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Sharing the load: housework, joint decision-making, and marital quality in Japan

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ABSTRACT

Guided by equity theory, we examine how hours of housework by spouse, perceived fairness of housework division, and joint decision-making predict marital quality in Japan. Our analysis of data from the Survey of Midlife Development in Japan (MIDJA) shows that husbands who say their wives perform more hours of housework than themselves report higher marital quality, while no comparable pattern is present for wives. On the other hand, perceived fairness of housework division has a positive effect on marital quality for wives only. Regardless of gender, joint decisionmaking positively affects marital quality, although this effect is larger for women. We conclude that even in marriages with an uneven division of housework, which are common in societies such as Japan with serious labour market gender inequalities, joint decision-making may allow for greater empathy and less strain.

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Housework; joint decisionmaking; marital quality; Japan; MIDJA

Although the gender gap in housework hours has declined in many societies over recent decades, wives still perform the vast majority of housework (Altintas & Sullivan, 2016; Craig & Mullan, 2012; Lachance-Grzela and Bouchard, 2010). In Japan, husbands' average housework hours increased between 1994 and 2009 (Tsuya et al., 2012). Internationally, however, Japanese husbands' housework sharing ranks as one of the lowest whether researchers look at married couples generally (Batalova & Cohen, 2002; Fuwa, 2004; Knudsen & Waerness, 2008) or dual earner couples (Tsutsui, 2016). Even among East Asian countries, Japan's gender gap in housework stands out, with women doing 10.8 times the share of housework as men (Qian & Sayer, 2016). Indeed, a sizeable proportion of Japanese men and women (53% and 42%, respectively) approve of the traditional division of labour within marriage (ICPSR, 2016), and even when Japanese wives work full time, they perform 72% of the housework on weekdays, on average (Kobayashi et al., 2016). In a post-industrial society with persistent traditional gender norms, such as Japan, how does the division of housework affect marital quality for men and women?

While investigating how housework affects marital quality, it is important to distinguish between the actual division of housework and perceived fairness of this division. For example, Greenstein (2009) shows that women do the majority of household chores,

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but over 40% of women do not see this unequal division as unfair. We examine how hours of housework by self and spouse and perceived fairness of housework division are associated with marital quality using data from the Survey of Midlife Development in Japan. Because contemporary marriage is defined by balanced exchanges of various resources such as material and instrumental support, perceived equity of housework division is central to marital quality research (Greenstein, 1996; Lavee & Katz, 2002; Wilkie et al., 1998). Furthermore, guided by existing research on communication in marriage (Kadono, 1995; Shi, 2000; Suemori, 1999; Treas & Tai, 2012), we explore the predictive role of joint decision-making on marital quality. Unlike scholars of Western marriages who emphasize the importance of open communication for 'good marriage', scholars of Japanese marriages argue that Japanese communicate indirectly to avoid conflict (Matsunaga & Imahori, 2009; Rothbaum et al., 2002). Nevertheless, more direct communication has been linked to greater marital satisfaction among Japanese men and women (Shi, 2000; Suemori, 1999; Taniguchi & Kaufman, 2014). We propose that joint decision-making, a type of open communication, may positively predict marital quality not only directly, but indirectly through perceived fairness of housework division.

Japan provides an interesting case for considering the relationship between housework and marital quality. The country's overwork culture in its extreme is captured by the term karoshi (death by overwork) which entered the Japanese (and English) lexicon in the late 1980s. Although Japan's working hours declined in the last decade, the proportions of men and women working 40 h or more per week, 76% and 43%, respectively, are higher in Japan compared to most Western developed countries, with the US being an exception (OECD, 2018). These figures gauge 'usual' work hours and likely disregard overwork. Almost a quarter of Japanese companies report having employees who do more than 80 h of overwork per month (Ministry of Health, Labour and Welfare, 2016). Meanwhile, among married Japanese, it is typical for men to be primary breadwinners and women primary homemakers. This is because Japan's labour market is structured around the traditional model of gendered division of labour, aided by the family-unfriendly corporate environment and national tax codes that incentivize dependent spouses to work fewer hours or at lower earnings (Boling, 2008). For a long time after the passage of the Equal Employment Opportunity Law in 1986, gender inequality persisted in access to 'regular' employment, which comes with higher pay, fringe benefits, and opportunities for career advancement (Abe, 2011). Nevertheless, wife's income is increasingly indispensable to the family's survival, which may explain the rise in prime-age married women's labour force participation rates from 58% in 2000 to 71% in 2016 (Shambaugh, Nunn, & Portman, 2017). It is in this context that our study examines the association between housework and marital quality.

Literature review

The division of housework and marital quality

In close relationships, partners exchange various types of material, instrumental, cognitive, and emotional support. Today, 'good marriage' is defined by a balanced or fair exchange of support, and thus wives in marriages not so characterized are likely to perceive imbalance or unfairness in their support exchange with their spouse. DeMaris (2010) finds that

women are more likely to see themselves as underbenefited, giving more to their marriage than they receive, than men, and their perceptions align more closely with reality. Equity theory, applied to marital relationships, suggests that perceptions of unbalanced or unfair exchanges (Lively et al., 2010; Sprecher, 1986, 2018; Walster et al., 1978) lead to distress, which in turn dampen overall marital quality. Unbalanced exchanges include overbenefitting (giving less/receiving more than one's partner) and underbenefitting (giving more/ receiving less). It appears that balanced exchange is associated with the least amount of distress, followed by overbenefitting, then by underbenefitting (Buunk & Van Yperen, 1991; Sprecher, 2018). Underbenefitting has also been associated with various other negative affective reactions such as anger, fear, resentment, and frustration (Lively et al., 2010; Sprecher, 1986, 2018).

Many researchers, not only of marriages in the West but increasingly in other regions of the world, examine perceptions of the division of housework as a predictor of marital quality. There is general agreement that housework is 'undesirable' (Bird & Ross, 1993). This is an important distinction from other domestic tasks, namely childcare. Individuals are unlikely to 'choose' to perform housework while childcare is seen as more rewarding (Sullivan, 2013), which may explain why men's housework hours have stalled or decreased since the late 1990s while their time in child care has increased (Bianchi et al., 2012). The skewed division of housework can be a source of resentment for those who do more, and relief (or guilt) for those who do less. A number of studies show that a balanced division of housework is positively associated with marital quality (Frisco & Williams, 2003; Greenstein, 1996; Wilkie et al., 1998). In the Japanese context, spouse's contribution to household labour is also important for marital happiness (Tsuya et al., 2012). For example, Japanese wives whose husbands do more housework report higher marital happiness than those with husbands doing less housework (Kaufman & Taniguchi, 2009). Likewise, Kobayashi et al. (2016) find that Japanese wives report greater marital satisfaction when their spouses do more housework, and that Japanese husbands show a similar but weaker pattern. Therefore, we hypothesize that spouse's housework positively predicts marital quality (Hypothesis 1). In particular, spouse's housework hours should increase marital quality while own housework hours should decrease marital quality.

There is, however, reason to believe there are gender differences in the relationship between housework and marital quality. Qian and Sayer (2016) find that the negative association between housework hours and marital quality exists for Japanese men but not for Japanese women (Qian & Sayer, 2016). Wife's greater share of housework is consistent with the traditional gender norm that persists in Japan. Indeed, performing an overwhelming majority of the housework seems to be a normal part of marriage for Japanese women (Bumpass et al., 2009) while marriage barely impacts the amount of time men spend on housework (Tsuya et al., 2012). Lee and Ono (2008) also find evidence that Japanese wives report higher levels of marital happiness when their marriage conforms to a more traditional specialization. We thus hypothesize that the positive effect of spouse's relative contribution to housework on marital quality will be stronger for men than women (Hypothesis 1a).

We further draw from the distributive justice framework to consider constructions of fairness. As part of distributive justice, individuals determine what is fair based on comparisons to others. In relation to housework, wives often consider how much housework they perform relative to their husbands (Braun et al., 2008; Ruppanner, 2010). These

comparisons generally result in perceptions of unfairness (Frisco & Williams, 2003). Wives' sense of fairness may also be influenced by the national context as women compare their situations to other women (Greenstein, 2009). In more gender traditional contexts, women may accept an unequal division of labour as normative and thus fair.

Perceived fairness is often modelled to mediate the effect of the division of housework on marital quality (Claffey & Mickelson, 2008; Lavee & Katz, 2002; Mikula et al., 2012; Wilkie et al., 1998). Net of variables such as spouse's share of earnings, husbands whose wives do more housework tend to find the division of housework fairer (Wilkie et al., 1998), whereas wives find their greater share of housework less fair (Greenstein, 1996; Mikula et al., 2012; Wilkie et al., 1998). Some scholars focus on the moderating role of gender ideology in the relationship between perceived fairness of housework division and marital quality and find that perceptions of fairness matter less to explain marital quality for gender-traditional women (Greenstein, 1996; see also Mickelson et al., 2006). Perceived fairness also has weaker explanatory power over relationship quality in countries with lower gender equity, including Japan (Greenstein, 2009).

While equity theory suggests the importance of a fair division of household labour for marital quality, gender theory would posit that the effect not only of the division of housework but of perceived fairness of the division on marital quality may differ for women and men. Gender is the main organizing principle in considering beliefs about the division of housework (Doan & Quadlin, 2019). Women's marital quality is more susceptible to an uneven division of household labour (Lavee & Katz, 2002), particularly women with more egalitarian views. Evidence is mixed on whether perceptions of housework division affect men and women's marital quality differently. Some studies, based in Western Europe, find that perceived fairness matters more for women's marital satisfaction (Buunk & Van Yperen, 1991; Mikula et al., 2012). Other studies using data from the US find that fairness elevates men and women's marital quality similarly (Frisco & Williams, 2003; Wilkie et al., 1998). With varying designs, these studies are not quite comparable, and it is unclear if the inconsistencies here are necessarily due to regional or cultural differences.

Indeed, identification of one's primary role within a marriage – breadwinner, homemaker, or both – has been shown to exert influence over perceptions of fairness in housework sharing. Greenstein (1996), in his analysis of data from a US national survey in the late 1980s, finds that the negative effect of one's share of housework on perceived fairness is stronger for wives with more egalitarian gender beliefs. A more recent US study similarly finds that married women with more liberal gender ideology are less likely than those with more traditional ideals to feel appreciated for the housework they do (Lee & Waite, 2010).

Belief in the conventional roles of husbands' breadwinning and wives' homemaking is likely to be prevalent not only among married couples generally, but dual earner couples, especially in societies with high levels of gender employment discrimination. Zuo and Bian (2001), based on their in-depth interviews of dual earner married couples in Beijing, China stress the general absence of dissatisfaction with the heavier burden of unpaid household chores expressed by employed wives, who tend to view a husband's over-involvement in housework as 'unmanly' or 'nonambitious' and a 'neglect of his financial responsibility' (p. 1127). The wife's greater share of housework may also indicate that the couple is economically successful enough to live by the (neo)traditional ideal of husband as primary breadwinner and wife as primary homemaker, thus increasing marital quality.

Interestingly, a comparative study using nationally representative datasets shows that wife's earnings share is positively associated with her marital satisfaction in China, while the opposite pattern is found for Japan (Oshio et al., 2013). It appears that Chinese favour an egalitarian over traditional division of labour within marriage, whereas Japanese couples are more supportive of the traditional specialization model. Lee and Ono (2008) find that Japanese wives are happier with household specialization, especially if their husband earns a high income. Nevertheless, there is some evidence that Japanese husbands who do more housework have happier marriages because they are in compliance with their wife's 'wishes about housework' (Tsuya et al., 2012, p. 715). Based on their study focusing on Japan along with other studies (Buunk & Van Yperen, 1991; Frisco & Williams, 2003; Mikula et al., 2012; Wilkie et al., 1998), we expect that perceived fairness of housework division positively predicts marital quality (Hypothesis 2). Given gender differences in expectations, we further expect that the effects of perceived fairness on marital quality will be stronger for women than men (Hypothesis 2a). Even though evidence is mixed on the gender difference in the effect of perceived fairness on marital quality, when a difference is found, it seems that fairness affects women more.

Decision-making and marital quality

Research on the effect of perceived fairness of housework division on marital quality mostly focuses on the notion of distributive justice that is linked to outcomes. However, decision-making is a key component of household management. In a cross-national study of 31 countries, Treas and Tai (2012) find that among married couples, shared decision-making is the norm, but women who earn higher incomes than their partners are more likely to take on sole household decision-making responsibility, which resonates with the curvilinear association between wives' share of income and housework found in earlier research (Bittman et al., 2003; Schneider, 2011; but see also Shu et al., 2013). The same study also finds that wives are less burdened with family decisions when their husbands do more housework. In short, housework sharing and decision-making within marriage are intertwined.

Meanwhile, to study the effect of housework equity on marital quality in a society with serious gender inequality in the labour market, it is equally or perhaps more important to consider procedural justice, i.e. fairness linked to processes. Couples in such a society may realize that the traditional division of labour within a marriage, however modified, is the most effective way to run the household. In a situation where a husband's egalitarian involvement in housework, or family work more broadly, is impractical due to long hours of employment, a couple may try to attain equity by sharing decision-making processes on household and other related commitments. Housework is not just about actually performing specific tasks, but about making decisions about tasks to run the household with efficiency and effectiveness. Often, researchers talk about juggling paid work and family work, but homemakers, including full-time homemakers, juggle among different household chores, which are often entangled with caregiving. For instance, caring for someone with compromised physical or mental health can involve other chores such as additional loads of laundry, extra time for dietary restricted meal preparation, or long waiting times in a clinic. Decision-making is a continuous cognitive process that involves realizing one's need for making a decision, searching possible action plans, and choosing

the best plan of action (Simon, 1947). Determining how best to spend resources to run the household is an important part of housework.

Past research on housework and marital quality indicates the important predictive role of decision-making (Bartley et al., 2005; Wiesmann et al., 2008). Mikula et al. (2012), drawing on data from Austria, Germany, and Switzerland, find that wives' perceptions of procedural justice, along with distributive justice, in housework division predicts husbands' perceptions of marital conflict, which in turn adversely affects overall marital satisfaction for both wives and husbands. Analysing data from 31 countries, Forste and Fox (2012) find that family satisfaction is higher when both partners contribute to decisionmaking, even if the division of labour is more traditional. An in-depth interview study of 31 Dutch couples in the early stage of their relationships, however, reveals that they typically engage in no explicit decision-making regarding the division of paid or unpaid work unless they are already experiencing frustration about work-family arrangements (Wiesmann et al., 2008). Absent any open decision-making, the authors of this study observe, even couples who prefer an egalitarian division of labour end up having a traditional arrangement. However, another qualitative study of American dual-earner couples finds that couples who have issues with the division of housework discuss and adjust to keep harmony in their relationships (Carlson & Hans, 2017). Using nonrandom sample data from dual-earner spouses in a US Southern metropolitan area, Bartley et al. (2005) find that wives exert more unilateral influence in decision-making, and that those who report having greater influence in family decision-making perceive their marriage to be less equitable, suggesting that one spouse's (typically the wife's) 'sense of being "overburdened" manager' (p. 88) lowers marital quality.

Marital communication in Japan tends to be indirect or less open, presumably for harmony and conflict-avoidance (Matsunaga & Imahori, 2009; Rothbaum et al., 2002). Yet, there is some evidence that certain forms of direct or open communication positively predict marital quality for Japanese. Taniguchi and Kaufman (2014), analysing national data, find that troubles talk, i.e. the act of listening to one's spouse talk about her/his troubles and having one's spouse listen to troubles of one's own, is positively associated with marital satisfaction. Although their study addresses troubles talk in general terms, such talk may concern how best to tackle household tasks. We expect that joint decisionmaking positively affects marital quality (Hypothesis 3). Meanwhile, the effect of joint decision-making may be stronger for wives who usually have greater domestic responsibility and are more aware of the reduced domestic burden via such decision-making processes. We thus hypothesize that the positive relationship between joint decision-making and marital quality is larger for women than men (Hypothesis 3a). Finally, we consider whether perceived fairness mediates the relationship between joint decision-making and marital quality. We expect that joint decision-making positively predicts perceived fairness of housework division, which in turn positively predicts marital quality (Hypothesis 4).

Methods

Data

The data source for this study is the Survey of Midlife Development in Japan (MIDJA) (ICPSR, 2011, 2016). MIDJA was administered in 2008 to a random sample, stratified

by gender and 10-year age groups, of Tokyoites age 30–79 (ICPSR, 2011). The follow-up was conducted in 2012. The MIDJA was selected because it contains items to measure our variables of interest, such as the division of housework within marriage, perceived fairness of housework division, and extent of joint family decision-making, along with the standard socio-demographic characteristics to be included as controls. The original and follow-up surveys had response rates of 56.2% (1027 of 1827) (ICPSR, 2011) and 64% (657 of 1027) (ICPSR, 2016), respectively. Due to the substantial attrition, our main analysis uses the original MIDJA survey. (See Appendix for results from our change score analysis (Allison, 1990) using the original and follow-up surveys.) After limiting our sample to married individuals and deleting cases with missing values, an analysis sample of 649 respondents was obtained.

Measures

Our dependent variable, *marital quality*, is measured with a single item that asked married/partnered respondents to rate their 'marriage or close relationship these days' on a scale from 0 (=the worst possible) to 10 (=the best possible). The distribution of data on marital quality is negatively skewed because only a small number of respondents chose scores below 5. We aggregated those scores to correct the skewness and ran the same set of OLS models (see Analytic Strategy) with this new measure for comparison. Unsurprisingly, diagnostics indicated that the violations of the OLS assumptions (e.g. normal and homoscedastic distribution of errors) were less severe in the models with the aggregated measure of marital quality. However, because the estimates are very similar between the two sets of our analyses, we chose to use the original measure of marital quality.

Our main independent variables include housework, perceived fairness, and joint decision-making. *Housework* hours is measured with the following question: 'In a typical day, about how much time do you generally spend doing household chores?'. Respondents were given examples of housework, i.e. cooking, shopping, laundry, cleaning, yard work, repairs, and paying bills. A similar question asks about the respondent's spouse (or partner). Respondents with children were clearly instructed not to include childcare tasks 'such as bathing them, taking them places, or helping them with their homework', but to include 'chores like doing their laundry, washing their dishes, or cooking for them' (ICPSR, 2011). We measure *perceived fairness* by the question: 'How fair do you think this arrangement of household chores is to you?' to which respondents rated their perception on a scale ranging from 1 (=very fair) to 4 (=very unfair). The original scale is reversed so that higher scores indicate higher levels of perceived fairness.

Four items of *joint decision-making* within marriage are available in the MIDJA (Institute on Aging, 2010). On a 7-point scale ranging from 'strongly disagree' to 'strongly agree', respondents rated the following statements: 'My partner and I are a team when it comes to making decisions'; 'Things turn out better when I talk things over with my partner'; 'I don't make plans for the future without talking it over with my partner'; 'When I have to make decisions about medical, financial, or family issues, I ask my partner for advice'. Alpha reliability coefficient is 0.79. Admittedly, these items do not exactly concern the division of housework, but we use the last item as a proxy of joint decision-making because it seems to best capture the notion of household management, which 'includes all taken decisions and performed activities by household members' (Meyer et al., 2017, p. 318).

In order to remove an expected correlation with marital quality of a more general form of direct communication from that of joint decision-making, we also consider how often respondents have 'a really good talk about something important' with their spouse. Reponses range from 1 (=at least once a day) to 5 (=less than a few times a month). The original scale is reversed so that higher scores indicate higher frequencies of direct communication. Finally, age, parental status (1 = yes; 0 = no), employment status (1 = full-time; 2 = part-time; 3 = not employed), financial wellbeing rated on an 11-point scale from 'the worst' to 'the best' possible situation, and spouse employment (1 = employed; 0 = not employed) are included as control variables.

Analytical strategy

We begin with OLS regression models of marital quality. The dependent variable is, first, regressed on own and spouse hours of housework, and perceived fairness of housework division (along with the control variables). Next, joint decision-making is added, and finally the frequency of 'a good talk' is added. These models are run for men and women separately because some of our hypotheses concern gender differences.

We conduct mediation analysis with structural equation modelling (SEM) in order to test Hypothesis 4. For null hypothesis testing, bootstrapped standard errors are obtained with 5000 replications. Preacher and Hayes (2008) recommend bootstrapping to test the significance of indirect effects in mediation analysis primarily because it tends to be more robust to the violation of OLS normality assumption. Along with the model χ^2 test, indices such as comparative fit index (CFI), Tucker–Lewis index (TLI), and root mean squared error of approximation (RMSEA) are used to evaluate how well the proposed model fits with the data.

Results

Descriptive findings

In Table 1, we show summary statistics for the study variables. Since the MIDJA data come from a sample of Tokyoites, we also include available statistics on identical or similar variables from the 2006 Japanese General Social Survey (JGSS) family module for a comparison. On average, MIDJA respondents rate their marriage at about 7 on the original 0–10 scale. This is lower than the mean of about 8 on the same scale for their counterparts in the 2004–2006 National Surveys of Midlife in the United States (ICPSR, 2007) which the MIDJA was modelled on (ICPSR, 2011) and comparatively lower than the mean from the JGSS. The relatively low rating reported by MIDJA respondents is consistent with earlier research (Kamo, 1993; Taniguchi & Kaufman, 2014). Men score higher than women on marital quality (p < .05) although the gender difference is quite small. A small yet significant gender difference in relationship quality is also found among the JGSS respondents.

Among MIDJA respondents, on average, women spend five hours per day on housework, about four more hours than men. Conversely, men report that their wives spend

Table 1. Summary	statistics I	by d	gender.
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Variable [range]	Mean (s.e.)	Mean (s.e.)	Δ^{a}	Cohen's d
[range]	(s.e.) Men $(n = 341)$	(s.e.) Women ($n = 308$)		
ALDIA		Women (<i>II</i> = 500)		
Dependent variables:				
One-item 'global' rating of marriage	7.48	7.09	*	0.20
[0,10]	(0.11)	(0.12)		
Key independent variables:				
Own hours of housework (per day)	1.05	4.97	***	-1.80
[0,17]	(0.07)	(0.16)		
Spouse hours of housework (per day)	4.92	0.87	***	1.54
[0,20]	(0.19)	(0.07)		
Perceived housework fairness	2.45	2.39		0.06
[1,4]	(.05)	(.06)		0.02
Joint decision-making	5.33	5.30		0.02
[1,7] Fraguency of a 'good talk'	(0.07) 3.12	(0.08) 3.02		0.07
Frequency of a 'good talk' [1,5]	(0.08)	(0.09)		0.07
Control variables:	(0.06)	(0.09)		
Age	55.85	53.33	*	0.19
[30,79]	(0.16)	(0.16)		0.15
Any children	0.84	0.88		n.a.
[0,1]	(0.02)	(0.02)		
Financial situation	5.33	5.80	**	-0.21
[0,10]	(0.12)	(0.13)		
Employed full time	0.70	0.22	***	n.a.
[0,1]	(0.02)	(0.02)		
Employed part time	0.09	0.32	***	n.a.
[0,1]	(0.01)	(0.03)		
Not employed	0.22	0.46	***	n.a.
[0,1]	(0.02)	(0.03)	***	
Spouse employed	0.48	0.78	***	n.a.
[0,1]	(0.03) Men (<i>n</i> = 693)	(0.02) Women (<i>n</i> = 770)		
JGSS	Mett (1 – 095)	Women (<i>n</i> = 770)		
Dependent variables:				
Satisfaction with marital relationship	4.10	3.79	***	0.29
[1,5]				
Key independent variables:				
Rey maepenaem vanables.				
Own frequency of housework	3.27	6.36	***	-2.86
Own frequency of housework [1,7]				
Own frequency of housework [1,7] Spouse frequency of housework	3.27 6.22	6.36 2.92	***	-2.86 2.66
Own frequency of housework [1,7] Spouse frequency of housework [1,7]	6.22	2.92		2.66
Own frequency of housework [1,7] Spouse frequency of housework [1,7] Joint decision-making ^b				
Own frequency of housework [1,7] Spouse frequency of housework [1,7]	6.22	2.92		2.66
Own frequency of housework [1,7] Spouse frequency of housework [1,7] Joint decision-making ^b [0,2]	6.22	2.92		2.66
Own frequency of housework [1,7] Spouse frequency of housework [1,7] Joint decision-making ^b [0,2] <i>Control variables:</i>	6.22 0.77	2.92 0.76		2.66 0.01
Own frequency of housework [1,7] Spouse frequency of housework [1,7] Joint decision-making ^b [0,2] <i>Control variables:</i> Age	6.22	2.92	***	2.66
Own frequency of housework [1,7] Spouse frequency of housework [1,7] Joint decision-making ^b [0,2] <i>Control variables:</i> Age [22,88]	6.22 0.77 54.26	2.92 0.76 51.72	***	2.66 0.01 0.28
Own frequency of housework [1,7] Spouse frequency of housework [1,7] Joint decision-making ^b [0,2] <i>Control variables:</i> Age [22,88] Any children	6.22 0.77	2.92 0.76	***	2.66 0.01
Own frequency of housework [1,7] Spouse frequency of housework [1,7] Joint decision-making ^b [0,2] <i>Control variables:</i> Age [22,88] Any children [0,1]	6.22 0.77 54.26 0.62	2.92 0.76 51.72 0.64	***	2.66 0.01 0.28 n.a.
Own frequency of housework [1,7] Spouse frequency of housework [1,7] Joint decision-making ^b [0,2] <i>Control variables:</i> Age [22,88] Any children [0,1] Relative income ^c	6.22 0.77 54.26	2.92 0.76 51.72	***	2.66 0.01 0.28
Own frequency of housework [1,7] Spouse frequency of housework [1,7] Joint decision-making ^b [0,2] <i>Control variables:</i> Age [22,88] Any children [0,1] Relative income ^c	6.22 0.77 54.26 0.62	2.92 0.76 51.72 0.64	***	2.66 0.01 0.28 n.a.
Own frequency of housework [1,7] Spouse frequency of housework [1,7] Joint decision-making ^b [0,2] <i>Control variables:</i> Age [22,88] Any children [0,1] Relative income ^c [1,5] Employed full time [0,1]	6.22 0.77 54.26 0.62 2.67 0.58	2.92 0.76 51.72 0.64 2.72 0.15	***	2.66 0.01 0.28 n.a. –0.07
Own frequency of housework [1,7] Spouse frequency of housework [1,7] Joint decision-making ^b [0,2] <i>Control variables:</i> Age [22,88] Any children [0,1] Relative income ^c [1,5] Employed full time [0,1] Employed part time	6.22 0.77 54.26 0.62 2.67	2.92 0.76 51.72 0.64 2.72	***	2.66 0.01 0.28 n.a. –0.07
Own frequency of housework [1,7] Spouse frequency of housework [1,7] Joint decision-making ^b [0,2] <i>Control variables:</i> Age [22,88] Any children [0,1] Relative income ^c [1,5] Employed full time [0,1] Employed part time [0,1]	6.22 0.77 54.26 0.62 2.67 0.58 0.18	2.92 0.76 51.72 0.64 2.72 0.15 0.35	*** *** ***	2.66 0.01 0.28 n.a. 0.07 n.a.
Own frequency of housework [1,7] Spouse frequency of housework [1,7] Joint decision-making ^b [0,2] <i>Control variables:</i> Age [22,88] Any children [0,1] Relative income ^c [1,5] Employed full time [0,1] Employed part time [0,1] Not employed	6.22 0.77 54.26 0.62 2.67 0.58	2.92 0.76 51.72 0.64 2.72 0.15	***	2.66 0.01 0.28 n.a. 0.07 n.a.
Own frequency of housework [1,7] Spouse frequency of housework [1,7] Joint decision-making ^b [0,2] <i>Control variables:</i> Age [22,88] Any children [0,1] Relative income ^c [1,5]	6.22 0.77 54.26 0.62 2.67 0.58 0.18	2.92 0.76 51.72 0.64 2.72 0.15 0.35	*** *** ***	2.66 0.01 0.28 n.a. 0.07 n.a. n.a.

Note: *p < .05 **p < .01 ***p < .001 two tailed.

^aWe use independent sample t-tests for continuous variables, and tests of proportions for categorical variables. Stata svy was used to take into account the sampling design of each survey.

^bIt is based on a question about who primarily decides (i) the allocation of living expenses and (ii) the purchase of high cost items. It is coded 0 if neither item was jointly decided, 1 if one item is jointly decided, and 2 if both items are jointly decided.

^cIt measures how respondents perceive their family income relative to what they consider the average on a 5-point scale ('far below average' to 'far above average').

five hours per day on housework while women report that their husbands do about one hour. Despite the large gender inequality in housework, there is no gender difference in the mean score of perceived fairness in housework sharing which is just below the midpoint of the1-to-4 scale. Meanwhile, perceptions of shared decision-making average 5.3 on a 7-point scale for both genders. Data on housework and joint decision-making are not comparable between the MIDJA and JGSS. However, gender inequality in housework is also evident with the JGSS respondents.

Table 2 shows correlations between key variables. With the exception of perceived fairness in housework sharing for men, all key predictors are significantly correlated with marital quality, and the coefficients have the expected sign. Spouse's housework hours weakly but significantly correlates with marital quality of both genders, while perceived fairness only significantly correlates with women's. Joint decision-making has moderate (r = .34) and large (r = .60) correlations with marital quality for men and women, respectively. The frequency of a 'good talk' moderately correlates with both men and women's marital quality.

Regarding correlations among our key predictors, spouse's hours of housework and perceived fairness correlate negatively for men, and positively for women. Only for women, perceived fairness positively correlates with the level of joint decision-making and frequency of 'a good talk'. Meanwhile, a moderate positive correlation exists between joint decision-making and frequency of a 'good talk' for both genders.

Multivariate findings

Table 3 presents results from OLS models of marital quality. Partly in support of Hypothesis 1, spouse's hours of housework positively predicts marital quality for men (p < .01), whereas it has no significant effect for women (p = .12) (Models 1 and 2). The latter evidence is inconsistent with Kaufman and Taniguchi's (2009) finding that Japanese wives report higher marital happiness when their spouses do housework more often. The discrepancy is likely because the above study does not consider perceived fairness of housework division, while our study considers it. Indeed, in an additional analysis excluding perceived fairness, we found a positive significant effect of spouse's hours of housework on marital

Men:	MQ	HW	SPHW	PF	JD	GT
Marital quality, MQ	1.00					
Own hours of housework, HW	-0.04	1.00				
Spouse hours of housework, SPHW	0.14*	0.10	1.00			
Perceived housework fairness, PF	0.03	0.23***	-0.21***	1.00		
Joint decision-making, JD	0.34***	0.02	0.11*	-0.03	1.00	
Frequency of a 'good talk', GT	0.29***	0.07	0.12*	-0.01	0.27***	1.00
Women:	MQ	HW	SPHW	PF	JD	GT
Marital guality, MQ	1.00					
Own hours of housework, HW	0.04	1.00				
Spouse hours of housework, SPHW	0.15**	-0.04	1.00			
Perceived housework fairness, PF	0.30***	-0.12*	0.27***	1.00		
Joint decision-making, JD	0.60***	0.08	0.11	0.28***	1.00	
	0.41***	-0.00	0.10	0.21***	0.37***	1.00

Table 2. Pearson correlations between the key variables.

Note: **p* < .05 ***p* < .01 ****p* < .001 two tailed.

	Model 1 Men	Model 2 Women	$\begin{array}{c} H_0:\\ \beta_1=\beta_2 \end{array}$	Model 3 Men	Model 4 Women	$\begin{array}{c} H_{0}:\\ \beta_{3}=\beta_{4} \end{array}$	Model 5 Men	Model 6 Women	$H_0: \\ \beta_5 = \beta_6$
Own housework hours	11 (.10)	.09 (.05)	†	12 (.10)	.04 (.04)		15 (.09)	.04 (.03)	†
Spouse hours of housework	.09 ^{**} (.03)	.14 (.09)		.07* (.03)	.09 (.08)		.06* (.03)	.07 (.08)	
Perceived housework fairness	.16	.57***	*	.17	.30**		.18	.27**	
Joint decision-making	(.12)	(.11)		(.12) .46***	(.10) .79***	**	(.11) .37***	(.10) .70***	**
Frequency of a 'good talk'				(.09)	(.08)		(.09) .30***	(.08) .27***	
Age	.02* (.01)	.01 (.01)		.02* (.01)	.02* (.01)		(.07) .02*** (.01)	(.07) .02* (.01)	
Any kids	23 (.27)	70* (.34)		26 (.26)	65* (.31)		27 (.25)	59* (.30)	
Financial situation	.22*** (.05)	.21*** (.05)		.19*** (.05)	.15*** (.04)		.18*** (.04)	.15*** (.04)	
Employed full time	02 (.30)	.09 (.32)		.03 (.27)	.09 (.25)		03 (.27)	.02 (.24)	
Employed part time	.43 (.37)	.02 (.24)		.54 (.37)	.15 (.20)		.49 (.36)	.20 (.20)	
Not employed (referent)	-	-		-	-		-	-	
Spouse employed	20 (.21)	.25 (.32)		—.21 (.21)	.15 (.27)		—.17 (.205)	.16 (.256)	
<i>R</i> -squared	.12	.17		.21	.43		.25	.46	

Table 3. Unstandardized coefficients from the OLS models of marital quality (standard errors in parentheses).

Note: p < .01 (used only for gender comparison) p < .05 + p < .01 + p < .01 two tailed.

quality for women as well (p < .01, not tabled). Meanwhile, the gender difference in the effect of spouse's housework sharing is insignificant, inconclusive with Hypothesis 1a where we expected the effect would be stronger for men than women. Adding joint decision-making (Models 3 and 4), or joint decision-making and the frequency of a 'good talk' (Models 5 and 6) does not greatly change the effect of spouse's housework sharing. Although not our focus, the effect of own hours of housework fails to reach significance at the .05 level across the models.¹

As expected (Hypothesis 2), perceived fairness positively predicts marital quality (Models 1 and 2), but this effect is only significant for women (p < .001). The gender difference in the effect of fairness is significant (p < .05). When joint decision-making is added (Models 3 and 4), the effect of fairness on women's marital quality becomes smaller and less significant (p < .01), making the gender difference in the effect of fairness insignificant. Adding frequency of a 'good talk' does not much change the effects of perceived fairness (Models 5 and 6). Thus, support for Hypothesis 2a (where we expected the effect of fairness to be larger for women) is partial and depends on the consideration of the communication variables. These findings generally show that perceived fairness of housework division matters to predict marital quality, consistent with existing research from Western Europe and the US. No significant effect of perceived fairness for men under some models is also in line with Greenstein's (2009) finding that the effect of perceived fairness with lower gender equity such as Japan (Greenstein, 2009).

Joint decision-making has a significant positive effect on marital quality for both genders, but this effect is significantly larger for women (p < .01), in support of both Hypotheses 3 and 3b (Models 3 and 4). These findings add to the existing studies suggesting a significant association between procedural justice and marital quality in Japan. Despite the oft-made observation that Japanese couples engage in limited open communication, those who 'talk over' family matters, which could include household chores, with their spouse report higher marital quality marriages. The effect of joint decision-making is somewhat reduced with the frequency of a 'good talk' included (Models 5 and 6). The 'good talk' variable has a similar positive effect on marital quality for both genders. Findings for our control variables show that financial situation and age positively predict marital quality for both men and women while children negatively predict marital quality for women.

Above we saw that for women, the effect of perceived fairness of housework sharing weakens with the inclusion of joint decision-making. This suggests that perceived fairness may partly mediate the effects of joint decision-making on the dependent variable, consistent with Hypothesis 4 (where we expect that joint decision-making positively predicts perceptions of fairness, which in turn positively predicts marital quality). Table 4 shows results from our mediation analysis of marital quality. Joint decision-making positively predicts perceived fairness (b = .16; p < .001), which in turn positively predicts marital quality (b = .27; p < .01). Compared to the indirect effect of joint decision-making via perceived fairness on marital quality (b = .04, p < .05), the direct effect of joint decision-making via perceived fairness (b = .70, p < .001), thus providing little support to Hypothesis 4.

Our mediation analysis also shows that employment status positively correlates with perceived fairness of housework division although it has no significant effect on marital quality. An additional analysis (not tabled) revealed that employment status significantly interacts with spouse's hours of housework to predict perceived fairness (p < .01). That is, spouse's hours of housework matter more to predict marital quality for wives with full-time employment than wives with part-time employment or no employment. The model fit statistics indicate a good fit.

Despite the severe attrition problem, we performed change score analysis with data from both waves of the MIDJA to take advantage of its panel design. The purpose of this analysis is to examine whether the change in scores on a variable of interest (e.g. joint decision-making) predicts the change in marital quality for the same person between the two time points. Fortunately, the attrition of respondents was unrelated to our study variables in the first survey for the most part. However, there were exceptions for women. The 'stayers' score higher than the 'leavers' on the joint decision-making (p < .05) and a 'good talk' variables (p < .01). Thus, the following results (see also Appendix) should be taken with some caution.

Whereas in our cross-sectional analysis, spouse hours of housework matters only for men as a predictor of marital quality, this additional analysis finds that the change in spouse hours of housework from time 1 to time 2 has a significant positive effect on the change in marital quality within the same time frame for both genders, giving stronger support to Hypothesis 1. Similarly, the within-person change in joint decision-making positively predicts the within-person change in marital quality for men and women, supporting Hypothesis 3. Inconsistent with our finding from the cross-sectional analysis where perceived fairness significantly and positively predicts women's marital quality,

	Marital	Mediator (fairness)	
	Direct effect (Bootstrap s.e.)	Indirect effect (Bootstrap s.e.)	Direct effect (Bootstrap s.e.)
Own housework hours	.04	02*	07***
	(.04)	(.01)	(.02)
Spouse hours of housework	.07	.06*	.22***
	(.09)	(.03)	(.05)
Perceived housework fairness	.27**	-	-
	(.10)		
Joint decision-making	.70***	.04*	.16***
-	(.08)	(.02)	(.04)
Frequency of a 'good talk'	.27***	_	_
. , ,	(.07)		
Age	.02*	01*	02***
5	(.01)	(.00)	(.00)
Any kids	59*	_	_
	(.30)		
Financial situation	.15**	_	_
	(.05)		
Employed full time	.02	14*	51***
. ,	(.24)	(.06)	(.14)
Employed part time	.20	11*	39**
	(.20)	(.05)	(.13)
Not employed (referent)	_	_	_
Spouse employed	.16	_	_
	(.26)		
<i>R</i> -squared	.46 (marital qual	ity)	.23 (mediator)
Overall <i>R</i> -squared	.55		
Likelihood-ratio χ^2 (df)		model vs. saturated	
CFI	1.00		
TLI	.99		
RMSEA	.02		
RMSEA, 90% CI	.00 to .09		
P-value, RMSEA<.05	.68		
SRMR	.01		

Table 4. Unstandardized of	coefficients from	mediation ana	lysis with SEM.
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Note: p < .05 *p < .01 *p < .01 two tailed.

in our change score analysis, perceived fairness is insignificant regardless of gender, thus unable to support Hypothesis 2. Consistent between the results from our cross-sectional and change-score analyses is that joint decision-making within marriage plays a larger role to predict marital quality than perceived fairness of housework division.

Discussion

In Japan, as elsewhere, the division of housework within marriage has become more contentious as wives are increasingly faced with the double bind of paid work and unpaid housework. Similar to paid work, housework involves tough demands, which may reduce subjective well-being (Lennon & Limonic, 2010), including marital quality. Existing research, largely based in the West, finds that greater fairness in housework division is associated with higher marital quality (Frisco & Williams, 2003; Greenstein, 1996; Wilkie et al., 1998). Using data from the Survey of Midlife Development in Japan, we find that exclusively for men, spouse's housework is positively linked to marital quality, which is consistent with previous research (Oshio et al., 2013; Qian & Sayer, 2016). Public support of the traditional division of labour within marriage remains quite high in Japan (ICPSR, 2016). While Japanese may be receptive to egalitarian marriage, structural factors, such as employment practices, likely shape their beliefs about the best way to run the household. In Japan, women are severely underrepresented in the formal labour market, and predominantly employed as contingent workers. Women in the formal labour market, once married or pregnant, are often pressured to leave the paid workforce entirely or switch to part-time employment. Husbands of these women are thus by default to become the sole or primary wage earners. In a country infamous for the corporate culture of 'morning-to-midnight' overwork and long commutes, and the norm of intensive homemaking (Boling, 2008; Sako, 2017), the uneven division of household chores within marriage is likely to be inevitable for most couples. Indeed, marriage has almost no impact on Japanese men's time on housework (Tsuya et al., 2012). Japanese women, on the other hand, are expected to do the vast majority of housework when they get married (Bumpass et al., 2009) and conforming to these expectations may increase marital quality (Lee & Ono, 2008).

Nevertheless, previous research suggests a distinction between housework performance and perceived fairness of housework division. Japanese wives are likely to experience greater marital happiness when their marriages follow a more traditional division of labour (Lee & Ono, 2008), and they may view this uneven division as fair. Our findings show that perceived fairness is positively related to women's marital quality, with no corresponding effect on men's marital quality. This suggests that net of the actual division of labour, wives who think their husbands are doing their fair share see their marriages in a more positive light (Tsuya et al., 2012). This finding is interesting in light of the gender differences in correlations between housework and perceived fairness and between spouse's housework and perceived fairness. For women, perceived fairness increases when they do less housework and their spouse does more housework. In contrast, for men, perceived fairness increases when they do more housework and their spouse does less housework. This is consistent with equity theory in that women are more likely to see themselves as underbenefited, doing more than their fair share, while men realize that they are overbenefitting, doing less than their fair share (DeMaris, 2010). Perceived fairness matters more for women's marital satisfaction (Mikula et al., 2012) likely because underbenefitting is associated with more distress than overbenefitting (Sprecher, 2018).

Meanwhile, we identify joint decision-making within marriage as a key predictor of marital quality. More extensive joint decision-making is associated with higher marital quality. Our models of marital quality show that controlling for a more general communication variable ('good talk'), joint decision-making positively predicts relationship quality. We are unable to find sufficient evidence for the hypothesized mediating role of perceived housework equity linking joint decision-making and marital quality. In an additional, alternative mediation analysis (results not tabled), we found that for women, joint decision-making partially mediates the effect of perceived fairness on marital quality, suggesting a pathway from perceiving housework equity to sharing the 'mental load'.

Severe gender inequality in the Japanese labour market is likely to make it quite difficult for couples to attain equity in the division of housework in the ways many Western researchers define it. Yet, our study shows that even faced with the structural factors outlined above, Japanese couples may still be able to strive for a better marriage by elevating procedural justice within their relationship. When spouses both contribute to decisionmaking, satisfaction is higher (Forste & Fox, 2012). This can be enhanced by empathizing with each other, which is often accomplished by talking and listening to each other's problems (Taniguchi & Kaufman, 2014). Indeed, Japanese wives with young children who perceive less emotional and physical support from spouse are more likely to report symptoms of depression or neurosis of childrearing (Tanaka & Lowry, 2013). Deciding on how best to distribute limited resources across necessary tasks to run the household is a stressful part of housework. Here, it may be feasible, if not easy, for primary wage earners to participate even while physically away from home, especially with today's mobile connectivity. Their cooperation, albeit limited, may also have a long-term effect on post-retirement marital quality because of prospective retired breadwinners' familiarity with the nuts and bolts of housework. Certainly, fundamental change in the labour market structure is necessary in order for Japanese couples to work toward marital equity more comprehensively. Until that time comes, joint decision-making may be one of few pragmatic alternatives to improve power imbalances within marriage.

This study has some limitations. First, given our use of cross-sectional data, we cannot examine the causal effects of perceived fairness of housework division between spouses and joint decision-making, on marital quality. We are thus unable to rule out the possibility that satisfying marriage causally precedes perceived fairness and joint decisionmaking. Secondly, we lack data on spousal employment beyond the binary measure. Future research should explore how the division of paid work (e.g. spouse's share of earnings), along with the division of housework, predicts the use of joint decision-making, which in turn affects marital quality. Relatedly, the division of childcare, which is beyond of the scope of our study, should also be considered part of the larger scheme of division of labour for couples. Modern Japanese fathers see themselves as more involved than their own fathers (Ishii-Kuntz, 2013), while housework is generally seen as less rewarding than childcare (Sullivan, 2013). It would be interesting to study how the dependency between the divisions of childcare and housework affects marital quality. Third, this study uses data from Tokyoites, and thus cannot generalize its findings. Nevertheless, 92% of Japan's population lives in urban areas (World Bank, 2018), which suggests that our findings may be more broadly applicable in Japan. Despite these shortcomings, our study shows an important connection between spouse's hours of housework, perceived fairness of housework division, joint decision-making, and marital quality. Equal sharing in planning and strategizing on family matters may go a long way to mitigate the mental overload that is a non-negligible part of the gender housework gap.

Note

1. In an additional analysis, we tested whether the effect of each of our housework-related variables varied by parental status. This analysis showed that for men, the effect of own housework hours varies by parental status. With the interaction variable (formed by multiplying own housework by parental status) in the model, the previously insignificant effect of own housework hours becomes significant (b = -0.955, p < .01), while the effect of own housework hours is larger, or less negative, for fathers than men without children (b = 0.886, p < .01). That is, own hours of housework is associated with lower marital quality, but this is primarily for men without children.

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Appendix. Change score models of marital quality utilizing MIDJA Waves 1 and 2

	Model 1 Men (<i>N</i> = 390)	Model 2 Women (<i>N</i> = 348)	$H_0: \\ \beta_1 = \beta_2$
Own housework hours	22*	.03	**
	(.09)	(.03)	
Spouse hours of housework	.11***	.25**	
	(.03)	(.09)	
Perceived housework fairness	.09	.15	
	(.10)	(.09)	
Joint decision-making	.49***	.60***	
	(.08)	(.07)	
Frequency of a 'good talk'	.17*	.27***	
	(.07)	(.06)	
Age	.01	.03**	†
	(.01)	(.01)	
Any kids	17	73**	
	(.29)	(.27)	
Financial situation	.22***	.15***	
	(.04)	(.04)	
Employed full time	61*	30	
	(.27)	(.24)	
Employed part time	43	25	
	(.36)	(.21)	

(Continued)

	Model 1	Model 2	H _o :	
	Men (<i>N</i> = 390)	Women (<i>N</i> = 348)	$\beta_1 = \beta_2$	
Not employed (referent)	-	-		
Spouse employed	02	.58*	†	
	(.21)	(.27)		
Sample size (# of persons)	390 (195)	348 (174)		
<i>R</i> -squared	.27	.45		

Note: p < .01 (used only for gender comparison) p < .05 p < .01 p < .01 two tailed.

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