

## **Division of domestic labor over retirement among older couples in Korea**

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**Abstract.** A few recent longitudinal studies from developed Western countries have shown that gender inequality in domestic labor among older couples decreases as the husband gets retired. Despite rapid aging of the population and an increase in labor force participation among women at older ages, little is known about how domestic labor changes over retirement among older adults in developed Asian countries, where expectations for traditional gender-roles and family-dependent care systems still prevail. Using data from the 2012, 2014, and 2016 waves of the Korean Longitudinal Survey of Women and Families, first, we describe housework and care provided by Korean couples aged 50-64 and those aged 65 or more. Next, using couple-fixed effects regressions, we examine how the domestic labor provision changes with the husband's and the wife's respective retirement in the two age groups. Results show that older Koreans spent more time on housework than care. For both types of domestic labor, gender gap was large. Among couples aged 50-64, retirement increased the retiree's housework and reduced that of the spouse regardless of the retiree's sex. However, the size of these effects was small, which led to continuity in the gendered division. Among couples aged 65 or more, the only significant finding was a decline in the husband's housework in response to the wife's retirement. Both spouses' retirement hardly showed significant associations with their care labor. Policy implications are drawn for marital well-being and female labor force participation in later life in Korea and other gendered Asian countries.

## INTRODUCTION

In South Korea (Korea hereafter), people aged 65 or more (older adults hereafter) accounted for 7% of the population for the first time in 2000 and the proportion became doubled to 14% in 2017 (Ministry of the Interior and Safety, 2017). This is remarkably shorter than the time taken for the same transition to occur in other countries, for example, 115 years in France, 73 years in Australia, and 69 years in the United States (Kinsella & Phillips, 2005). Despite the rapid aging of the population, not much is known about well-being of Koreans in later life. Marital quality is one of the unknown aspects.

Compared to their counterparts in other developed countries, older adults in Korea show some atypical patterns with regard to their marital satisfaction. Unlike the U-shaped pattern observed between age and marital satisfaction among the married in the West, Koreans' marital satisfaction does not bounce in later life (Statistical Research Institute, 2012). In particular, older women's marital satisfaction is lower than that of their husbands (Statistical Research Institute, 2012) and, after some mourning period, becoming widowed even increases women's subjective well-being (Rudolf and Kang, 2015). Marital dissolution in later life has also been on sharp rise also: Until mid-1990s, couples married for 20 years or more consisted of less than 10% of the entire divorce cases, but the proportion increased to 30.4% in 2016 (Statistics Korea, 2017a).

The current study is an effort to understand those unusual phenomena through the investigation of how older Koreans divide domestic labor within the couple. As a determinant of marital satisfaction, domestic labor, including housework, childcare, elder care, and spousal care, has been studied widely (Coltrane, 2000; Shelton & John, 1996). Evidence has documented that one's satisfaction with marriage tend to decline with one's own time spent on the labor and

increase with the spouse's contribution to the labor (e.g., Amato et al., 2003; Barstad, 2014; Forste & Fox, 2012; Khawaja & Habib, 2007; Stevens et al., 2001). For older people, retirement is an important life-course transition, which might have impact on the division of domestic labor within the couple. The labor is gendered in most societies and men tend to stay in the labor market longer compared to their wives. Hence, a particular interest lies in whether retirement in later life reduces gender inequality in the domestic sphere.

Regarding the question, while time availability and relative resource hypotheses predict a decrease in the inequality with retirement (Becker, 1981; Blood & Wolfe, 1960), the gender-norm perspective predicts continuity in the inequality (Berk, 1985; Brines, 1994; West & Zimmerman, 1987). Empirical evidence, especially longitudinal evidence, is lacking and predominantly based on developed Western countries. Moreover, the findings are mixed on both housework (Leopold & Skopek, 2015; Solomon, Acock, & Walker, 2004; Szinovacz, 2000) and care (Charmichael, Charles, & Hulme, 2010; Leopold & Skopek, 2014; Lumsdaine and Vermeer, 2015; Stern, 1995).

Little is known about how older adults in developed Asian countries provide domestic labor and how the arrangement at home changes over retirement, two research questions of the current study. In the Asian region, expectations for traditional gender roles are still prevalent and care systems are highly reliant on the family. Under the circumstances, high gender inequality in domestic labor has been suggested to lead to double burden of working mothers in early marriage (Kim & Cheung, 2018; Tsuya et al., 2000), causing low rates of family formation and female labor force participation (Kim & Cheung, 2015). With an increase in older women's participation in the labor force, gendered division of domestic labor may cause work-family conflict not only for married women at childbearing ages but also for married women in their

later life. By analyzing panel data of Korean couples aged 50 or more from the Korean Longitudinal Survey of Women and Families (KLOWF) using couple fixed-effects (FEs) regressions, we aim to fill these gaps in these literature.

## **THEORETICAL AND EMPIRICAL LITERATURE**

Time availability, relative resources, and gender norms are commonly hypothesized to determine how couples divide domestic labor. The theory of family economics postulates that one who spends less time on paid work and therefore has more time available at home provides more domestic labor than his or her spouse (Becker, 1981). The theory also posits that domestic labor is born more by one who has less economic resources outside the home, which lead to lower bargaining power to avoid domestic labor (assuming it is undesirable, so no one want to do it) (Blood & Wolfe, 1960) and to comparative advantage to specialize in domestic tasks than paid work (Becker, 1981). These perspectives predict that transitions to retirement increase the retiree's domestic labor regardless of the retiree's sex. Such gender-neutral response to retirement reduce gender inequality in domestic labor in later life for many couples, in which men stay in the labor market until later ages, spend longer hours at paid work, and earn higher income than their wives.

In contrast to the time availability and relative resource hypotheses, the perspective of gender norms focuses on the husband's and the wife's distinctive gender roles, which may operate both through individuals' gender attitudes (e.g., Leopold & Skopek, 2015), and through societal gender values (e.g., Hank & Jürges, 2007). According to the hypothesis, women display their feminine identify through domestic labor, while men display their masculine identify by

playing the role as a male breadwinner (Berk, 1985; Brines, 1994; West & Zimmerman, 1987) and limiting their involvement in the domestic sphere. This theory predicts that retirement does not affect the gendered division of domestic labor because women continue to do a lion's share of domestic labor, which is normatively considered as women's work. Among different kinds of domestic labor, gender norms might be more influential on traditionally gendered domestic tasks, such as cooking, cleaning (, which are considered as female-typed housework), and repairs (as male-typed housework).

Care of dependent family members is an important component of domestic labor. Older adults often provide care for their grandchildren, their own parents, and their spouses. The impact of retirement on care might differ from the impact on housework in several important ways. First, care involves relatively less gendered tasks compared to housework and hence men's provision of care might be less discouraged by gender display than doing housework (as Leopold & Skopek (2014) argued for grandchild care). Next, care provision often involves coresidence. Not to mention spousal care, care for grandchildren and for elderly parents is often provided by coresident grandparents and coresident adult children, respectively. Third, care for grandchildren is not necessarily burdensome but often involves joy (Leopold and Skopek, 2014).

On the research question of how domestic labor changes over retirement among older couples, there exist only a few longitudinal studies, all of which come from the U.S. or developed European countries. Most of these studies look into only one kind of domestic labor – housework, childcare, elder care, or spousal care, although a few studies, such as Ishii-Kuntz and Coltrane (1992), emphasized the need to consider plausible relationships among different kinds of domestic labor. Regarding housework, two studies showed that gender inequality in the labor among older couples decreased with retirement. Leopold and Skopek (2015) tracked German

couples' domestic labor over 25 years. For example, when the labor two years prior to the retirement is compared with the labor two years after the retirement, men's housework increased from 2.5 to 4.0 hours a day and women's housework decreased from 6.6 hours to 6.1 hours a day. According to Szinovacz's study (2000) based in the US, the husband spent 15 hours and the wife spent 36 hours a week on housework in the baseline. Both men's and women's retirement led to an increase in own housework: The change in female-typed housework was 3.5 hours for the husband and 5.8 hours for the wife while the change in male-typed housework was 2.3 hours for the husband and 1.5 hours for the wife. Yet, evidence is not entirely consistent. In another study of Americans, Solomon, Acock, and Walker (2004) found that both men's and women's housework remained stable over retirement or a reduction in paid working hours, so the division of housework continued to be gendered.

Available, longitudinal evidence with regard to the impact of retirement on care is also meager and mostly from western developed countries. Two studies looked into the relation with grandchild care. In their analysis of European couples aged 50 or more, Leopold and Skopek (2014) found that a single-earner man accounted for 27.0% of the couple's total time spent on grandchild care. As the wife's share in the couple's total time spent on paid work increased by one percentage points (%p), his share in the care increased by 0.17%p. In addition, his retirement led to an increase in the share to 40.7% (i.e., by 13.7%p). According to Lumsdaine and Vermeer (2015), among older women in the US, having a newly born grandchild, but not being retired, led to grandchild care later (, thereby arguing that "grandmother caring may be driven more by demand than by supply"). Having coresident grandchildren was also shown to relate positively with later provision of care.

Caregivers for parents or spouses are often at their prime-working age, so available longitudinal studies are not restricted to older people or their retirement. Instead, the studies include non-older people and examine work status or working hours rather than retirement status. For example, Stern (1995) found that lagged employment status had no effect on transition to become a caregiver for parents in the pooled sample of men and women in the US. However, Charmichael, Charles, and Hulme (2010) showed that, both British men's and women's employment in the past had a negative effect on transitions to a caregiver in the future. Moreover, the effect of employment was significant for co-residential care, but not for non-co-residential care.

It should be noted that the impact in the reverse direction from care provision to retirement is also plausible. For example, Lumsdaine and Vermeer (2015) showed that older American women's provision of grandchild care at an earlier point in time was related to an increase in the probability of their retirement at a later point in time. Relatedly, Ilchuk (2009) found that the husband's onset of disability, indicative of his care needs, led to retirement of the wife in the US.

As shown, the empirical literature regarding the impact of transitions to retirement on domestic labor is restricted to a few longitudinal studies, which are predominantly from the West. In addition, there is no longitudinal study which examined housework and care together in association with retirement. We try to fill these gaps in the literature by analyzing recent panel data from Korea with couple FE regressions.

## **GENDERED AND FAMILY-DEPENDENT CONTEXT IN KOREA**

Historically, patriarchal family systems and the Confucian traditions prevailed in Korea and other developed Asian countries. Under the traditions, male lineage and seniority served as core values within the family, which was the basis of the society (Park & Cho, 1995; Skinner, 1997). The male household head held absolute authority and owned housing and major means of household production such as land. Gender roles were clearly divided: men worked as breadwinners while women were in charge of domestic duties including housework and care. The norm for elder support was the eldest son supporting his old parents, coresiding with them, although the wife of the eldest son was the actual provider of care for her parents-in-law with the husband working outside home.

During the industrialization period of the country, the government tended to rely on the tradition of familial care and minimize its role as a provider of care for dependent members of the society, including children and older adults. Korean government's spending on social services remained the lowest among Organisation for Economic Co-operation and Development (OECD) countries (OECD 2010) until late-2000's. Since then, there has been a gradual increase in the spending with launches of programs such as the Long-term Care Insurance, an eldercare program for elders with functional limitations, and the Nuri Curriculum, a childcare and early education program subsidized by the government (Suh et al., 2012)

As a result, in today's Korean society, the burden of housework and care tends to fall on the shoulder of the family, especially that of women – the wife, the mother, and the grandmother – with little of the labor shared with men. While in most countries women provide more domestic labor than their husbands, the gender gap is especially large in countries in East Asia and Southern Europe (Miranda, 2011). In particular, men's contribution in the domestic sphere



tends to be the lowest in Korea and Japan both in terms of the amount of time and relative to the contribution of their wives among OECD countries (OECD, 2012).

Moreover, such an unequal division of domestic labor in Korea persists even when women are employed. As a result, working mothers at childbearing age have been shown to get double-burdened with paid work and family duties (Kim & Cheung, 2018; Tsuya et al., 2000), and the consequent incompatibility between the two has been suggested to lead to low rates of both family formation and female labor force participation (Kim & Cheung, 2015). The labor force participation among older women has been increasing in the past decades (from 54.1% in 2000 to 65.9% in 2016 among those aged 50-54 and from 50.3% to 57.6% among those aged 55-59, from 45.5% to 48.1% among those aged 60-64, and from 22.7% to 23.2% among those aged 65 or more (Statistics Korea, 2017b)). With the increase, it remains a critical policy question whether older women might also have hard time to combine their domestic responsibilities and work commitments, which may explain their low marital quality at least in part.

## **METHODS**

### **Data**

We use data from the Korean Longitudinal Survey of Women and Families (KLOSA), a panel survey of nationally representative Korean women. We analyze the 2012, 2014, and 2016 waves, which ask about each spouse's time spent on housework and care, respectively, in a consistent manner. Our analysis sample is restricted to couples with which both the husband and the wife were aged 50 or more at each wave. When we pool couple-level data over the three waves, the sample includes 3,244 couples or 8,074 couples-waves.

## Variables

For dependent variables, we examine each spouse's time spent on domestic labor in minutes per day. We study housework and care, separately. It should be noted that housework in the current study tends to capture the labor in the female-type only. When the KLOWF surveys the time, the questionnaire provides a list examples of housework, consisting of cooking, dishwashing, laundry, shopping (including grocery shopping), and cleaning, all of which are categorized as female typed housework in the literature.

The key independent variables are two binary variables--one for the husband and the other for the wife--which are coded as 1 if one was neither doing any economic activity nor looking for a job at the time of an interview, and 0 otherwise. As such, what the variables indicate is inclusive of, but not restricted to retirement. Yet, for the simplicity of writing, we call the independent variable equal to 1 as being retired hereafter. Moreover, the variables code not just economic inactivity but also searching for a job as 0, and the sample consists of people aged 50 or above, for whom transitions in the variables over waves are more likely to be from 1 to 0 rather than from 0 to 1. Notably, independent variables in other recent longitudinal studies on domestic labor over retirement, such as Leopold and Skopek (2014) and Solomon, Acock, and Walker (2004), are also inclusive of economic inactivity or a reduction in paid work hours.

As for covariates, we control for each spouse's age and age squared and the wife's characteristics, consisting of her gender-role attitudes (ranging between 1 and 4, higher number indicating more traditional attitudes), her self-reported health (ranging between 1 and 5, higher number meaning poorer health), and whether she had any limitations with activities or instrumental activities of daily living (0/1). We also include whether couples coresided with any grandchild at pre-school age (i.e., aged between 0 and 6), the husband's parent(s), and the wife's

parent(s), each using a binary variable. Table 1 presents summary statistics of all variables used in the current study.

[Table 1 about here]

## **Research design**

We first describe each spouse's provision of domestic labor, separately for housework and care. Specifically, we describe whether one provided any domestic labor and the amount of time one spent on the labor. We also present the husband's share of the couple's total time spent on domestic labor when the sample gets restricted to couples in which at least one spouse spent a positive amount of time on the labor (so that the shares can be calculated). Next, using the ordinary least squares (OLS) regressions with couple FEs and year FEs, we examine how the husband's and the wife's respective retirement relates to each and every spouse's time spent on domestic labor. To see whether the findings differ by age cohorts, we conduct both the descriptive and the regression analyses for two age groups, one aged 50-64 (consisting of couples of which the older spouse was aged between 50 and 64), and the other aged 65 or more (consisting of couples of which the older spouse was aged 65 or more). The former group consisted of 2,183 couples or 5,212 couples-waves, and the latter included 1,061 couples or 2,862 couples-waves.

## **RESULTS**

### **Descriptive findings**

Gender inequality in the provision of both housework and care was substantial in both age groups in Korea. While almost all women did some housework, about 6 out of 10 men did so (Figure 1). For both men and women, the prevalence of those who provided care was much lower than that for housework: only about 2~3% of men and about 5~7% of women provided care labor. In terms of the amount of time, women's time spent on housework ranged between 134 minutes and 148 minutes a day, but the time for men was much shorter with 17 to 23 minutes a day (Figure 2). Due in part to the small proportion of people who provided care, the time spent on care was short on average: the time spent a day fell below 5 minutes for men and ranged between 8 and 15 minutes for women. Lastly, Figure 3 presents the share of the husband and hence that of the wife in couple's total time spent on domestic labor with the sample restricted to couples in which at least one spouse spent a positive amount of time on the labor. Men's contribution accounted for about 10~14% of couples' total time spent on housework and about 18~22% of couples' total time spent on care. Hence, the gender inequality in care was less evident relative to that in housework. There were not much differences in these findings by age groups or over time.

[Figures 1 & 2 & 3 about here]

As for the key independent variables, in the pooled sample over the three waves shown in Table 1, the proportion of the retired was higher among couples aged 65 or more for both men and women, reflecting that retirement is a life course transition at older ages. There were more women who were retired than retired men, and the gender difference was much larger for couples aged 50-64 (20.2% vs. 40.7%) than for couples aged 65 or more (45.7% vs. 49.5%), implying that men stay longer in the labor market.

Regarding other covariates, 1.4% of couples aged 50-64 and 1.9% of couples aged 65 or more coresided with a grandchild at preschool ages. Consistent with the patriarchal transition, couples in both age groups were more likely to live with the husband's parent (8.0% of couples aged 50-64 and 2.9% of couples aged 65 or more) than the wife's parent (1.2% of couples aged 50-64 and 0.4% of couples aged 65 or more). The prevalence of coresidence with both sides of parents were lower among couples aged 65 or more probably because their parents were less likely to be alive.

### **Results from regression analyses**

Table 2 presents FE regression analyses of time spent on housework on retirement. Results show that, among couples aged 50-64, regardless of the sex of a retiree, the retiree's own time spent on housework increased while the time of his or her spouse decreased. With the husband's retirement, the husband spent additional 8.3 minutes a day on housework ( $p < 0.01$ ) and the wife spent 8.2 minutes less a day on the labor ( $p < 0.05$ ). As the wife retired, the husband's housework went down by 5.3 minutes a day ( $p < 0.01$ ) and the wife's housework increased by 7.0 minutes a day ( $p < 0.10$ ).

In contrast, among couples aged 65 or more, the associations between retirement and housework were much weaker although signs of the coefficients remain the same with those of the coefficients for the younger group. None of the housework outcomes was responsive to the husband's retirement. In contrast, men's housework went down by 6.4 minutes day ( $p < 0.05$ ) in response to their wives' retirement.

[Table 2 about here]

Table 3 summarizes the FE regression analyses of care time on retirement. According to the results, in both age groups, regardless of the sex of the retiree, retirement was hardly associated with care provision of either spouse. The only statistically significant association was that women's care labor increased with their own retirement by 9.9 minutes a day ( $p < 0.01$ ) among couples aged 50-64.

[Table 3 about here]

As for important findings on covariates, if wives had limitations with activities, their husbands provided more housework in both age groups and care among couples aged 65 or more. The wife's reporting poorer self-reported health also increased the husband's care labor among couples aged 50-64.

Among couples aged 65 or more, coresidence with grandchildren at pre-school ages decreased men's housework by 15.4 minutes a day ( $p < 0.01$ ) but their care provision increased by 30.0 minutes a day ( $p < 0.01$ ), leading to an increase in their total amount of time spent on domestic labor. The coresidence led to an even larger increase in the wife's care work ( $\beta = 70.6, p < 0.01$ ) but there was no change in her housework. Among couples aged 50-64, the coresidence was associated with an increase in women's care work only without change in either spouse's housework ( $\beta = 59.3, p < 0.01$ ).

Living with parents showed interesting results also. With housework, the coresidence showed significant associations only among couples aged 50-64. While coresidence with the husband's parents increased housework provided by the wife ( $\beta = 18.4, p < 0.05$ ), coresidence with the wife's parents decreased the labor provided by the husband ( $\beta = -21.6, p < 0.01$ ). Regarding care, in both age groups, living with the husband's parents tended to increase both spouses' care labor (The insignificant association with care provided by women aged 65 or more

might be due to the small number of the coresident women who provided care, which is reflected in the large standard error compared to the coefficient). In neither age group, living with the wife's parent showed a significant association with either spouse's care provision.

## **CONCLUSIONS**

Using the recent panel data from the KLOWF, we describe how Korean older couples provide housework and care, and examine how the domestic labor relates to their retirement and other determinants of the labor. As a snapshot of the labor provision, today's older couples in Korea spent more time on housework than care. Gender inequality was high for both housework and care, especially higher for the former than the latter. Even when it is considered that the KLOWF surveyed mostly female-typed housework, the gender difference in housework in Korea (17 to 23 minutes a day for men vs. 134 to 148 minutes day for women) appears substantial compared to that in Germany (2.5 hours vs. 6.6 hours [Leopold & Skopek, 2015]) and in the US (15 hours vs. 36 hours a week [Szinovacz, 2000]).

In terms of how their housework responds to retirement, the two age groups showed an interesting contrast. Among couples aged 50-64, retirement was associated with an increase in the retiree's housework and a decrease in that of the retiree's spouse regardless of whether the retiree was the husband or the wife. At first glance, such gender-neutral response may appear in line with time availability and relative resource hypotheses. However, the small effect of retirement in size with the pre-existing high gender inequality in housework provision actually imply continuity in gendered division of the labor and hence support the gender-norm hypothesis. Recall that women spent more than two hours a day on housework while men's

housework fell much below 30 minutes a day. The change a day brought by the husband's retirement was an increase by 8.3 minutes ( $p < 0.01$ ) for the husband and a decrease by 8.2 minutes for the wife ( $p < 0.05$ ). With the wife retirement, the husband's housework went down by 5.3 minutes ( $p < 0.01$ ) and the wife's housework increased by 6.9 minutes ( $p < 0.10$ ).

Among couples aged 65 or more, the trade-off between paid work and housework was much less evident compared to the younger age group. The only finding which was statistically significant was that the husband's contribution to housework decreased with his wife's retirement, which made the division of housework further gender-unequal. The gender-dependent response supports the gender-norm hypothesis and countervails the hypotheses on time availability and relative resources. Putting our findings in the literature, they are contrary to Leopold and Skopek (2015) in Germany and Szinovacz (2000) in the US and consistent with Solomon, Acock, and Walker (2004) in the US.

Both spouses' retirement hardly showed significant associations with care other than women aged 50-64 spent about 10 more minutes a day on care with their own retirement ( $p < 0.01$ ). The findings support continued gender inequality in care in later life given that an average woman spent 8 to 15 minutes a day on care while an average man spent less than 5 minutes on the labor with the husband's contribution accounting for 18 to 22% of the couples' total time spent on care. In this case, our finding is contrary to Leopold and Skopek's (2014) finding in Europe (that an older man's retirement led to an increase in his contribution to grandchild care) or Charmichael, Charles, and Hulme's (2010) finding in England (that lagged employment status of both men and women had a negative effect on transitions to a caregiver). Alternative explanations are also plausible. Lumsdaine and Vermeer (2015) argue what matters to care provision is demands rather than supply: An increase in one's availability as a caregiver with



retirement might not lead to care provision unless the retirement occurred in an anticipation of an increase in care needs. The insignificant associations may also be due to the small number of older adults who provided care in the sample.

In the Korean context of gender-unequal and family-dependent care, which is often accompanied by intergenerational coresidence, there are interesting observations between the coresidence and gender dynamics of domestic labor. Coresidence with both the husband's and the wife's parents reinforced gendered division of housework. Among those aged 50 to 64, living with the husband's parents increased the wife's housework. In contrast, living with the wife's parents reduced the husband's housework: The decrease in the husband's labor might be borne by the wife's parents, plausibly her mother, in which case coresidence intensifies gendered division not just within the couple but even across generations by putting more burden on women and their mothers and less burden on their husbands. What might explain the contrasting effects of coresidence with the husband's and with the wife's parents? Display of gender might get further enacted by intergenerational coresidence. The other explanation could be that coresidence with the husband's parents might be driven by the parents' need (which is implied in the increases in both spouses' care with the coresidence), while the coresidence with the wife's parents might be driven by the wife's need for help from parents with domestic labor.

Becoming coresident grandchildren at pre-school ages made Korean men aged 65 or more, who tend to hold traditional gender norms, provide more care, but less housework. The findings are consistent with Leopold & Skopek's (2014) argument that grandchild care involves relatively less gendered tasks compared to housework and, hence, men's involvement in the former might be less discouraged by gender display.

Although a few earlier studies, such as Ishii-Kuntz and Coltrane (1992), emphasized the need to study different types of domestic labor together, most studies in the literature tend to study only one type of the labor (Coltrane, 2000), thereby failing to capture complex relationships among the different types and comprehend the overall impact of life-course transitions on domestic labor. Our examination of housework and care at the same time demonstrated that gender inequality in the domestic labor was higher with housework compared to care. We also showed that coresidence with grandchildren made men aged 65 or more provide more care, but less housework. Among couples aged 50-64, coresidence with parents made housework within the couple further gendered without similar effect on care. These findings might support the argument that gender norms may be more influential on more gender-typical domestic labor, housework in this study (particularly given that KLOWF questions on housework focus on female-typed housework), than on less gendered domestic labor, care. Furthermore, if care provision was mainly for grandchildren, men might have opted to provide childcare, which often involves more joy (Leopold and Skopek, 2014), rather than doing routine and time-consuming housework. The examination of housework and care also helps understanding of who benefits from coresidence with parents. Among those aged 50 to 64, living with the husband's parents increased the wife's housework and both spouses' care (implying the coresidence might be driven by the parents' need), while the coresidence with the wife's parent's decreased the husband's housework with impact on neither spouse's care provision (implying the coresidence might be driven by the wife's need).

Our study has caveats. First, our independent variables are indicative of neither doing any economic activity nor looking for a job rather than retirement. Thus, although the variables might be close to indicators of retirement for couples in the KLOWF survey, the exact interpretation

should follow the definition above. Second, regarding the dependent variables, our measure of housework focuses on female-typed labor, which is acceptable when the implications of the current study is restricted to the housework and in the sense that the housework is most routine and time-consuming. Yet, the measurement still may cause underestimation of men's housework of a male-type and of an increase in the housework in response to their retirement. In addition, KLOWF uses women's self-report of their own and their husbands' domestic labor, rather than time diaries. Therefore, women's contributions to domestic labor might be over-reported while those of the husbands might be under-reported. Third, causal interpretation of our findings need further caution. While FE regression analyses eliminate bias associated with individuals' or couples' FEs, bias due to time-variant omitted variables remains. In addition, the current study is limited in establishing causal direction between retirement and domestic labor, and further studies using instrumental variables or lagged independent variables would help in this regard. Fourth, due to a lack of data, we controlled health and gender-role attitudes of women only without those of men. Lastly, the current study tracked domestic labor over four years, and it would be desirable for future research to follow the trend over longer time span after retirement.

In their research on grandchild care in response to retirement in Europe, Leopold and Skopek (2014) raised the possible concern about work-family conflict faced by working women at older ages. Such concern is more salient in Korea and other gendered Asian countries given the heavy burden of domestic labor due to the traditional gender norms and family-dependent care systems. Just as women at childbearing age are forced to choose between their career and family formation in Korea (Kim & Cheung, 2015), Korean women in later life may also be situated to weigh their labor force participation against marital dissolution, or at least some decline in marital quality. Improving the low marital well-being in later life in the Asian region

may require that older men share their wives' domestic labor at home as well as the governments expand public childcare and elder-care systems.

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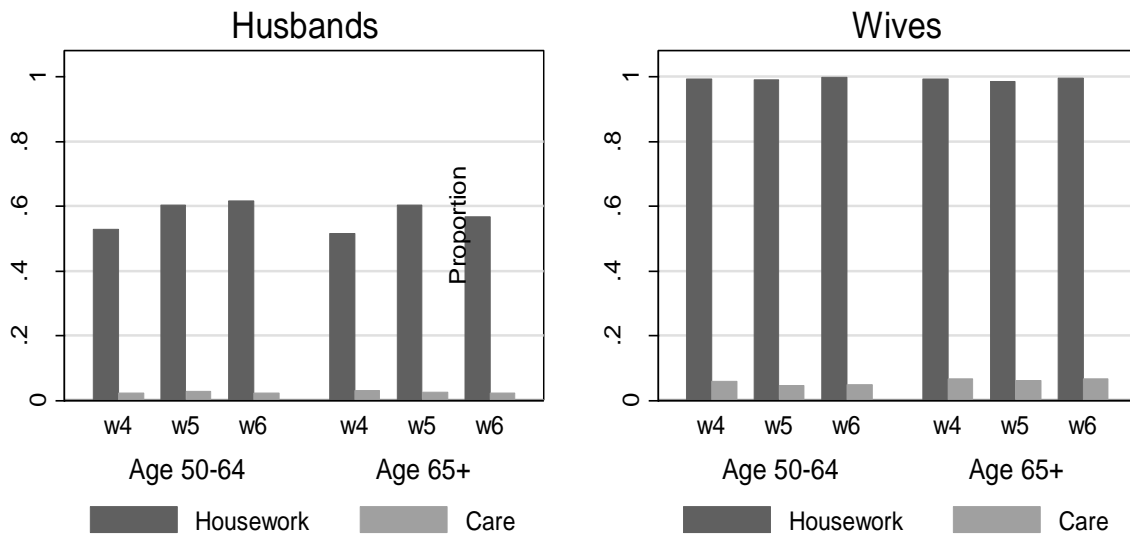
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Figure 1. Whether husbands and wives spent a positive amount of time on domestic labor

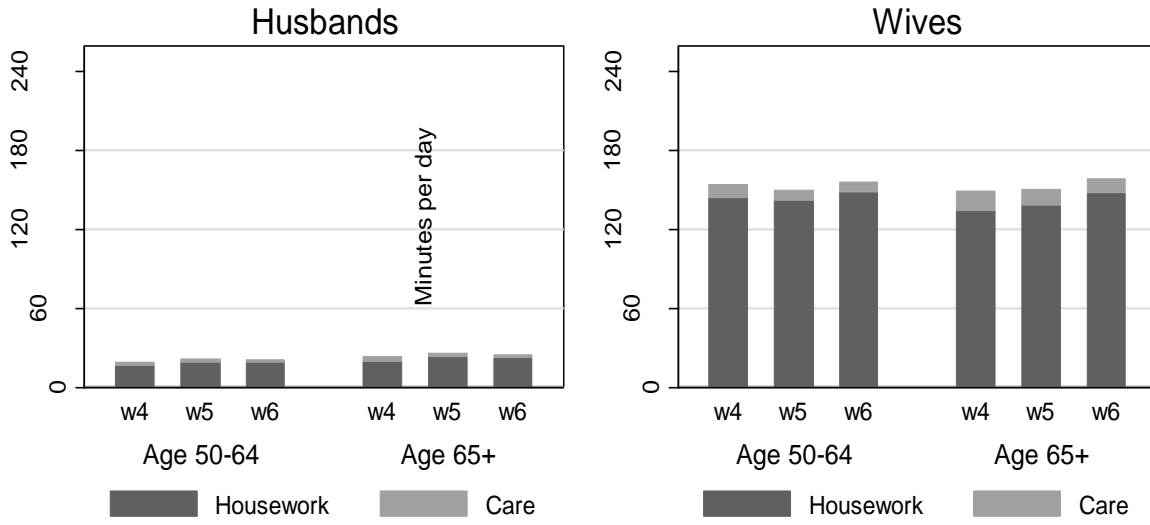


Source: Authors' own calculation using the 2012, 2014, and 2016 KLOWF

Notes: The analytic sample is restricted couples both H and W were aged 50 or more at each wave. The age 50-64 subgroup consists of couples of which the older spouse was aged between 50 and 64, and age 65+ subgroup consists of couples of which the older spouse was aged 65 or above at each wave. H and W indicate husband and wife, respectively.



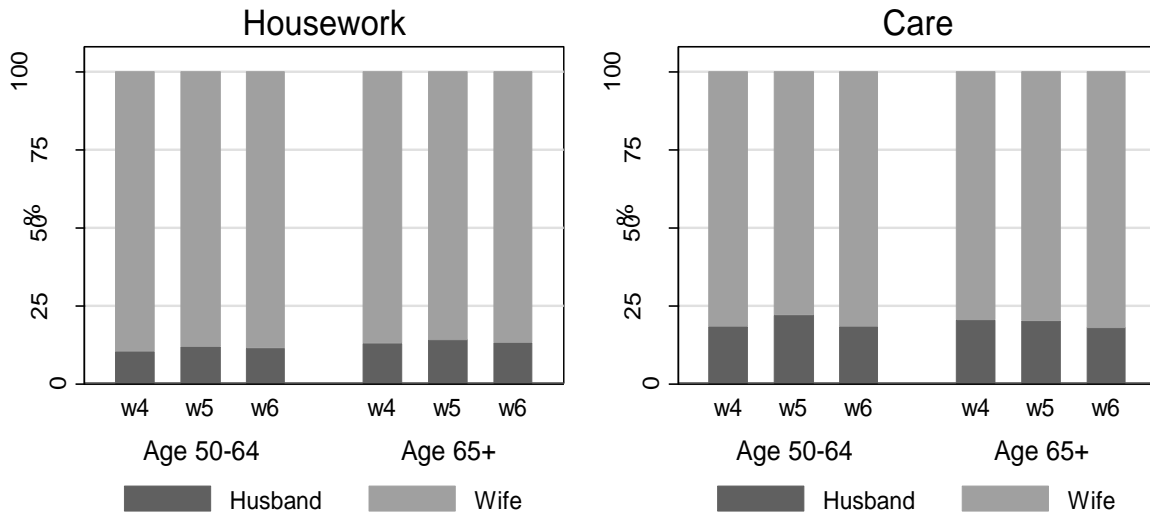
Figure 2. Average amount of time husbands and wives spent on domestic labor



Source: Authors' own calculation using the 2012, 2014, and 2016 KLOWF

Notes: See notes at the end of Figure 1.

Figure 3. Husbands' and the wives' shares in couple's total hours spent on domestic labor



Source: Authors' own calculation using the 2012, 2014, and 2016 KLOWF

Notes: See notes at the end of Figure 1. The analysis of housework and care is further restricted couples in which at least one spouse spent a positive amount of time on housework and care, respectively.

Table 1. Descriptive statistics

	Age 50-64				Age 65+			
	Mean	S.D.	Min.	Max.	Mean	S.D.	Min.	Max.
H: Any domestic labor	0.591		0	1	0.568		0	1
Any housework	0.587		0	1	0.561		0	1
Any care	0.025		0	1	0.028		0	1
W: Any domestic labor	0.994		0	1	0.991		0	1
Any housework	0.993		0	1	0.991		0	1
Any care	0.051		0	1	0.065		0	1
H: Domestic labor (min. / day)	20.41	39.14	0	1,037	24.72	44.07	0	600
Housework	18.33	29.75	0	514.3	21.58	30.92	0	360
Care	2.081	21.90	0	900	3.147	26.70	0	548.6
W: Domestic labor (min. / day)	153.3	85.31	0	1,041	152.5	100.5	0	1,020
Housework	144.7	65.76	0	687.4	139.6	68.80	0	685.7
Care	8.624	51.19	0	942.9	12.92	65.96	0	900
H: Retired	0.202		0	1	0.457		0	1
W: Retired	0.407		0	1	0.495		0	1
H: Age at interview	58.93	4.457	50	68	70.87	3.665	57	86
W: Age at interview	56.03	4.181	50	68	65.66	3.909	50	74
W: Gender-role attitude (4: Traditional)	2.637	0.781	1	4	2.740	0.813	1	4
W: Limitations with activities	0.264	0.864	0	12	0.687	1.345	0	12
W: Self-reported health (5: Poor)	2.681	0.819	1	5	3.136	0.874	1	5
Coresident with a grandchild aged 0-6	0.014		0	1	0.019		0	1
Coresident with a H's parent	0.080		0	1	0.029		0	1
Coresident with a W's parent	0.012		0	1	0.004		0	1
Year								
2012	0.288		0	1	0.352		0	1
2014	0.340		0	1	0.332		0	1
2016	0.372		0	1	0.317		0	1
Number of couple-years		5,212				2,862		
Number of couples		2,183				1,061		

*Source:* Authors' own calculation using the 2012, 2014, and 2016 KLOWF

*Notes:* The analytic sample is restricted couples both H and W were aged 50 or more at each wave. The age 50-64 subgroup consists of couples of which the older spouse was aged between 50 and 64, and age 65+ subgroup consists of couples of which the older spouse was aged 65 or above at each wave. H and W indicate husband and wife, respectively.

Table 2. FE regression of time spent on housework (in minutes per day) on H's and W's retirement

	Age 50-64		Age 65+	
	W's time	H's time	W's time	H's time
H: Retirement	-8.116** (3.246)	8.273*** (1.514)	-2.952 (4.723)	1.213 (2.034)
W: Retirement	6.981* (4.082)	-5.263*** (1.903)	2.543 (6.054)	-6.392** (2.608)
H: Age at interview	-70.401 (78.035)	-54.670 (36.385)	3.860 (33.938)	-4.677 (14.620)
H: Age squared	0.059 (0.100)	0.048 (0.047)	-0.028 (0.121)	0.042 (0.052)
W: Age at interview	45.942 (35.638)	2.365 (16.617)	3.876 (33.212)	-0.661 (14.307)
W: Age squared	0.030 (0.107)	-0.022 (0.050)	-0.006 (0.112)	-0.000 (0.048)
W: Gender-role attitude (4: Traditional)	0.677 (1.451)	-0.391 (0.677)	-0.470 (2.031)	-0.675 (0.875)
W: Limitations with activities	-0.044 (1.350)	2.749*** (0.629)	2.174 (1.336)	1.807*** (0.576)
W: Self-reported health (5:Poor)	0.697 (1.622)	1.180 (0.756)	-0.903 (2.181)	0.155 (0.939)
Coresident with a grandchild aged 0-6	-2.043 (11.447)	-3.226 (5.337)	18.368 (13.336)	-15.406*** (5.745)
Coresident with a H's parents	18.437** (7.499)	2.701 (3.497)	-3.269 (16.961)	-4.058 (7.306)
Coresident with a W's parent	0.373 (16.229)	-21.551*** (7.567)	45.183 (37.224)	-9.289 (16.036)
Constant	1,380.592 (4,742.969)	2,898.664 (2,211.500)	-222.316 (584.541)	186.380 (251.811)
Couple FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Number of couple-years	5,212	5,212	2,862	2,862
Number of couples	2,183	2,183	1,061	1,061

Notes: See notes at the end of Table 1. Robust standard errors in parentheses: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table 3. FE regression of time spent on care (in minutes per day) on H's and W's retirement

	Age 50-64		Age 65+	
	W's time	H's time	W's time	H's time
H: Retirement	-1.071 (2.722)	0.006 (1.259)	6.585 (4.291)	1.575 (1.999)
W: Retirement	9.948*** (3.423)	1.598 (1.583)	5.463 (5.501)	0.877 (2.563)
H: Age at interview	12.811 (65.428)	-5.095 (30.257)	13.670 (30.836)	-0.365 (14.369)
H: Age squared	-0.125 (0.084)	0.060 (0.039)	-0.103 (0.110)	0.007 (0.051)
W: Age at interview	66.417** (29.881)	5.322 (13.818)	-4.590 (30.176)	-14.107 (14.062)
W: Age squared	0.090 (0.090)	-0.056 (0.041)	0.039 (0.102)	0.101** (0.047)
W: Gender-role attitude (4: Traditional)	1.410 (1.217)	-0.326 (0.563)	0.471 (1.845)	0.969 (0.860)
W: Limitations with activities	1.688 (1.132)	-0.333 (0.523)	-0.504 (1.214)	1.019* (0.566)
W: Self-reported health (5:Poor)	-1.262 (1.360)	1.315** (0.629)	-1.986 (1.981)	-0.288 (0.923)
Coresident with a grandchild aged 0-6	59.381*** (9.598)	4.241 (4.438)	70.561*** (12.117)	29.863*** (5.646)
Coresident with a H's parents	27.012*** (6.287)	13.167*** (2.908)	21.359 (15.410)	31.170*** (7.181)
Coresident with a W's parent	13.855 (13.607)	0.673 (6.293)	17.219 (33.821)	-3.302 (15.760)
Constant	-4,159.143 (3,976.747)	-29.131 (1,839.031)	-306.821 (531.104)	479.643* (247.485)
Couple FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Number of couple-years	5,212	5,212	2,862	2,862
Number of couples	2,183	2,183	1,061	1,061

Notes: See notes at the end of Table 1. Robust standard errors in parentheses: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.