40.4% for the 35-40 year old sample (Ishida et al. 2007). Despite the relatively low response rate, data are representative by age, gender, marital status, types of residential area, occupation, work hours, and education (Miwa 2008). The survey includes questions on general 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. I use self-rated health as a measure of the general health condition. Self-rated health is 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 are collapsed into a binary outcome, where good health represents excellent, very good, or good health, whereas fair or poor health are categorized as poor health. Series of logistic regressions are used to assess the association between marriage, gender, and health.

Independent Variables. I operationalize marital status as three dummy variables representing *currently-married, never-married* (reference category), and *separated, widowed, or divorced*. As a measure of economic resources, I use the *annual household income per family member*.

Respondents were asked to indicate the annual household income in addition to their own income and spouse's income when appropriate. I divided the household income by the number of persons living in the household. When the household income was missing, I replaced it with the sum of self and spousal incomes. I use *co-residence with own parent(s)* and *lack of supportive network* as a measure of social integration and support that may explain the health benefit of marriage (Umberson et al. 1996). Those who answered that they have nobody to rely on when it comes to work, study, personal relationships, or financial emergency were coded as 1. Given the prevalence of co-residence with aprent(s) among Japanese singles, this variable may explain the marital status difference in health especially for women. I also use frequency of *smoking* to measure the degree of healthy behaviors which may explain the link between marriage and better (Umberson 1992). Smoking more than 10 cigarettes per day is considered to be unhealthy behaviors. To explore the Japanese pattern of gender work division, For work hours, I create the following 5 categories: 1) zero hour including those without employment and out of labor force, 2) 1 to 35 hours per week, 3) 36 to 49 hours, 4) 50 to 59 hours, and 5) 60+ hours.

I also include other important variables that are likely to influence health, i.e. age (House, Kessler, & Herzog 1990), educational attainment, and employment status (Mirowsky, Ross and Reynolds 2000). In addition, the presence of *dependents under age 18* 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 in the U.S. (Schoenborn 2004; Umberson and Williams 1999).

Results

Descriptive Statistics. Table1 shows the percentage distributions and means of background variables and self-rated health for all respondents, and further stratified by gender and marital status. The table indicates that respondents are young individuals where roughly half of them are married. For both men and women, married individuals tend to have higher household income, better self-rated health (where 1 being excellent health), and more social support. Long work hours and frequent smoking, however, appear to be prominent for married men. On average, married men work 53 hours per week and 40% of them smoke more than 10 cigarettes per day.

[Table 1 about here]

Multivariate Statistics. Table 2 shows the relationship between marriage, gender, and health for all individuals. Model 1 includes gender, marital status, age, and education of respondents. It shows that being currently-married, as opposed to being never-married, is associated with better health. Married individuals are about 70% as likely to report excellent, very good, or good health. Being female also increases the propensity of reporting good health by 30%. The positive relationship between marriage and health disappears when employment status and the presence of a child under age 18 are introduced in Model 2. However, the interaction terms between gender and marital status introduced in Model 3 indicate that the effect of marriage depends on gender, suggesting that being female and being currently-married increases the odds of being in good health by 60%. This positive relationship continues to hold even after controlling for economic resources, social support, and smoking (Model 7).

Three mechanisms of marriage benefit identified in American literature do not appear to mediate the relationship between marriage and health in Japan. Unlike findings in the U.S., household income is not significantly associated with health. Even though a lack of social

support and frequency of smoking affect health negatively, the relationships are independent of marital status. Intorduction of smoking in Model 6, however, explains the positive and direct effect of being female on self-rated health. Women, on average, report better health than men because they tend to smoke less, regardless of marital status.

[Table 2 about here]

Table 3 divides the sample into men and women to further entangle the relationship between marriage and health. Comparison between female and male in Model 1 indicates that the effect of marriage on health is substantially greater for women. Married women are much more likely to report good health by more than 200%, whereas for men, being married increases the odds of reporting good health by 45%. Model 2 further indicates gendered relationship between marriage and health. The presence of a child under 18 explains the positive association between marriage and health only for women. On the other hand, the employment status explains the positive effect of marriage only for men. Model 3 where adds income, social support and smoking to the baseline model. The negative effect of smoking on health appears to be smaller for men than for women (30% vs. 50% decline in reporting good health). Again, the structural mechanisms appear to affect health independent of marital status.

Models 4 and 5 add co-residence with own parent(s) and work hours to test the alternative hypotheses unique to Japanese contexts. Model 4 shows that the positive effect of marriage becomes significant after introducing co-residence, which suggests that the effect of being married (as opposed to being never-married) was suppressed by respondent's non-coresidence with their own parent(s). The high propensity of being in good health among the marrieds is somewhat offset by the fact that married women are less likely to live with their own parents, which is associated with the low propensity of reporting good health. This contradicts our

prediction that co-residence with parents would partially explain the health difference between being never-married and currently-married. Model 5 indicates that for men, work hour is associated with better health up to 59 hours per week. Being unemployed, being out of labor force, and working more than 60 hours per week are negatively associated with men's health. Although extremely long work hour is associated with worse health for men, being in employment in general, as opposed to not working at all, explains the positive relationship between marriage and health for men.

[Table 3 about here]

Table 4 introduces different sets of role combinations to test whether combining multiple role influences marriage and health for men and women. Model 2 shows that interaction between being currently-married and working full time reduces the odds of reporting excellent, very good, or good health by almost 60%. Even though marriage and full-time employment each has a positive effect on health (as shown in Model 1), combining both appears to worsen subjective health for women. Combination of marriage and full-time employment, however, does not influence men's health. Models 3 and 4 examine the effect of combining the child-rearing role and marriage and employment. Model 3 indicates that combining marriage and child rearing and marriage does not affect one's health. However, combing child rearing and full-time employment significantly reduces the health status for women, but not for men. Taken together, multiple roles appear to impact women's health negatively when full-time employment is combined with marriage or child rearing.

[Table 4 about here]

Additional Analysis. Propensity Score will be used to assess the causality of marriage on health.

Discussions

Literature on Japanese marriage and family suggested that marriage in Japan operates in a different context than does marriage for majority population in the United States. In particular, long work hours and difficulty of combining work and family for women were discussed to dilute the health benefit of marriage. Several hypotheses based on both structural and gender-role perspectives were tested, using a nationally representative sample of young adults aged between 20 and 40. Results showed that Japanese women benefit more from marriage than men even after structural mechanisms are controlled. The ways in which marriage impacts health, furthermore, differ greatly from what findings in the U.S. suggest. First, household income has little effect on health in Japan, which may be due to Japan's universal health care. Second, social support and healthy behaviors have strong, but direct effects on health. Third, the positive effect of marriage was mediated partially by the presence of a young child for women, and work hours for men. Furthermore, combining marriage and full-time work was found to reduce women's health significantly, even after controlling for structural factors.

The above mentioned findings suggest that assumptions about the meaning of marriage as it relates to health may differ in Japan. First, while American literature tends to put exclusive focus on marriage, in Japan, marriage appears to be important in affecting health because it relates to other domains including work and child-rearing. Second, the meaning of gender roles and combinations of roles may have profound consequences for health, beyond structural implications, in a society where gender ideology is rigid. The relationship between marriage and health may need to be examined in light of gender relations of the society and of the time.

Conclusion

Conclusion will be added.

Bibliography

Akabayashi, Hideo. 2006. "The labor supply of married women and spousal tax deductions in Japan—a structural estimation." *Review of Economics of the Household* 4:349-78.

Allison, Anne. 1994. *Nightwork : sexuality, pleasure, and corporate masculinity in a Tokyo hostess club*. Chicago: U of Chicago Press.

Andrade, L., J. J. Caraveo-Anduaga, P. Berglund, R. V. Bijl, R. De Graaf, W. Vollebergh, E. Dragomirecka, R. Kohn, M. Keller, R. C. Kessler, N. Kawakami, C. Kilic, D. Offord, T. B. Ustun, and H. U. Wittchen. 2003. "The Epidemiology of Major Depressive Episodes: Results from the International Consortium of Psychiatric Epidemiology (ICPE) Surveys." *International Journal of Methods in Psychiatric Research* 12(1):3-21.

Aneshensel, C. S., C. M. Rutter, and P. A. Lachenbruch. 1991. "Social structure, stress, and mental health - Competing conceptual and analytic models." *American Sociological Review* 56(2):166-78.

Arber, S. 1991. "Class, paid employment and family roles - Making sense of structural disadvantage, gender and health status." *Social Science & Medicine* 32(4):425-36.

Arber, S. 1997. "Comparing inequalities in women's and men's health: Britain in the 1990s." *Social Science & Medicine* 44(6):773-87.

Baba, Yasuhiko, Katsunori Kondo, and Suemori. 2003. "Marriage and Psychological Health - Socioeconomic Status as a background." *Kikan Kakei Keizai Kennkyuu* 58:77-85.

Backlund, E., P. D. Sorlie, and N. J. Johnson. 1999. "A Comparison of the Relationships of Education and Income with Mortality: the National Longitudinal Mortality Study." *Social Science & Medicine* 49(10):1373-84.

Barnett, R. C., and J. S. Hyde. 2001. "Women, men, work, and family - An expansionist theory." *American Psychologist* 56(10):781-96.

Barrett, A. E. 2000. "Marital trajectories and mental health." *Journal of Health and Social Behavior* 41(4):451-64.

Becker, G. 1981. *A Treatise on the Family*. Cambridge: Harvard University Press.

Belle, D. 1982. "The stress of caring: Women as providers of social support." Pp. 496–505 in *Handbook of Stress: Theoretical and clinical aspects*, edited by L. Goldberger and S. Bresnitz. New York: Free Press.

Bernard, Jessie. 1972. *The Future of Marriage*. New York: Bantam Books.

Bloom, J. R. 1990. "The relationship of social support and heath." *Social Science & Medicine* 30(5):635-37.

Brinton, Mary C. 1993. *Women and the Economic Miracle: Gender and Work in Postwar Japan*. Berkeley: University of California Press.

Brinton, Mary C (Ed.). 2001. *Women's Working Lives in East Asia*. Stanford: Stanford University Press.

Carr, D., and K. W. Springer. 2010. "Advances in Families and Health Research in the 21st Century." *Journal of Marriage and the Family* 72(3):743-61.

Centers for Disease Control and Prevention. 2009. *Behavioral Risk Factor Surveillance System Survey Questionnaire*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.

Chandola, T., and C. Jenkinson. 2000. "Validating Self-Rated Health in Different Ethnic Groups." *Ethnicity & Health* 5(2):151-59.

Chilcoat, H. D., and N. Breslau. 1996. "Alcohol disorders in young adulthood: Effects of transitions into adult roles." *Journal of Health and Social Behavior* 37(4):339-49.

Cutrona, Carolyn E. 1996. *Social Support in Couples*. Thousand Oaks, CA: Sage.

Dahlgren, A., G. Kecklund, and T. Akerstedt. 2006. "Overtime work and its effects on sleep, sleepiness, cortisol and blood pressure in an experimental field study." *Scandinavian Journal of Work Environment & Health* 32(4):318-27.

Ferraro, K. F., and Y. Yu. 1995. "Body-Weight and Self-Ratings of Health." *Journal of Health and Social Behavior* 36(3):274-84.

Fukuda, Y., K. Nakamura, and T. Takano. 2005. "Accumulation of health risk behaviours is associated with lower socioeconomic status and women's urban residence: a multilevel analysis in Japan." *Bmc Public Health* 5:10.

Goldman, N., and Y. R. Hu. 1993. "Excess Mortality among the Unmarried - A Case-Study of Japan." *Social Science & Medicine* 36(4):533-46.

Goodwin, J. S., W. C. Hunt, C. R. Key, and J. M. Samet. 1987. "The effect of marital status on stage, treatment, and survival of cancer patients." *JAMA-Journal of the American Medical Association* 258(21):3125-30.

Gove, W. R. 1972. "Relationship between sex roles, marital status, and mental health." *Social Forces* 51(1):34-&.

Gove, W. R., and J. F. Tudor. 1973. "Adult sex roles and mental illness." *American Journal of Sociology* 78:812-35.

Hayase, Yasuko. 2005. "Gender Attitudes and Reality." Pp. 217-46 in *Chou Shoushika Jidai no Kazoku Ishiki*, edited by Mainichi Shimbun Jinko Mondai Chousakai. Tokyo: Mainichi Newspaper.

Hayashi, T., Y. Kobayashi, K. Yamaoka, and E. Yano. 1996. "Effect of overtime work on 24-hour ambulatory blood pressure." *Journal of Occupational and Environmental Medicine* 38(10):1007-11.

Heather L. Koball1, Emily Moiduddin1, Jamila Henderson1, Brian Goesling1, and Melanie Besculides1. "What Do We Know About the LinkBetween Marriageand Health?".

Higuchi, Y. 1997. "The effects of income tax and social security policy: Married women in the Japanese labor supply." *U.S.-Japan Women's Journal* 13:104-29.

Horwitz, A. V., H. R. White, and S. HowellWhite. 1996. "Becoming married and mental health: A longitudinal study of a cohort of young adults." *Journal of Marriage and the Family* 58(4):895-907.

House, J. S., R. C. Kessler, and A. R. Herzog. 1990. "Age, Socioeconomic Status, and Health." *Milbank Quarterly* 68(3):383-411.

House, J. S., K. R. Landis, and D. Umberson. 1988. "Social Relationships and Health." *Science* 241(4865):540-45.

Idler, E. L., and Y. Benyamini. 1997. "Self-rated health and mortality: A review of twenty-seven community studies." *Journal of Health and Social Behavior* 38(1):21-37.

Ikeda, A., H. Iso, H. Toyoshima, Y. Fujino, T. Mizoue, T. Yoshimura, Y. Inaba, A. Tamakoshi, and Jacc Study Grp. 2007. "Marital Status and Mortality among Japanese Men and Women: the Japan Collaborative Cohort Study." *Bmc Public Health* 7:7.

Inaba, A., P. A. Thoits, K. Ueno, W. R. Gove, R. J. Evenson, and M. Sloan. 2005. "Depression in the United States and Japan: Gender, Marital Status, and SES Patterns." *Social Science & Medicine* 61(11):2280-92.

Ishida, Hiroshi, Satoshi Miwa, Koji Yamamoto, and Masao Oshima. 2007. "Work, Health and Hope: The Results of the Japanese Life Course Panel Survey (JLPS) 2007." *University of Tokyo, Institute of Social Science, Discussion Paper Series*.

Iwasawa, M. 2006. "Chapter 2: Marriage." in *International Opinion Survey on Society with a Declining Birthrate*, edited by Cabinet Office. Tokyo: Cabinet Office.

Jacobs, J., and K Gerson. 2004. *The time divide: Work, family, and gender inequality*. Cambridge, MA: Harvard University Press.

Kawakami, Norito, Yasuki Kobayashi, and Hideki Hashimoto (Eds.). 2006. *Shakai kakusa to Kenko (Social Disparity and Health)*. Tokyo: University of Tokyo Press.

Kiecolt-Glaser, J. K., and T. L. Newton. 2001. "Marriage and health: His and hers." *Psychological Bulletin* 127(4):472-503.

Kleiner, S., and E. K. Pavalko. 2010. "Clocking In: The Organization of Work Time and Health in the United States." *Social Forces* 88(3):1463-86.

Kondo, Katsunori. 2006. *Health Disparity Society*. Tokyo: Igaku Shoin.

Lamb, K. A., G. R. Lee, and A. DeMaris. 2003. "Union formation and depression: Selection and relationship effects." *Journal of Marriage and the Family* 65(4):953-62.

Kuroda, Sachiko. 2010. "Do Japanese Work Shorter Hours than before?: Measuring Trends in Market Work and Leisure Using 1976-2006 Japanese Time-Use Survey." *Journal of Japanese and International Economies* 24:481-502.

Lee, S., E. Cho, F. Grodstein, I. Kawachi, F. B. Hu, and G. A. Colditz. 2005. "Effects of marital transitions on changes in dietary and other health behaviours in US women." *International Journal of Epidemiology* 34(1):69-78.

Lerman, Robert. 2002. *Marriage and the Economic Well-Being of Families with Children: A Review of the Literature*. Washington, DC: The Urban Institute and American University.

Lillard, L. A., and C. W. A. Panis. 1996. "Marital status and mortality: The role of health." *Demography* 33(3):313-27.

Lim, G., and S. Ng. 1998. "Home-Based Married Women's Inclination to Enter the Workforce in Singapore." *Research and Practice in Human Resource Management* 6(1):1-16.

Lim, So-jung, James M. Raymo, and Larry L. Bumpass. 2008. "Relationships between Marriage and Women's Health in Japan ". Unpublished manuscript.

Liu, H., and D. J. Umberson. 2008. "The Times They Are A Ahangin': Marital Status and Health Differentials from 1972 to 2003." *Journal of Health and Social Behavior* 49(3):239-53.

Lorenz, F. O., K. A. S. Wickrama, R. D. Conger, and G. H. Elder. 2006. "The short-term and decade-long effects of divorce on women's midlife health." *Journal of Health and Social Behavior* 47(2):111-25.

Maeda, Nobuhiko. 2002. "Dansei no roudoujikan to kateiseikatsu (Men's work hours and family life)." Pp. 158-81 in *Kazoku to shokugyo (Family and occupation)*, edited by Kunio Ishihara. Kyoto: Minerva shobo.

Ministry of Health Labour and Welfare. 2010. "7th Longitudinal Survey of Adults in the 21st Century." Ministry of Health, Labour, and Welfare.

Mirowsky, J., and C. E. Ross. 2003. *Social causes of psychological distress*. New Brunswick, N.J.: Aldine Transaction.

Mirowsky, J., C.E. Ross, and J.R. Reynolds. 2000. "Links between Social Status and Health Status." Pp. 47-67 in *The Handbook of Medical Sociology*, edited by C.E. Bird, P. Conrad, and A.M. Fremont. NJ: Prentice Hall.

Nagase, Nobuko. 2003. "Standard and Nonstandard Work Arrangements, Pay Difference, and Choice of Work by Japanese Mothers." in *Nonstandard work in developed economies: causes and consequences*, edited by Susan N. Houseman and Machiko Ōsawa. Kalamazoo, MI, : W.E. Upjohn Institute for Employment Research.

Nakamura, K., S. Shimai, S. Kikuchi, H. Takahashi, M. Tanaka, S. Nakano, Y. Motohashi, H. Nakadaira, and M. Yamamoto. 1998. "Increases in body mass index and waist circumference as outcomes of working overtime." *Occupational Medicine-Oxford* 48(3):169-73.

Nakata, Y. F., and R. Takehiro. 2002. "Employment and wages of female Japanese workers: Past, present, and future." *Industrial Relations* 41(4):521-47.

Neale, A. V., B. C. Tilley, and S. W. Vernon. 1986. "Marital Status, Delay in Seeking Treatment and Survival from Breast Cancer." *Social Science & Medicine* 23(3):305-12.

NIPSSR. 2010. "Jinkou toukei shiryou shu 2010 (Population Statistics 2010)." edited by National Institute of Population and Social Security Research.

Ogasawara, Yuko. 1998. *Office Ladies and Salaried Men: Power, Gender, and Work in Japanese Companies*. CA: University of California Press.

Parker-Pope, Tara. 2010. "Is marriage good for your health?" in *New York Times*.

Prigerson, H. G., P. K. Maciejewski, and R. A. Rosenheck. 2000. "Preliminary explorations of the harmful interactive effects of widowhood and marital harmony on health, health service use, and health care costs." *Gerontologist* 40(3):349-57.

Raymo, J. M. 2003. "Premarital Living Arrangements and the Transition to First Marriage in Japan." *Journal of Marriage and the Family* 65(2):302-15.

Raymo, J. M., and M. Iwasawa. 2005. "Marriage market mismatches in Japan: An alternative view of the relationship between women's education and marriage." *American Sociological Review* 70(5):801-22.

Read, J. G., and B. K. Gorman. 2006. "Gender Inequalities in US Adult Health: The Interplay of Race and Ethnicity." *Social Science & Medicine* 62(5):1045-65.

Rindfuss, R. R., M. K. Choe, L. L. Bumpass, and N. O. Tsuya. 2004. "Social Networks and Family Change in Japan." *American Sociological Review* 69(6):838-61.

Rogers, R. G. 1995. "Marriage, sex, and mortality." *Journal of Marriage and the Family* 57(2):515-26.

Rogers, R. G., B. G. Everett, J. M. Saint Onge, and P. M. Krueger. 2010. "Social, behavioral, and biological factors, and sex differences in mortality." *Demography* 47(3):555-78.

Ross, Catherine E., John Mirowsky, and Karen Goldsteen. 1990. "The Impact of the Family on Health: The Decade in Review." *Journal of Marriage and the Family* 52(4):1059-78.

Roxburgh, S. 2004. "'There just aren't enough hours in the day': The mental health consequences of time pressure." *Journal of Health and Social Behavior* 45(2):115-31.

Rumpf, H. J., C. Meyer, U. Hapke, and U. John. 2001. "Screening for mental health: validity of the MHI-5 using DSM-IV Axis I psychiatric disorders as gold standard." *Psychiatry Research* 105(3):243-53.

Saslow, Rachel. 2011. "Health benefits of falling and staying in love." in *Washington Post*.

Schoenborn, Charlotte A. 2004. "Marital Status and Health: United States, 1999–2002." *Advance Data from Vital and Health Statistics, National Center for Health Statistics* 351.

Sechiyama, Kaku. 2000. "Shufu Hogo Seisaku no Daitenkan o: Jidˆo Teate Giron o Kikkake ni Shite." *Ronza* 11:134-45.

Seeman, T. E., B. H. Singer, C. D. Ryff, G. D. Love, and L. Levy-Storms. 2002. "Social relationships, gender, and allostatic load across two age cohorts." *Psychosomatic Medicine* 64(3):395-406.

Shibuya, K., H. Hashimoto, and E. Yano. 2002. "Individual income, income distribution, and self rated health in Japan: cross sectional analysis of nationally representative sample." *British Medical Journal* 324(7328):16-19.

Shields, Margot. 1999. "Long Working Hours and Health." *health reports* 11:1-17.

Simon, R. W. 1995. "Gender, Multiple Roles, Role Meaning, and Mental-Health." *Journal of Health and Social Behavior* 36(2):182-94.

Simon, R. W. 2002. "Revisiting the relationships among gender, marital status, and mental health." *American Journal of Sociology* 107(4):1065-96.

Social Insurance Agency. 2000. "Outline of social insurance in Japan 1999." edited by Ministry of Health and Welfare. Tokyo: Japan International Social Security Association.

Suzuki, Atsuko (Ed.). 2007. *Gender and Career in Japan*. Melbourne: Trans Pacific Press.

Takeda, Hiroko. 2005. *The Political Economy of Reproduction in Japan*. New York Routledge Curzon.

Takeda, Y., I. Kawachi, Z. Yamagata, S. Hashimoto, Y. Matsumura, S. Oguri, and A. Okayama. 2004. "Multigenerational family structure in Japanese society: impacts on stress and health behaviors among women and men." *Social Science & Medicine* 59(1):69-81.

Thoits, P. A. 1983. "Multiple identities and psychological well-being - A reformulation and test of the social-isolation hypothesis." *American Sociological Review* 48(2):174-87.

Thompson, L., and A. J. Walker. 1989. "Gender in families - Women and men in marriage, work, and parenthood." *Journal of Marriage and the Family* 51(4):845-71.

Tsuya, N. O., and K. O. Mason. 1995. "Changing gender roles and below-replacement fertility in Japan." Pp. 139-67 in *Gender and Family Change in Industrialized Countries*, edited by K. O. Mason and A. Jensen. Oxford: Clarendon Press.

Tsuya, Noriko O., Larry L. Bumpass, Minja K. Choe, and Ronald R. Rindfuss. 2005. "Is the gender division of labour changing in Japan?" *Asian Population Studies* 1(1):47-67.

Tsuya, N. O., L. Bumpass, M. K. Choe, and R. R. Rindfuss. 2011. "Employment and Household Tasks of Japanese Couples." *Unpublished Manuscript*.

Uchino, B. N. 2006. "Social support and health: A review of physiological processes potentially underlying links to disease outcomes." *Journal of Behavioral Medicine* 29(4):377-87.

Uchino, Bert N. 2004. *Social Support and Physical Health: Understanding the Health Consequences of Relationships*. New Haven, CT: Yale University Press.

Umberson, D. 1987. "Family Status and Health Behaviors: Social Control as a Dimension of Social Integration." *Journal of Health and Social Behavior* 28(3):306-19.

Umberson, D. 1992. "Gender, Marital-Status and the Social-Control of Health Behavior." *Social Science & Medicine* 34(8):907-17.

Umberson, D., R. Crosnoe, and C. Reczek. 2010. "Social Relationships and Health Behavior Across the Life Course." *Annual Review of Sociology* 36:139-57.

Umberson, Debra, M. C. D. Chen, J. S. House, K. Hopkins, and E. Slaten. 1996. "The Effect of Social Relationships on Psychological Well-Being: Are Men and Women Really so Different?" *American Sociological Review* 61(5):837-57.

Vanfossen, B. E. 1981. "Sex-differences in the mental-health effects of spouse support and equity." *Journal of Health and Social Behavior* 22(2):130-43.

Waite, L. J. 1995. "Does marriage matter?" *Demography* 32(4):483-507.

Waite, L. J., and E. L. Lehrer. 2003. "The benefits from marriage and religion in the United States: A comparative analysis." *Population and Development Review* 29(2):255-+.

Waite, Linda J., and Maggie Gallagher. 2000. *The Case for Marriage: Why Married People are Happier, Healthier, and Better Off Financially*. New York: Doubleday.

White, L., and S. J. Rogers. 2000. "Economic circumstances and family outcomes: A review of the 1990s." *Journal of Marriage and the Family* 62(4):1035-51.

Williams, K. 2003. "Has the future of marriage arrived? A contemporary examination of gender, marriage, and psychological well-being." *Journal of Health and Social Behavior* 44(4):470-87.

Williams, K., and D. Umberson. 2004. "Marital status, marital transitions, and health: A gendered life course perspective." *Journal of Health and Social Behavior* 45(1):81-98.

Wilson, Chris M., and Andrew J. Oswald. 2005. "How Does Marriage Affect Physical and Psychological Health? A Survey of the Longitudinal Evidence." in *Discussion Paper*.

Wood, Robert G., Brian Goesling, and Sarah Avellar. 2007. "How Does Marriage Affect Physical and Psychological Health? A Survey of the Longitudinal Evidence." edited by Office of the Assistant Secretary for Planning and Evaluation: Office of Human Services Policy.

Yamaguchi, Kazuo. 2009. "Over-employment " Pp. 198-238 in *Work-Life Balance*. Tokyo: Nihon Keizai Shimbun Publication.

Yamazaki, S, S Fukuhara, and J Green. 2005. "Usefulness of five-item and three-item Mental Health Inventories to screen for depressive symptoms in the general population of Japan." *Health Qual Life Outcomes* 3:48.

Zhang, Z. M., and M. D. Hayward. 2006. "Gender, the marital life course, and cardiovascular disease in late midlife." *Journal of Marriage and the Family* 68(3):639-57.

Zick, C. D., and K. R. Smith. 1991. "Marital transitions, poverty, and gender differences in mortality." *Journal of Marriage and the Family* 53(2):327-36.

Table 1. % Distributions and Means of Respondent Characteristics by Gender and Marital Status: JLPS 2007

	Total Sample (N=4,775)		Female			Male		
Variable	N	%	Never-married (n=1,109)	Currently-married (n=1,222)	Divorced/ Widowed (n=104)	Never-married (n=1,273)	Currently-married (n=1,033)	Divorced/ Widowed (n=59)
Mean Age (*s.d.*)	31 (6)		27	34	34	28	34	34
With One or More Children	1955	*40*	*0*	*84*	*66*	*0*	*81*	*57*
Co-Residence with Own Parent(s)	2135	*45*	*80*	*7*	*50*	*75*	*13*	*53*
Education								
High school or less	1452	*30*	*20*	*36*	*40*	*28*	*37*	*49*
Vocational school, 2-year college	1548	*33*	*41*	*46*	*45*	*20*	*21*	*24*
College or above	1762	*37*	*39*	*18*	*14*	*52*	*42*	*27*
Employment								
Unemployed	208	*4*	*4*	*7*	*6*	*5*	*1*	*7*
Employed	2332	*49*	*78*	*56*	*92*	*74*	*98*	*92*
Out of Labor Force	922	*19*	*18*	*37*	*3*	*21*	*1*	*2*
Mean Work Hours per Week	36 (23)		36	18	36	39	53	48
Mean Household Income per Family Member	531 (397)		472	580	367	480	612	521
Mean Self-Rated Health (1=excellent, 5=poor)	2.5 (0.9)		2.5	2.4	2.6	2.5	2.5	2.7
No Social Support	2000	*42*	*41*	*39*	*48*	*46*	*39*	*47*
11 or More Cigarettes per Day	1015	*21*	*7*	*9*	*30*	*29*	*40*	*53*

Table 2. Logistic Regression Odds Ratios Predicting Good Health (1=Excellent/VeryGood/Good Health, 0=Fair/Poor Health): JLPS 2007

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7	
	OR	p	OR	p	OR	p	OR	p	OR	p	OR	p	OR	p
Female	1.31	**	1.37	**	1.15		1.36	**	1.35	**	1.20		1.02	
Marital Status														
Never-Married	Ref		Ref		Ref		Ref		Ref		Ref		Ref	
Currently-Married	1.74	***	1.31		1.05		1.24		1.20		1.18		0.97	
Widowed/Divorced	0.93		0.75		0.81		0.74		0.75		0.79		0.82	
Age	0.97	**	0.97	**	0.97	***	0.97	***	0.97	***	0.97	**	0.97	**
Education														
High school or less	Ref		Ref		Ref		Ref		Ref		Ref		Ref	
Vocational school, 2-year college	0.92		0.94		0.94		0.93		0.93		0.89		0.89	
College or above	1.30	*	1.34	*	1.36	**	1.28	*	1.26		1.17		1.20	
Employment														
Unemployed			Ref		Ref		Ref		Ref		Ref		Ref	
Employed			1.80	**	1.95	**	1.72	**	1.68	**	1.74	**	1.87	**
Out of labor force			1.49		1.43		1.49		1.47		1.48		1.43	
Child under Age 18			1.47	*	1.47	*	1.54	*	1.53	*	1.58	**	1.58	**
Interactions														
Female * Married					1.63	**							1.59	**
Female * Widowed/Divorced					0.93								0.98	
Household Income per Family Member														
Less than 1 million JP yen							Ref		Ref		Ref		Ref	
1-1.7 million JP yen							1.19		1.18		1.18		1.17	
1.7-2.5 million JP yen							0.98		0.96		0.98		0.96	
Mare than 2.5K million JP yen							1.30		1.29		1.30		1.26	
Icome missing							0.86		0.85		0.85		0.84	
No Social Support									0.60	***	0.59	***	0.58	***
11 or More Cigarettes per Day											0.65	***	0.66	***
AIC	3375		3339		3337		3339		3298		3279		3278	
N	4752		4708		4708		4708		4689		4678		4678	

* p<.05, ** p<.01, *** p<.001 (two-tailed test)

Table 3. Logistic Regression Odds Ratios Predicting Good Health (1=Excellent/VeryGood/Good Health) by Gender: JLPS 2007

	Model 1		Model 2		Model 3		Model 4		Model 5	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
	OR p	OR p	OR p	OR p	OR p	OR p	OR p	OR p	OR p	OR p
Marital Status										
Never-Married	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
Currently-Married	2.21 ***	1.45 *	1.52	1.16	1.42	1.04	1.76 *	1.15	1.95 *	1.27
Widowed/Divorced	1.00	0.94	0.72	0.85	0.83	0.83	0.98	0.85	1.05	0.85
Age	0.97 *	0.98	0.96 **	0.97 *	0.96 **	0.97 *	0.96 *	0.97 *	0.96 **	0.97 *
Education										
High school or less	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
Vocational school, 2-year college	1.15	0.74	1.23	0.73	1.13	0.70 *	1.15	0.70 *	1.12	0.74
College or above	1.78 **	1.08	1.89 **	1.10	1.68 *	0.94	1.70 *	0.95	1.55 *	0.95
Unemployment										
Unemployed			Ref	Ref	Ref	Ref	Ref	Ref		
Employed			1.40	2.85 ***	1.38	2.78 ***	1.40	2.78 ***		
Out of Labor Force			1.10	1.98	1.08	2.03	1.10	2.02		
Child under Age 18			1.83 *	1.18	1.90 *	1.32	1.97 *	1.33	1.94 **	1.25
Household Income per Family Member										
Less than 1 million JP yen					Ref	Ref	Ref	Ref	Ref	Ref
1-1.7 million JP yen					1.23	1.12	1.27	1.14	1.32	1.20
1.7-2.5 million JP yen					0.83	1.09	0.89	1.12	0.93	1.14
Mare than 2.5K million JP yen					1.12	1.37	1.23	1.45	1.26	1.44
Missing					0.61	1.15	0.64	1.12	0.61	1.08
No Social Support					0.59 ***	0.58 ***	0.60 **	0.58 ***	0.59 ***	0.59 ***
11 or More Cigarettes per Day					0.51 **	0.71 *	0.52 **	0.71 *	0.49 **	0.78 *
Coresidence with Own Parent(s)							1.46 *	1.18	1.33	1.17
Ave. Work Hours per Week										
0 hour									0.65	0.36 ***
1-35 hours									0.79	1.06
36-49 hours									Ref	Ref
50-59 hours									1.13	1.09
60+ hours									0.73	0.57 **
Missing									0.72	1.14
AIC	1590	1786	1570	1767	1538	1745	1527	1743	1544	1668
N	2414	2338	2392	2316	2377	2301	2365	2295	2382	2312

† p<.1, * p<.05, ** p<.01, *** p<.001 (two-tailed test)

Table 4. Logistic Regression Odds Ratios Predicting Good Health (1=Excellent/VeryGood/Good Health) by Gender: JLPS

	Model 1		Model 2		Model 3		Model 4	
	Female	Male	Female	Male	Female	Male	Female	Male
	OR p	OR p	OR p	OR p	OR p	OR p	OR p	OR p
Marital Status								
Currently-Single	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
Currently-Married	1.68 *	1.32	3.03 **	0.58	1.65	1.31	1.67 *	1.32
Age	0.96 **	0.97 *	0.96 **	0.97 *	0.96 **	0.97 *	0.96 **	0.97 *
Education								
High school or less	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
Vocational school, 2-year college	1.12	0.75	1.11	0.74	1.11	0.75	1.12	0.75
College or above	1.56 *	1.00	1.59 *	0.99	1.59 *	1.00	1.59 *	1.00
Employment								
Unemployment	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
Part-time employment	1.22	2.96 ***	1.63	2.59 **	1.22	2.97 ***	1.44	2.66 **
Full-time employment	1.58 *	2.28 ***	2.49 **	2.14 ***	1.58 *	2.28 ***	2.21 **	2.21 ***
Child under Age 18	2.10 **	1.20	1.94 **	1.19	1.88	1.14	3.16 ***	0.71
Coresidence with Own Parent(s)	1.33	1.19	1.36	1.20	1.37	1.19	1.35	1.20
Married * Part-time work			0.68	6.28				
Married * Full-time work			0.38 *	2.35				
Married * Child					1.06	1.06		
Child * Pull-time work							0.82	4.52
Child * Full-time work							0.40 *	1.68
Household Income per Family Member								
Less than 1 million JP yen	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
1-1.7 million JP yen	1.29	1.17	1.23	1.17	1.28	1.17	1.24	1.17
1.7-2.5 million JP yen	0.90	1.10	0.87	1.10	0.90	1.10	0.91	1.10
Mare than 2.5K million JP yen	1.19	1.41	1.16	1.42	1.19	1.42	1.18	1.41
Missing	0.62	1.06	0.65	1.11	0.62	1.06	0.65	1.07
No Social Support	0.59 ***	0.60 ***	0.59 ***	0.61 ***	0.59 ***	0.60 ***	0.60 ***	0.61 ***
11 or More Cigarettes per Day	0.50 **	0.75 *	0.51 **	0.75 *	0.50 **	0.75 *	0.50 **	0.75 *
AIC	1470	1681	1467	1682	1472	1683	1467	1683
N	2285	2215	2285	2215	2285	2215	2285	2215

† p<.1, * p<.05, ** p<.01, *** p<.001 (two-tailed test)