# A survey on the division of housework among family members in Japan： A preliminary study for occupational therapy intervention 

Yaoko Iwasaki（Faculty of Health Sciences，Kyorin University，iwasaki＠ks．kyorin－u．ac．jp，Japan）<br>Tomoko Kondo（Faculty of Health Sciences，Kyorin University，tkondomtm＠ks．kyorin－u．ac．jp，Japan）<br>日本における家族間の家事分担に関する実態調査<br>—作業療法介入に向けた予備的研究—<br>岩崎 也生子（杏林大学 保健学部）<br>近藤知子（杏林大学 保健学部）

## 要約

家事は，人が生活し，家庭を維持して行く上で不可欠であり，地域での自立や，役割の獲得•維持において重要である と認識されてきた。家事の形態や，家事に対する価値観は，時代と共に変化するとされ，今日では，女性の就業率の増加，世帯の高齢化，単身世帯の増加，テクノロジーの変化などにより，家事の担い手や家事の量が著しく変化している。家事の不平等感は，うつなどの精神的問題を生じると言われているものの，家事の実態が十分に明らかにされているわ けではない。そこで本研究では，家事の中でも，食事の準備，掃除，洗濯，買い物等の9つの作業の作業に焦点を当て， これらの作業の工程を細分化し実施個数を算出した。その上で，実施者と実施の際の負担感について調ベ，ライフステー ジ，家事量の男女差，妻の就労状況，生活満足度，負担感との関連を明らかにした。対象は，地域在住の健常者，120世帯に対して自記式質問紙調査を実施した。結果， 57 世帯， 179 名より回答が得られた。平均世帯人数は 3.2 人，平均年齢は 36.8 歳であった。各世帯の平均家事個数は $78 \pm 14.53$ 個，女性が多い事が確認された。生活満足度は，家事時間 や家事量（個数）や家事への興味•重要度との相関はなく，役割分担の満足度との相関がみられた（ $r=0.353$ ）。家事全体の負担感は，興味との逆相関（ $r=-0.331-0.497$ ）がみられた。本研究では，家事を「見える化」した上で，実施個数 を家事量として定量的に調査した。全体の家事量はライフステージ間で差はないが，負担感は高齢世帯で増加しており， この世帯への介入が求められる。性差では，妻の就業状況により夫との家事分担が進んでいるものの，全体的には女性 の家事量が 3 倍近くあった。役割分担と生活満足度に相関がみられた事から，家事の負荷量の調整や，家族間での協業 を視野に入れた介入が求められる可能性がある。

## Key words

housework，burden，life－satisfaction，intervention，division of roles

## 1．Introduction

Housework is essential for people to live and maintain a household（Davis \＆Greenstein，2020），and in occupational therapy，it has been recognized as important in achieving in－ dependent living in the community and in acquiring and main－ taining roles in the home（Inomata \＆Kobayashi，2014）．There have been several studies on housework，including economic aspects such as labor（Iversen \＆Rosenbluth，2006），psychologi－ cal aspects such as the burden of daily repetition（Bird，1999）， and social and cultural aspects such as the roles and meanings associated with housework（Artis \＆Pavalko，2003；Geist， 2005；Lachance－Grzela \＆Bouchard，2010；Primeau，2000）．In occupational therapy，housework has been recognized as im－ portant not only for independence in community life but also in the obtaining of roles（Beagan \＆D＇Sylva，2011；Shordike \＆ Pierce，2005）．Housework involves a wide variety of tasks，each of which consists of different processes and requires different physical and mental functions（Beagan et al．，2017）．In addition，
the expected content and quantity of housework differs depend－ ing on the gender and life－stage of the person performing it （Shordike \＆Pierce，2005）．In particular，recently，with the aging of households and the entry of women into the workforce（Artis \＆Pavalko，2003；Major \＆Germano，2006：13－38；Primeau， 2000），housework needs to be performed in different ways than in the past．

The purpose of this study was to understand the implemen－ tation of housework from the perspectives of life－stage，gender， occupational status，and sense of burden and life－satisfaction．In particular，this study focused on housework that is considered ＂unaware＂or＂invisible，＂such as＂checking the trash day＂and ＂collecting the trash＂when＂taking out the trash．＂The results of this study can serve as a resource for occupational therapists in their involvement in housework．

## 2．Method

## 2．1 Subjects

A questionnaire survey was administered to 120 households of healthy persons living in the community．The households were selected from approximately 500 households that had pur－ chased a single－family home in a city in Tokyo within the past

15 to 50 years to ensure that the current life－stage was equal－ ized．

The survey procedure was explained in the form of a written survey sheet．Once the households agreed to participate，they were given informed consent forms to sign．The names on the consent forms were not attached to the data because those forms were kept in a locked file in the office of the research center， separate from the researcher．The authors have no conflicts of interest directly relevant to the contents of this article．This study was conducted with the approval of the Kyorin University Ethics Committee（Approval No．30－22）．

## 2．2 Procedure

Each questionnaire consisted of 7 parts：（1）demographic information，（2）housework，such as who does it，where，and the feeling while doing it，（3）levels of burden，significance，and interests in housework and the time to spend on it，（4）collabora－ tions，（5）descriptions of most important housework，（6）level of life－satisfaction，and（7）free description．

All survey items were selected by the judges（the author， OTR，and two experts who are both architects and housekeep－ ing researchers）to determine if they included common Japanese housekeeping tasks and processes after meeting once a month for over a year．

## 2．2．1 Housework items

Housework items relevantly descriptive of the process of housework were selected as follows．

Two OTRs（registered occupational therapists），having more than 15 years of experience，wrote down the process of each category of housework that they had always performed based on each of the categories of routine tasks and intermitted tasks by Garrido and Acitelli（1999）．Routine tasks were the following： preparing meals，washing dishes or putting items in the dish－ washer，food shopping，laundry，housecleaning，and keeping in touch with family members．These housework tasks were ana－ lyzed and subdivided into 75 items for process analysis to focus particular attention on＂unaware＂or＂invisible＂tasks，such as

Table 1：Housework tasks were analyzed and subdivided into 75 items

| Subtotal |  | Items（Excerpt） | Subtotal | Number of Items |
| :---: | :---: | :---: | :---: | :---: |
| Meal preparation | Breakfast，lunch，dinner | Think about the menu | 21 | 25 |
|  |  | Cooking |  |  |
|  | Shopping for food | Decide what to buy | 4 |  |
|  |  | Go shopping for groceries，etc． |  |  |
| Laundry | Laundry | Realize that the laundry is piling up | 3 | 11 |
|  |  | Put laundry in the washing machine |  |  |
|  | Tidying up | Put laundry away in its place | 4 |  |
|  | Ironing | Ironing | 1 |  |
|  | Cleaning | Pick up dry cleaning | 3 |  |
|  |  | Pick up laundry |  |  |
| Taking out the trash | Separating each type of trash | Separate trash by type and dispose of trash | 2 | 10 |
|  | Taking out the trash | Check the trash day | 8 |  |
|  |  | Collect trash from each room |  |  |
|  |  | Throw away trash |  |  |
| Bedclothes |  | Make the bed and bedding | 3 | 3 |
|  |  | Dry bedding and sheets |  |  |
|  |  | Take in bedding and sheets |  |  |
| Mail |  | Take out mail from the mailbox | 3 | 3 |
|  |  | Distribute mail to family |  |  |
|  |  | Check contents of mail（e．g．，confirm events， dispose of unwanted mail） |  |  |
| Toilet |  | Clean the floor and hand basin | 4 | 19 |
|  |  | Replenish paper and towels |  |  |
| Cleaning and tidying up | Bathroom | Clean the floor，water supply，and walls of the bathroom． | 6 |  |
|  |  | Put papers and things away in their proper place |  |  |
|  | Living room | Vacuuming | 4 |  |
|  | Dining room | Remove dirt from the floor | 3 |  |
|  | Entrance area | Put away shoes，etc． | 2 |  |
| Shopping（other than for meals） |  | Go to the store | 4 | 4 |
|  |  | Put purchased items in place |  |  |
| Total |  | 75 |  |  |

check the trash day and organizing mail (Table 1).

### 2.2.2 Levels of burden, significance, and interest in housework

Based on a rating chart for judgments of task performance and interest developed by Smith (Smith et al., 1986), and Watts \& Kielhofner (Watts \& Kielhofner, 1986), for each task item, the performers of housework were asked to check the level of burden, satisfaction, and interest.

### 2.2.3 Collaborations and level of life-satisfaction

The collaboration and life-satisfaction levels were asked of the respondents as follows: "Are you satisfied with your role sharing with your partner?," and "How satisfied are you with your current life?" Respondents answered each question using a visual analog scale ( 0 to 100 points), as used in previous studies (Kobayashi \& Miyamae, 2002).

### 2.3 Statistical analysis

General information about the subjects was tabulated using descriptive statistics. For differences in the amount of housework by gender, $t$-tests were used. One-way ANOVA was used for the differences in the amount of housework by a wife's employment status (full-time, part-time, and housewife) and the amount of housework by life-stage (married-couple-only households, child-rearing households, and elderly households). Spearman's rank correlation coefficient was used for the relationship between life-satisfaction, the sense of burden of housework, the amount of housework, and the division of housework. SPSS ver. 24 (IBM) was used for all statistical analyses.

## 3. Results

### 3.1 Demographic information

In a total of 179 respondents, 78 were husbands and 101 wives. Included in this group were 57 respondents who were married couples. The mean number of household members was $3.25 \pm 1.9$. The age of the family members ranged from 1 to 78
years with a mean age of $36.8 \pm 22.1$ years. The mean age of husbands and wives was $49.41 \pm 13.32$ and $47.5 \pm 14.70$ years respectively.

### 3.2 Differences in the amount of housework by gender

The average amount of housework for each household was $78 \pm 14.53$, with $19 \pm 17.85$ for males and $59 \pm 15.39$ for females. The mean housework time was $176 \pm 147$ minutes (Figure 1). The number of housework tasks performed and the amount of time spent on them were more by women than men ( $p<0.05$ ).

### 3.3 Differences in the amount of housework, sense of burden, and life-satisfaction by life-stage

The breakdown by life-stage was: (1) married-couple-only households (11 households, $13 \%$ ), (2) child-rearing households ( 30 households, $55 \%$ ), and (3) elderly households ( 10 households, $19 \%$ ). The number of household tasks performed by husbands in each life-stage is as follows: (1) married-couple-only households ( $26.31 \pm 19.56$ ), (2) child-rearing households (16.32 $\pm 16.57$ ), and (3) elderly households ( $20.00 \pm 21.26$ ). The number of household tasks performed by wives in each life-stage is as follows: (1) married-couple-only households ( $52.15 \pm 19.45$ ), (2) child-rearing households ( $61.87 \pm 13.28$ ), and (3) elderly households ( $62.78 \pm 15.50$ ).

For both men and women, there was no difference in the total number of household tasks by life-stage. As a result, the items that differed by life-stage were the number of laundry tasks performed by the husband ( $p=0.034$ ), the number of child-rearing tasks performed by the wife ( $p=0.01$ ), and the sense of burden throughout the entire household ( $p=0.016$ ). Husbands in married-couple-only households did more laundry than husbands in elderly households ( $p=0.031$ ).

Wives in child-raising households did more child-rearing than husbands in married-couple-only households and elderly households ( $p=0.000$ ), while husbands in child-raising households did not differ in the number of housework tasks compared to husbands in other life-stages.


Figure 1: Differences in amount of housework by gender

Elderly households felt significantly more burdened（ $p=$ 0.012 ）than married－couple－only households in terms of the overall burden of housework．

## 3．4 Differences in the amount of housework，sense of burden，and life－satisfaction by wife＇s employment status

The working status of the wives was：（1）company employee， etc．（full－time）（ 21 persons， $39 \%$ ），（2）company employee，etc． （part－time）（ 17 persons， $31 \%$ ），and（3）housewife（ 15 persons， $28 \%$ ）．

The total number of household tasks for husbands whose wives were full－time workers was $28.19 \pm 19.02$ ，for husbands whose wives were part－time workers was $13.12 \pm 12.88$ ，and for husbands whose wives were housewives was $12.60 \pm 15.18$ ． The total number of household tasks for wives was：（1） 50.52 $\pm 16.16$ for full－time，（2） $62.53 \pm 10.80$ for part－time，and（3） $68.00 \pm 12.61$ for housewives．There was a significant differ－ ence in the total amount of housework for both men $(p=0.06)$ and women（ $p=0.01$ ）due to differences in the employment status of the wives（Figure 2）．

Wives who worked full－time were significantly less likely than both part－time workers and housewives to take out the trash $(p=0.047)$ and manage the mail $(p=0.007)$ ．On the other hand，wives who worked part－time took out the trash $(p=0.023)$ and prepared bedding（ $p=0.045$ ）more often than wives who worked full－time．Housewives prepared more meals（ $p=0.035$ ） and laundry（ $p=0.000$ ）．

In terms of the total number of housework，husbands whose wives were full－time workers performed more than husbands whose wives were part－time workers $(p=0.019)$ and house－ wives（ $p=0.030$ ）．Conversely，the total number of housework tasks performed by full－time working wives was lower than that of part－time（ $p=0.029$ ）and housewives（ $p=0.003$ ）．

Husbands whose wives worked full－time prepared more


Figure 2：Differences in amount of housework by wife＇s em－ ployment status
Notes：（1）company employee，etc．（full－time），（2）company employee， etc．（part－time），（3）housewife．${ }^{* *} p<0.01,{ }^{*} p<0.05$ ．
meals（ $p=0.037$ ），laundry（ $p=0.002$ ），and bedding preparation than husbands whose wives worked part－time（ $p=0.02$ ）or were housewives（ $p=0.013$ ）．

The results showed that there were no differences among the three groups in the burden of housework，level of importance， and life－satisfaction．

## 3．5 The relationship between the amount of housework， interest in housework，and importance of housework

Life－satisfaction was not correlated with housework time， amount（number）of housework tasks，or interest／importance in housework，but was correlated with satisfaction with collabora－ tion $(r=0.353)$（Table 2）．

As for the amount of time spent on housework，wives＇posi－ tive correlation（ $r=0.339$ to 0.461 ）and husbands＇inverse cor－ relation（ $r=-0.337$ to -0.383 ）were found for meal preparation， laundry，trash disposal，cleaning，and a total number of tasks．

The overall burden of housework was not correlated with the actual amount of housework．It was inversely correlated with meals（ $r=-0.331$ ）and cleaning（ $r=-0.497$ ），which are high－interest housework（Table 2）．

## 4．Discussion

This study investigated the actual status of housework in each household，taking up housework that was considered to be ＂unaware＂or＂invisible＂in nature．

The amount of housework performed in this study revealed that women performed more than three times as much house－ work as men，and this result revealed that women performed more housework than indicated in a previous study in which women were responsible for twice as much housework as men in terms of time spent on housework．This was thought to be due to the＂visualization＂conducted in this study，which may more accurately reflect the reality of the division of housework than previous questionnaire surveys（Bianchi et al．，2000；Coltrane， 2000；Iversen \＆Rosenbluth，2006）or time diary surveys（Gers－ huny \＆Sullivan，2003；Hook，2006）used in previous studies on housework．This study suggests that the reason why women are responsible for more housework in Japan is that in coun－ tries where traditional gender role divisions are upheld，such as Japan，couples do not share housework equally，compared to countries that actively advocate gender equality（Geist，2005）． The results of this study may be influenced by the cultural back－ ground in Japan．

In a comparison of the amount of housework by type of employment，the number of housework tasks shared by men increased in the group of wives who worked full－time．On the other hand，women who worked part－time performed the same number of housework tasks as full－time housewives．The results of this study were consistent with previous studies，which have shown that the division of housework increases in proportion to women＇s income（Fuwa，2004；Fuwa \＆Cohen，2007）．How－

Table 2: Relationship between amount of housework, interest in housework

|  |  | Satisfaction with role assignment | Importance of housework | Interest in meal preparation | Interest in laundry | Interest in taking out trash | Interest in cleaning and tidying up |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Life-satisfaction | Pearson's correlation coefficient | .353* | 0.149 | -0.156 | -0.022 | -0.027 | $-0.214$ |
|  | Significance | 0.013 | 0.277 | 0.254 | 0.877 | 0.846 | 0.117 |
|  | Number | 49 | 55 | 55 | 54 | 54 | 55 |
| Time spent on task | Pearson's correlation coefficient | -0.181 | 0.133 | -0.097 | -.276* | -0.218 | -0.193 |
|  | Significance | 0.214 | 0.334 | 0.479 | 0.044 | 0.114 | 0.158 |
|  | Number | 49 | 55 | 55 | 54 | 54 | 55 |
| Sense of burden | Pearson's correlation coefficient | 0.019 | $-0.252$ | -.331* | -0.014 | -0.081 | -.497** |
|  | Significance | 0.896 | 0.063 | 0.014 | 0.919 | 0.562 | 0.000 |
|  | Number | 49 | 55 | 54 | 54 | 54 | 54 |

Note: ${ }^{*}$ * $p<0.01, * p<0.05$.
ever, the employment rate of mothers raising children under 3 years of age is over $50 \%$ in the U.S.A., while it is only $30 \%$ in Japan (Ministry of Health, Labour and Welfare, 2014), suggesting that the burden of housework on part-time working wives in Japan may be higher than in other countries.

A comparison by life-stage showed no difference in the overall number of housework tasks, but the sense of burden increased in elderly households. The main reasons for the increased sense of housework burden among elderly households are physical and psychological aspects. As for the physical aspect, the decline in cardiopulmonary function, muscle strength, and aerobic capacity due to aging may lead to a decline in daily living functions (Braet et al., 1997; Judge et al., 1996; Pendergast et al., 1993), which may also affect the increased sense of burden in housework activities. As for the psychological aspect, previous studies have described the psychological burden of older women spending more time on housework activities than men, even after retirement (Adjei et al., 2017; Bianchi et al., 2012). In particular, women have shown a sense of burden from continuing to perform routine and repetitive tasks such as laundry, cooking, and cleaning (Barnett \& Shen, 1997; Coltrane, 2000).

In light of the above, it is necessary to consider interventions such as streamlining the amount of housework, introducing electronic appliances, introducing external support, and sharing roles with men to reduce repetitive household chores that cause a high sense of burden, taking into account physical and psychological aspects. However, some opinions argue that women themselves are hesitant to abandon housework as they feel that it is their identity (Allen \& Hawkins, 1999; Hawkins \& Roberts, 1992). Therefore, it is necessary to consider individual values regarding housework and intervene after surveying individual needs.

The burden of housework and life-satisfaction were influenced by interest in housework and the division of roles in the household, not by the actual number of housework tasks or the
amount of time spent on them. Previous studies have shown that inequity in the division of housework has a greater impact on distress than the quantity of housework (Bird, 1999), a finding that is also supported by this present study. Regarding the division of housework, this study indicated that satisfaction with the division of housework contributes to satisfaction with life. Consistent with previous studies showing that inequality in the division of housework was correlated with lower levels of happiness (Blair \& Lichter, 1991; Coltrane, 2000), the results suggest that a sense of equality in the division of housework is related to happiness. The study also found that the less interest respondents had in meal preparation and cleaning, the greater the burden. This suggests that for households to maintain a healthy and high level of lifesatisfaction, it is necessary to consider not only the equal division of housework but also the individual's interest in housework.

## 5. Conclusion

Despite the increasing number of women entering the workforce, this survey revealed that women perform about three times the amount of housework compared to men. The overall amount of housework did not significantly differ by life-stage, suggesting that a certain amount of housework is demanded at all times in maintaining a household. The sense of burden for housework tends to increase among elderly households, suggesting that support for this group may be necessary. Housework tended to be shared more among households in which the wife was employed. In addition, a correlation was found between the division of roles and life-satisfaction, suggesting that the division of roles, including housework, influences the achievement of a satisfied life.

## References

Adjei, N. K., Brand, T., \& Zeeb, H. (2017). Gender inequality in selfreported health among the elderly in contemporary welfare countries: A cross-country analysis of time use activities, socioeconomic
positions and family characteristics．PLoS ONE， 12 （9），e0184676．
Allen，S．M．\＆Hawkins，A．J．（1999）．Maternal gatekeeping：Moth－ ers＇beliefs and behaviors that inhibit greater father involvement in family work．Journal of Marriage and the Family， 61 （1）， 199. Artis，J．E．\＆Pavalko，E．K．（2003）．Explaining the decline in women＇s household labor：Individual change and cohort dif－ ferences．Journal of Marriage and Family， 65 （3），746－761．
Beagan，B．L．，Chapman，G．E．，\＆Power，E．（2017）．The visible and invisible occupations of food provisioning in low－income families．Journal of Occupational Science， 25 （1），1－12．
Beagan，B．L．\＆D＇Sylva，A．（2011）．Occupational meanings of food preparation for Goan Canadian women．Journal of Oc－ cupational Science， 18 （3），210－222．
Bianchi，S．M．，Milkie，M．A．，Sayer，L．C．，\＆Robinson，J．P． （2000）．Is anyone doing the housework？：Trends in the gen－ der division of household labor．Social Forces， 79 （1）， 191.
Bianchi，S．M．，Sayer，L．C．，Milkie，M．A．，\＆Robinson，J．P． （2012）．Housework：Who did，does or will do it，and how much does it matter？Social Forces， 91 （1），55－63．

Bird，C．E．（1999）．Gender，household labor，and psychological distress：The impact of the amount and division of house－ work．Journal of Health and Social Behavior， 40 （1），32－45．

Blair，S．L．\＆Lichter，D．T．（1991）．Measuring the division of household labor．Journal of Family Issues， 12 （1），91－113．
Braet，C．，Mervielde，I．，\＆Vandereycken，W．（1997）．Psychological aspects of childhood obesity：A controlled study in a clinical and nonclinical sample．Journal of Pediatric Psychology， 22 （1），59－71．
Barnett，R．C．\＆Shen，Y．－C．（1997）．Gender，high－and low－ schedule－control housework tasks，and psychological dis－ tress．Journal of Family Issues， 18 （4），403－428．
Coltrane，S．（2000）．Research on household labor：Modeling and measuring the social embeddedness of routine family work． Journal of Marriage and Family， 62 （4），1208－1233．
Davis，S．N．\＆Greenstein，T．N．（2020）．Households and work in their economic contexts：State－level variations in gendered housework performance before，during，and after the great recession．Journal of Occupational Science， 27 （3），1－15．
Fuwa，M．（2004）．Macro－level gender inequality and the divi－ sion of household labor in 22 countries．American Sociologi－ cal Review， 69 （6），751－767．
Fuwa，M．\＆Cohen，P．N．（2007）．Housework and social policy． Social Science Research， 36 （2），512－530．
Garrido，E．F．\＆Acitelli，L．K．（1999）．Relational identity and the division of household labor．Journal of Social and Per－ sonal Relationships， 16 （5），619－637．
Geist，C．（2005）．The welfare state and the home：Regime dif－ ferences in the domestic division of labour．European Socio－ logical Review， 21 （1），23－41．
Gershuny，J．\＆Sullivan，O．（2003）．Time use，gender，and pub－ lic policy regimes．Social Politics：International Studies in Gender，State \＆Society， 10 （2），205－228．
Hawkins，A．J．\＆Roberts，T．－A．（1992）．Designing a primary in－
tervention to help dual－earner couples share housework and child care．Family Relations， 41 （2）， 169.

Hook，J．L．（2006）．Care in context：Men＇s unpaid work in 20 coun－ tries，1965－2003．American Sociological Review， 71 （4），639－660．
Inomata，E．\＆Kobayashi，N．（2014）．An exploratory study of solutions for certified long－term care elderly living alone：A focus on household tasks．Japanese Occupational Therapy Research， 33 （3），230－240．
Iversen，T．\＆Rosenbluth，F．（2006）．The political economy of gender：Explaining cross－national variation in the gender di－ vision of labor and the gender voting gap．American Journal of Political Science， 50 （1），1－19．
Judge，J．O．，Schechtman，K．，Cress，E．，\＆FICSIT Group（1996）．
The relationship between physical performance measures and independence in instrumental activities of daily living．Jour－ nal of the American Geriatrics Society， 44 （11），1332－1341．
Kobayashi，N．\＆Miyamae，T．（2002）．The relationship between oc－ cupation and life satisfaction in elderly persons living in an institu－ tion．Japanese Occupational Therapy Research， 21 （5），472－481．
Lachance－Grzela，M．\＆Bouchard，G．（2010）．Why do women do the lion＇s share of housework？：A decade of research．Sex Roles， 63 （11－12），767－780．

Major，D．A．\＆Germano，L．M．（2006）．Work life balance：A psychological perspective．Psychology Press．
Ministry of Health，Labour and Welfare（2014）．Labor and wel－ fare：Actual situation of working women 2004 （Summary）．
Pendergast，D．R．，Fisher，N．M．，\＆Calkins，E．（1993）． 9 cardio－ vascular，neuromuscular，and metabolic alterations with age leading to frailty．Journal of Gerontology，48，61－67．
Primeau，L．A．（2000）．Household work：When gender ideolo－ gies and practices interact．Journal of Occupational Science， 7 （3），118－127．
Shordike，A．\＆Pierce，D．（2005）．Cooking up Christmas in Kentucky：Occupation and tradition in the stream of time． Journal of Occupational Science， 12 （3），140－148．
Smith，N．R．，Kielhofner，G．，\＆Watts，J．H．（1986）．The rela－ tionships between volition，activity pattern，and life satisfac－ tion in the elderly．The American Journal of Occupational Therapy， 40 （4），278－283．
Watts，J．H．\＆Kielhofner，G．（1986）．The assessment of occupation－ al functioning：A screening tool for use in long－term care．The American Journal of Occupational Therapy， 40 （4），231－240．

Received：December 3， 2023
Accepted：January 12， 2024
Published：June 30， 2024
Copyright © 2024 Society for Human Environmental Studies


This article is licensed under a Creative Commons［Attribution－Non－ Commercial－NoDerivatives 4．0 International］license．
doi）https：／／doi．org／10．4189／shes． 22.17

