Sugiura, K., Ito, M., Kutsumi, M., & Mikami, H. (2009). Gender differences in spousal caregiving in Japan. *Journal of Gerontology: Social Sciences, 64B(1)*, 147–156,
doi:10.1093/geronb/gbn005, Advance Access publication on January 27, 2009

Gender Differences in Spousal Caregiving in Japan

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Background. Gender differences in spousal caregivers and their relationship to care experiences, social demographics, and caregivers' depression were examined.

Methods. A stratified random sample of 2,020 users of public long-term care insurance in a city of Osaka prefecture, Japan, participated in this study. Responses from 308 spouses (56.2% wives, 43.8% husbands) were analyzed. Variables relating to care experiences, social demographics, and caregivers' depression were compared by conducting simultaneous analyses of multiple populations.

Results. Wives caring for husbands had higher depression scores than husbands caring for wives. Wives tended to adopt "emotional support seeking" and "willing commitment" as coping strategies for their caregiving experience. Husband caregivers used more home-care services; however, increased service use had no effect on husbands' depression. The availability of secondary caregivers reduced depression for caregivers, regardless of gender.

Conclusions. The effects on depression differed related to the caregiver's gender. Husbands relied more on family or home-care services when caring for their wives, whereas wives provided higher levels of care, positively accepted their role, and did not seek to share caregiving, but sought emotional support.

Key Words: Gender differences—Long-term care insurance—Spousal caregivers.

IN the last few decades, there has been an increase in the number of spouses and daughters giving care to older people, whereas in 1968, daughters-in-law accounted for approximately half of all caregivers of older people (Kasuga, 1997). In more recent years, elders have relied more on their spouses for care provision. Kasuga (2003) has reported that the older adults preferred to pay for their own care expenses and preferred their spouse to be the caregiver. In aged households, support, care, and cohabitation, which used to be combined in the same household, have become increasingly separated. The family system has shifted from the extended family headed by older parents to older parents functioning as an independent family unit. One reason for this phenomenon is the decrease in cohabitation with the children.

Cohabitation with older parents in Japan has demonstrated some marked changes over time. Until the 1950s, parents expected to cohabitate with their adult children to ensure that support and care would be provided as they aged. This arrangement was particularly common in Asia and could be attributed to cultural beliefs about filial piety (Sung, 2000; Yamato, 2006). During the 1970s, the frequency of cohabitation of older parents with adult children was approximately 80%. Cohabitation decreased to 60% by 1985, which was still considered to be a high proportion among developed countries. The frequency of parents' cohabitation with adult children has been found to be low in most developed countries (Suzuki, 2001). In the past decade, the proportion of aged households without an adult child resident has been increasing in Japan, from 40% in the mid-1990s to about 50% in 2004 (Ministry of Health, Labour and Welfare, 2004).

Many factors have played a role in changing cohabitation needs among older people. Nishimura (2003) suggested that in the past Japanese elders had to live with their children due to finances. However, since the 1980s, public pension plans for living expenses have allowed elders to be less dependent on cohabitation with their children due to financial needs (Oomoto, 1988; Yamada, 1997). It should be also noted that in accord with Japanese traditional filial piety, it is regarded as shameful if the family sends older parents to a nursing home or asks for help with care for them. Japanese welfare policy was also based on this cultural tendency; therefore, family care was basically expected by both the infirm elders and the government until the changes in the 1980s (Kasuga, 1997).

The Japanese government has reported that those aged 65 years and older account for more than 20 million people, which includes a high proportion, 53.8%, of women (National Institute of Population and Social Security Research, 2007). Approximately 10.4% of those aged 65 years and older required assistance or observation to conduct their daily life activities (Ministry of Health, Labour and Welfare, 2004).

In 2000, the advent of the long-term care insurance (LTCI) system had a significant impact on older people's support system (Houde, Gautam, & Kai, 2007; Tsutsui & Muramatsu, 2007). According to a government survey, 13.1% of all people aged 65 years and older are qualified to receive LTCI service (Ministry of Health, Labour and

Welfare, 2004) and about 60% of these are suspected to suffer from dementia (Ministry of Health, Labour and Welfare, 2004). The most significant advantage of the LTCI was that infirm elders and their families were given the freedom to choose services. Before LTCI, local governments had to decide which services they could provide within their budgetary limits. The present study was conducted after the new nationwide elder care system had begun, so the use of resources could be influenced by the new system of LTCI.

Male Family Caregivers in Japan

According to a national survey, the proportion of male caregivers has increased steadily over time from 11.2% in 1984 to 17.9% in 1986 and 22.7% in 2004. The Ministry of Health, Labour, and Welfare has reported a doubling of male caregivers within a 20-year period. Saito (2007) surveyed 295 male caregivers sampled from 17 areas in Japan and found that their mean age was 69.3 years. About 60% provided care for their spouse, and more than half carried out housekeeping duties. Saito also reported challenges where 40% of male caregivers lost their temper with their care recipients, more than 20% ignored recipient's requests, and 10% engaged in acts of violence. Other studies found a higher occurrence of older adult abuse and alcoholism in male caregivers affected by stressors and social supports relating to care (Harris & Long, 1999; Institute for Health Economics and Policy, 2004).

Despite the dramatic increases in men providing care, experiences of male caregivers have not been sufficiently studied in Japan. Previously, the caregiver's gender was not a major issue because caregivers were predominantly women. Yamada, Sugisawa, Sugihara, Fukaya, and Nakatani (2006) reviewed studies of caregivers in Japan and reported that 80%–90% were women. Other studies had excluded male caregivers because of a lack of sufficient numbers for analysis (Ueda, Hashimoto, Goto, Nakazono, & Kosaka, 1993). This phenomenon was not limited to studies taking place in Japan. Ducharme et al. (2006) reported that most research on family caregiving has been conducted on samples made up entirely of women or including only a small proportion of men.

Gender Differences in Family Caregivers

Gender had been described, mainly in Europe and the United States, as an important contextual factor influencing the stress associated with the caregiving process (Barusch & Spaid, 1989; Bookwala & Schulz, 2000; Chang & White-Means, 1991; Yee & Schulz, 2000). Pinquart and Sorensen (2006) conducted a meta-analysis of 299 studies on gender differences for psychological and physical health, caregiving stressors, and social resources. Compared with male caregivers, women had higher levels of stress and depression and lower levels of subjective well-being and physical health. Women also reported that their care recipients had more behavioral problems and that they provided more caregiving hours and assisted more often with personal care. After statistical control for gender differences in stressors and resources, the range of gender differences in depression and physical health was reduced.

Pinquart and Sorensen (2007) also evaluated the physical health of informal caregivers by reviewing 176 studies and found that the association of caregiving stressors with health was stronger among older samples, dementia caregivers, and men. Older caregivers and spousal caregivers had worse physical health. Furthermore, men showed a stronger association between caregiving and physical health. Gray (2003) reported that women were more vulnerable to some types of stressful events and were more likely to have worse psychological outcomes. Sugiura, Ito, and Mikami (2004) reported that the average scores for stress and depression were higher in female caregivers. In evaluating the usage of public LTCI services for outside resources, male caregivers used home-helper services more often than women, whereas female caregivers sought more informal support (Sugiura et al., 2004). Multiple logistic regression analyses indicated caregivers' subjective stress and types of emotional support seeking, as well as their willing commitment to the caregiving role, were significantly higher for women. Sugiura et al. combined spouses and adult children with male caregivers. In Japan, Yamada et al. (2006) compared older spousal caregivers by gender, in what appears to be the only gender study of spousal caregivers. Male caregivers were found to be more likely (a) to have additional informal caregivers available who could take their place and (b) to use home-care service. Male caregivers also had lower scores on emotional exhaustion and physical symptom measures. However, some studies (Bookwala & Schulz, 2000; Miller, 1990) that have been restricted to spousal caregivers did not report gender differences. Results of the previous studies have supposed that coping behavior varies as a result of gender and may play an important role in explaining the differential impact of stressful events on male and female caregivers. Therefore, the current study included only spousal caregivers.

Coping With Caregiving Stress

Lazarus and Folkman (1984) have identified variables related to coping behavior and classified them into two major categories: problem-focused coping and emotion-focused coping. However, later studies have identified other categories of coping. Billings and Moos (1984), for example, added appraisal-focused coping. In Japan, Midorikawa (1993) developed the care stress–related coping scale for family caregiver and identified three factors. Okabayashi, Sugisawa, Takanashi, Nakatani, and Shibata (1999) investigated Midorikawa's scale in a large community sample using confirmatory and secondary factor analysis and identified the same three factors consisting of five coping strategies. Two of these factors correspond to problem-focused coping and emotion-focused coping of the study by Billings and Moos. However, the remaining factor, “approaching and cognitive” coping, was characterized by the positive effects of the stress situation (Okabayashi et al., 1999) and positive acceptance of the caregiving role as a major construct. Approaching and cognitive coping is different from appraisal-focused coping described by Billings and Moos, which consisted of appraising the stressful situation through logical analysis, efforts to understand the stressor, and assessing the consequences of possible strategies. Approaching and cognitive coping is interpreted as a typical Japanese caregiving behavior reflecting the Japanese norm of *sekentei* (Asai & Kameoka, 2007; Inoue, 2007). They have conceptualized *sekentei* in terms of avoidance of shameful behavior, concerns about how one appears to others, fear of social criticism, self-restraint in deference to others, and privacy of the family. It has been suggested that the *sekentei* norm positively influences and motivates caregiving to elders.

In our previous study conducted in Japan (Sugiura et al., 2004), we have identified five caregiver’s coping strategies that are similar to Okabayashi et al. (1999). These have been named “formal support seeking,” “emotional support seeking,” “keeping own pace of caregiving sustainability,” “valuing own leisure and refreshing,” and “willing commitment.” The dimension of willing commitment has been defined as a strategy of being positive and devoted to the caregiving duty, based on the traditional Japanese idea of filial piety and the *sekentei* norm.

In this study, we used formal support seeking, emotional support seeking, and willing commitment to investigate the caregiving experience in Japan as a function of gender, taking the availability of the public LTCI service, its use, and conservative gender roles into consideration.

Research Question and Hypotheses

In the present study, gender differences in spousal caregivers and their relationship to care experiences, social demographics, and caregivers’ depression were examined. Two hypotheses were examined.

The first hypothesis was that seeking resources and support from outside the family, and its impact on caregivers’ psychological well-being, would differ based on the gender of the caregiver. Yamada et al. (2006) determined that financial conditions had significant relationships to physical symptoms and social restrictions among wives, such as having no freedom to relax or rest from caregiving or leave the house because of household duties. Due to the new public LTCI established in 2000, which made it possible to use home-care services at 10% of the service charge, older couples’ financial conditions could have significantly changed. For spousal caregiving, economic factors could be a barrier or a facilitator to use services.

The second hypothesis was that the wife caregiver would adopt a “willing commitment of caring role” as a way of coping, whereas the husband caregiver would not. Adopting certain coping strategies and buffering effects on psychological well-being were examined for differences between genders.

METHODS

Participants

Spousal caregivers (n = 308) participated in this study. The samples were 2,020 at-home/day-service users consisting of the household unit of the impaired elder and family caregivers or the impaired older adults living alone on LTCI in Higashi-Osaka city, Osaka, Japan. The sample accounted for 30% of the total home service user population and was sampled by a stratified random sampling method according to the degree of impairment of the older people. Data were collected through anonymous, mailed self-report questionnaires administered from August 2002 to September 2002.

We secondarily used and analyzed the data set of the survey conducted in Higashi-Osaka city. The overall response rate was 63.7% (N = 1,287) with 947 older persons having primary caregivers. Institutionalized older persons (29), missing information, and nonfamily caregivers (50) were excluded from the study. Data of the remaining 868 family caregivers, 35.5% older spouses, 135 husbands, and 173 wives were analyzed.

The survey was conducted based on an agreement with Higashi-Osaka city that information about the LTCI usage of each subject would be anonymously provided by the city, and the data derived from this survey would not convey any private information. The study protocol underwent an ethics review by the control office of LTCI of Higashi-Osaka city.

The population of Higashi-Osaka city in June 2002 was 510,000, and the proportion of older people (65 years and older) was 16.1%. The proportion of the elderly inhabitants is slightly lower than the 18.5% reported in the national data, but the proportion of the elderly population that was not infirm was higher than the national level. For the elder households, the mean number of household members was 2.48, which was similar to the national data. The number of older adults receiving home-care services through LTCI in 2002 was 4,235, which was 5.7% of the population aged 65 years and older who were qualified for LTCI services, equivalent to the national norms (Ministry of Health, Labour and Welfare, 2004).

Some government data indicate that most older persons who require assistance or observation for their daily life activities end up applying for use of the LTCI service. More than 80% of qualified older persons actually used the LTCI service, which corresponded with the current study sample. Therefore, this sample represents infirm elders and family caregiver situations in Higashi-Osaka, which is typical of suburban cities in Japan.

Measures

*Demographic variables.—*Questions were asked about the caregiver's age, employment status, yearly household income, economic dependence on the family, and living arrangements. The economic dependence question asked "if the older care recipient depended on his or her extended family for living expenses." Those who answered that family assistance was one of their main sources of income for living were coded as "dependent on family" and those who did not were coded as "independent."

Physical and cognitive disorders of the older people.—Impairment of activities of daily living (ADLs). The LTCI's care level was used as the measure of impairment of ADLs. The LTCI's care level was formally determined by the care recipient's attending physician and technical staff dispatched from the local municipal government. The committee for certification consisted of health and welfare workers such as public health nurses, social workers, and physicians deciding the final care levels. Care levels ranged from 0 to 5. Higher certified care level indicated greater ADL impairment.

*Cognitive impairment.—*Cognitive impairment was assessed using 16 items on a questionnaire developed by the Tokyo Metropolitan Institute of Gerontology (Honma, 1996). This questionnaire is among the most frequently used instruments assessing cognitive function in older adults in Japan. The scale has confirmed validity (sensitivity, specificity, and positive predictive value). Sample items included "She/he says that she/he has not eaten yet, right after a meal" or "Difficulty remembering his/her age." Response categories were dichotomous (0 = no and 1 = yes). Individual items were added for a summary score ranging 0–16 (Cronbach's α = .89). Higher scores indicated more severe cognitive impairment.

*Settings of care experiences.—*Several questions were asked about the setting of the care experiences, including the "amount of care provided," "duration of caring," and "availability of secondary caregivers."

Amount of care provided: The amount of care provided comprised the dimensions of ADL and Instrumental Activities of Daily Living (IADL) care assistance scales in which the caregiver was in charge. The ADL care assistance scale consisted of 10 items relating to care for fundamental needs such as eating, toileting, dressing, shifting from bed to wheelchair, walking in own house, negotiating stairs, incontinence, medication, and bathing. The IADL care assistance scale consisted of seven items related to social functions such as going out by public transportation, meal preparation, cleaning, shopping, making a phone call, transportation to and from the hospital, and money management. Each item of the ADL/IADL care assistance scale was scored 1 point, and the total of the scores of each scale was used as the value for ADL or IADL care assistance. The ADL care assistance scale ranged from 0 to 10 (Cronbach's α = .83), and the IADL care assistance scale ranged from 0 to 7 (Cronbach's α =.72).

The duration of care values ranged from 0 (less than 6 months) to 6 (over 10 years). The availability of a secondary caregiver was coded as yes = 1 or no = 0. In this study, a secondary caregiver was defined as informal support personnel that could be a substitute for the caregiver, such as the older care recipient's family living apart, friends, and/or acquaintances.

*Caregivers' coping strategy.—*In a previous study by Sugiura et al. (2004), confirmatory factor analysis produced a structure of five factors for caregivers' coping strategies. Three of the five factors were adopted for this study. In previous research, two factors, emotional support seeking and willing commitment, have showed differences due to caregivers' gender. The factor formal service seeking considered the public service influence as participants of this study were LTCI service users. We did not include the other two factors in this study: keeping own pace for caregiving sustainability and valuing own leisure and refreshing.

The total scores of items in this study—formal service seeking (four items), emotional support seeking (three items), and willing commitment (four items)—were used. Examples of formal service seeking items were "active application for formal services" and "consulted with professionals." Examples of emotional support seeking items were "get his/her distress within close proximities" and "help each other along with peer caregivers." Examples of willing commitment items were "respect the care recipient's feelings" and "treat or care for the person cared for sincerely, gently, and conscientiously." Items were measured using a 3-point Likert scale (from 0 = hardly ever or never to 2 = much or most of the time).

The score for formal service seeking ranged from 0 to 8, emotional support seeking from 0 to 6, and willing commitment from 0 to 8. *Z*-scores were compared to adjust scale ranges of each item.

Following Bryman and Cramer (2001), for participants who omitted some responses, less than 50%, the total score was estimated by multiplying the sum of the scores of answered responses (the total number of questions)/(number of answered responses). This procedure has been criticized for underestimating the effects of the variance; however, we adopt it because it is commonly used for compensating for missing values by mean imputation.

*Utilization of LTCI.—*The current utilization of home care, day care, and short-stay services (coded as 0 = not use, 1 = use) covered by LTCI was used as a proxy indicator of use of extrafamilial formal support.

Caregiver depression.—Caregivers' depressive symptoms: The severity of depressive symptoms of the caregiver was assessed using the Radloff 12-item Center for Epidemiological Studies–Depression (CES-D) scale in Japanese developed by Yatomi, Liang, Krause, and Akiyama (1993). The CES-D is a widely used self-report general scale for the frequency of depressive mood and associated behavioral symptoms that occurred during the previous week. Several studies have evaluated depression of Japanese community-dwelling older adults by CES-D (Demura, Sato, Tada, Matsuzawa, & Hamasaki, 2006; Ihara, 1993), and only a few studies showed slight gender differences (Sugisawa, Sugisawa, Nakatani, Maeda, & Shibata, 1997). Item responses ranged from 0 (hardly ever or never) to 2 (frequently or most of the time). The present data showed high internal consistency (Cronbach's $\alpha = .91$), and the total score was used for analysis (range: 0–24). Missing data were treated in the same manner as for Bryman and Cramer (2001).

Analyses

t-Tests and chi-square tests were used to compare caregivers on demographic variables, physical and cognitive impairment of the spouse (or care recipient), setting of care experiences, coping strategies, and utilization of LTCI services. Multiple linear regressions were conducted with a simultaneous analysis method of multiple populations to assess separately the effect of these variables related to caregivers' depressive symptoms. A simultaneous multiple group analysis was used to test whether each path in the model for men was significantly different from that obtained for female caregivers. Missing data were substituted only for simultaneous multiple group analysis, by using the multiple imputation method (Little & Rubin, 1987). SPSS 15.0J for Windows and AMOS 7.0 were used for the analysis.

Results

Spousal Caregiving Status Related to Gender

Table 1 provides the demographic and caregiving characteristics by gender of caregiving spouses. The mean age of wives as care recipients was 73.6 ± 8.7 years old, which was slightly older than age of husbands as care recipients (70.2 ± 8.4 years old). There were no significant differences in household income. Eleven percent of wives as care recipients and 17% of husbands as care recipients were economically dependent on the family. Caregiving wives were almost twice as likely to have children living with them (31.0%) than caregiving husbands (16.7%).

The mean age of caregiving husbands (72.3 ± 8.3 years old) was significantly older than mean age of caregiving wives (69.3 ± 8.9 years old). Equal percentages (16%) of husband or wife caregivers were working full-, or part-time.

Ten percent of husbands and wives were at the care level of five of ADL impairment, requiring assistance for all aspects of daily life. More wives were caregivers for spouses with significantly more severe cognitive impairments than were husbands. Wives provided more aspects of ADL and IADL care than husbands. Secondary caregivers from the immediate family or relatives were available for 76% of husband and 63% of wife caregivers. No significant differences in duration of care were related to gender.

In terms of coping strategies, the mean value of wives' emotional support seeking was significantly higher than the husband caregivers. Wife caregivers also demonstrated higher scores of willing commitment. In terms of the use of LTCI services, husband caregivers used home-care services twice as often as wives, whereas both genders used day-care and short-stay services with equal frequency.

Spousal Caregiving Experiences and Depression

Husband caregivers were significantly less depressed than wife caregivers, as measured by scores on the CES-D (see Table 1). Table 2 provides the results from simultaneous analyses of spousal groups showing how caring for a spouse may contribute to caregiver depression. The model fits the data well (husbands model: Goodness of Fit Index (GFI) = 0.973, Adjusted Goodness of Fit Index (AGFI) = 0.816, Root Mean Square Error of Approximation (RMSEA) = 0.051; wives model: GFI = 0.981, AGFI = 0.872, RMSEA = 0.035).

In the husband caregiver equation, living with his own children (−0.199, $p < .05$), working (−0.211, $p < .05$), providing more ADL assistance (0.259, $p < .01$), caring for a shorter period (−0.168, $p < .05$), absence of a secondary caregiver (−0.291, $p < .01$), and utilizing short-stay services (0.222, $p < .01$) were significantly associated with depression. Use of the willing commitment coping strategy was also associated with higher levels of depression (0.205, $p < .05$).

In the wife's equation, more severe cognitive impairment among husband care recipients (0.205, $p < .05$) and absence of a secondary caregiver (−0.180, $p < .05$) were significantly associated with higher levels of depression.

Other demographic factors and the setting of care experiences were not significantly related to the caregiver's depression for either gender. Gender differences were found for the duration of care, use of willing commitment as a coping strategy, and use of short-stay services in this model. Additionally, gender differences in living with their own children and working were found at a marginal significance level of $p < .1$.

Discussion

Gender differences in Japanese spousal care experiences and factors that may influence depression in the caregiver were examined in this study. Gender differences in the care experience that may be related to caregivers' experiencing depression were discussed. Caregivers' LTCI service use, seeking resources and support from outside the family, gender differences in coping behavior, and economic issues and family arrangements were also discussed.

Table 1. Spousal Caregiving Status Related to Gender

	Caregiver Husbands (*n* = 135)			Caregiver Wives (*n* = 173)			
	n	*M*	*SD*	*n*	*M*	*SD*	
Demographics							
Recipient spouse's age	128	73.6	8.7	170	70.2	8.4	†
Household income/year ($) (%)	126			158			
<8,500		7.9			11.4		
8,500≤ <25,500		58.7			57.0		
25,500≤ <42,500		22.2			20.9		
42,500≤ <68,000		6.3			3.8		
68,000≤ <85,000		3.2			2.5		
85,000≤		1.6			4.4		
Economic dependence on extended family (%)	133			171			
None (independent)		88.7			83.0		
Dependent		11.3			17.0		
Living arrangement (%)	132			171			
Living with own children		16.7			31.0		**
Only couple household		83.3			69.0		
Caregiver's age	132	72.3	8.3	170	69.3	8.9	**
Caregiver's employment (%)	126			165			
Unemployment		84.1			83.6		
Part-time		6.3			8.5		
Full time		9.5			7.9		
Recipient's variables							
Activities of daily living (ADL) impairment	135	3.5	1.4	173	3.4	1.4	
Cognitive impairment	108	1.1	2.3	154	1.7	2.5	*
Setting of care experiences							
ADL assistance	120	3.2	2.8	158	4.2	2.9	**
IADL assistance	120	3.8	2.1	158	4.5	2.1	**
Duration of care (%)	124			164			
<6 months		10.5			11.6		
<1 year		13.7			17.1		
<3 years		27.4			27.4		
<5 years		19.4			16.5		
<10 years		15.3			15.2		
10 years and up		13.7			12.2		
Availability of secondary caregivers (%)	108				152		
Not available		24.1			36.8		
Available		75.9			63.2		
Coping strategy (*Z*-score)							
Formal service seeking	111	–0.018	1.07	149	0.014	0.942	
Emotional support seeking	112	–0.169	1.04	154	0.123	0.953	*
Willing commitments	113	–0.142	1.11	155	0.103	0.898	†
Utilization of long-term care insurance services							
Home care	129	0.6	0.5	168	0.3	0.5	**
Day care	125	0.5	0.5	166	0.5	0.5	
Short stay	132	0.1	0.3	170	0.1	0.3	
Depression							
Center for Epidemiological Studies–Depression	93	5.5	4.9	146	6.8	5.5	*

Note: p values of t-test: $*p < .05$; $**p < .01$; $†p < .1$.

Comparison of Caregivers' Depression and Care Experiences

Depression levels were significantly higher for wife caregivers than husband caregivers in this study. These results are consistent with previous studies (Marks, Lambert, & Choi, 2002; Yee & Schulz, 2000) reporting that stress process parameters including depression are worse in female than male caregivers. In addition, this current study shows that different factors may be associated with depression and care experiences based on gender. Caregiving stresses may be explained by different factors for each gender. The wife caregiver's equation indicated that only the husband's cognitive impairment as a care recipient was associated with the caregiving wife's depression. These findings differed from Yamada et al. (2006), who found that both husbands and wives as caregivers showed a significant association between emotional exhaustion and their spouses' cognitive impairment.

The husband caregiver's equation indicated that working was a positive factor related to reduced depression. It is possible that working provides husbands with a compensatory

Table 2. Simultaneous Analysis of Spousal Caregiving Status Related to Gender Differences in Depression

	Standardized Coefficient		
	Caregiver Husbands (n = 135)	Caregiver Wives (n = 173)	Gender Differences
Demographics			
Recipient's			
Age	−0.115	−0.062	
Household income/year	0.084	0.048	
Economic dependence on family (dependent = 1)	0.057	0.005	
Living arrangement (with own children = 1)	−0.199*	−0.017	†
Caregiver's			
Age	−0.076	0.091	
Employment status	−0.211*	−0.004	†
Recipient's variables			
Level of activities of daily living (ADL) disorder	−0.060	−0.016	
Cognitive impairment of elderly	0.023	0.205*	
Setting of care experiences			
ADL assistance	0.259**	0.133	
IADL assistance	0.026	−0.020	
Duration of care	−0.168*	0.094	*
Availability of secondary caregivers (available = 1)	−0.291**	−0.180*	
Coping strategy			
Formal service seeking	−0.151	0.003	
Emotional support seeking	−0.055	−0.015	
Willing commitment	0.205*	−0.075	*
Utilization of long-term care insurance services			
Home care	0.125	−0.044	
Day care	0.133 †	0.147†	
Short stay	0.222**	−0.067	*
Goodness of fit for model			
GFI	0.973	0.981	
AGFI	0.816	0.872	
RMSEA	0.051	0.035	

Notes: Center for Epidemiological Studies–Depression score was dependent variable, and gender differences were examined by critical ratio for between parameters in this study.

*$p < .05$; **$p < .01$; †$p < .1$.

positive spillover from multiple roles, such as spouse, caregiver, and worker (Stephens, Franks, & Atienza, 1997). Because of the spillover, husbands may experience positive effects from certain roles that compensate for the negative effects of other roles.

Characteristics of Service Use

Husband caregivers used more home-care services; however, use of services did not have a significant effect on husbands' depression in this study. This result is consistent with Yamada et al. (2006). Saito (2007) reported that more than half of all male caregivers took on household chores, although many were not good at cooking and cleaning. Saito suggested that men lacked domestic chore experiences and had to become quickly proficient at completing household chores after they started care for their impaired spouse. One would expect that greater use of home-care services would offset the stress and depression among caregiving husbands, who presumably had greater weakness in this area.

Saito determined that male caregivers often used home-care service providers to assist their spouse with personal care such as hair washing, bathing, and bathroom use. The association between ADL assistance and depression appeared only for husband caregivers, whereas IADL assistance was not related to depression in husbands. Therefore, it seemed more stressful for men to meet the fundamental personal care needs of their infirm spouses rather than their social functioning needs (e.g., shopping, money management, substitute communications with telephone). Generally, ADL assistance needs, such as toileting and feeding, occur repeatedly from day to day. Such assistance also requires consideration on the part of care recipients, because they require hands-on care of even private parts, and husbands are required to provide support to compensate for the impaired abilities of the wife. This study showed that husbands prefer to use home-care services. However, the use of home-care services had no significant effect on husbands' depression, perhaps because home-care services did not satisfy all the needs and difficulties of the husbands. Women are generally better socialized to be obliging to others. With much less experience in providing personal care than women, it is suggested that husbands feel more care burden when providing ADL assistance.

As an unexpected finding, the use of short-stay services was found to be related to increased depression among caregiving husbands. Short-stay services are generally used for respite care. In Japan, due to social factors, infirm older people requiring limited hospital treatment used to stay in hospitals, through a process called "social hospitalization." In the last decade, the government promoted deinstitutionalization, or political restriction of social hospitalization, which led to the use of short-stay services as an alternative to social hospitalization, but not as respite care (Murata, 2005). Short-stay services could be considered to be the middle ground between home care and institution care. In previous studies, men had difficulties dealing with the problem behaviors caused by dementia (Mui, 1995) and gave up their caregiving role when care recipients developed worsening cognitive functions (Stoller, 1990). Another study reported that male caregivers were twice as likely as female caregivers to transfer their older care recipient from home care to a nursing facility (Jette, Tennstedt, & Crawford, 1995). In our study, the duration of care did not differ between the genders. The reasons for using short-stay service were not measured, but it is possible that husbands using short-stay service showed higher depression due to their sense of failure in giving up home care. There is also the possibility that the cause–effect relationship between the husbands' depression and short-stay service is reversed because the husbands' depression might be the reason for using short-stay service in the first place. Or, it is also possible that the use of short-stay service may have resulted from some long-term care needs that were not measured by physical and cognitive measures used in this study. Further research is necessary to identify the relationships between these variables.

Another finding was that the availability of secondary caregivers moderated the spouse's depression for both genders. These results suggested that it is necessary to use LTCI services and to assess and respect others that are engaged in caregiving, as well as to ascertain the availability and strength of the main caregiver's informal support network.

Gender Differences in Coping Behavior

As hypothesized, wife caregivers adopted coping behaviors of emotional support seeking and willing commitment significantly more than husbands. Husband caregivers adopted emotional support seeking less often than other coping behaviors. A remarkable phenomenon was that willing commitment was associated with depression for husband caregivers.

Deciding to adopt the willing commitment strategy might be challenging for husbands aged around 70 years, because of the conservative gender role and the lack of experience in doing domestic chores. It is suggested that this challenge might have resulted in the observed depression in husbands. Therefore, it is suggested that community care providers should be aware of the risk of depression and monitor such husbands.

Coping characteristics found in previous research were also evident in this study. Wife caregivers were in charge of caring for spouses with higher cognitive impairment. Wives provided more ADL and IADL assistance than husbands in our study; thus, wives fulfilled greater care needs, gave more care, and positively accepted their role.

Family Arrangement and Economic Factor

There were no significant gender differences in household income, cared-for spouse's economic dependence on the family, and caregiver's employment status. LTCI started in 2000 in Japan, and users paid 10% for insurance-covered services such as day care, home care, and short stay. In this study, participants were restricted to spouse caregivers with a mean age of 70 years who were receiving social security or a pension. As a result of the inclusion criteria, both genders had equivalent availability and accessibility of LTCI services or formal services based on their economic situation. Neither household income nor economic dependence on family was significantly related to spouses' depression.

More than 80% of husband caregivers lived only with their infirm spouses and were living separately from their children. Husband's cohabitating with children had better psychological well-being. This finding could be attributed to approximately 75% of husbands having secondary caregivers available. These findings suggest that husbands relied on other family members for taking care of ailing wives.

The percentage of wives living with children was 31%. Wives had less availability of secondary caregivers and took care of infirm husbands. It is possible that by using a strategy of willing commitment, children may play a role in providing emotional support rather than sharing care.

From the patterns of these results, it could be inferred that spouse caregivers tended to care for their spouse without involving their children, although the manner was different for the wife and the husband.

Methodological Characteristics of This Study

The use of a large sample in this study made it possible to statistically analyze spouse caregivers by gender. Municipal authorities monitor the LTCI services, which vary depending on the LTCI authorities, just as familiarity with the services varies for community residents who differ in local culture (Kajiya, Suzuki, & Kanamori, 2004). Participants were obtained from a single city; therefore, variation among service-providing institutions and cultural bias relating to LTCI service use were not likely to have occurred.

A limitation of this study involves intergenerational views about care. Because spousal caregivers were the average age of 70 years, this generation might be less conflicted about other social roles such as working and child rearing and possibly less affected by the issues relating to gender roles of younger generations. The study also did not determine whether giving up the care role or sending infirm elders to nursing facilities occurred more often for male caregivers.

Another limitation is that those who were qualified but did not utilize LTCI services were not analyzed. Those with actual care needs were supposed to manage by themselves but applied for LTCI services for future use. Further research is needed to examine the relationship between differences in the gender of the caregiver and the desirability of the service and the decision-making process behind using the service. Future studies could increase the range of participants to include those who did not choose to use the service and examine the gender differences among the caregivers.

Results of this study were significant because gender difference among caregivers has not been previously studied in Japan. This study contributes to further developing a care-relating stress model, which has been discussed with a female dominance sample.

Other strengths of this study include analysis of data from a large stratified sample provided from a municipality that was the LTCI insurer. Therefore, data used in this study represent spousal caregiving experiences in a typical suburban city in Japan. Some government data indicate that most older people who require assistance or observation for their daily life activities end up applying for use of LTCI services. More than 80% of qualified older people actually used the LTCI services. In this study, 36% of all family caregivers were spouses, and the ratio of female/male caregivers was 1.3. The original data (Sugiura et al., 2002) demonstrated a higher number of participants and female/male caregiver ratio of 2.75. Both studies show that whereas most caregivers are women, male spouses act as caregivers more frequently than would be predicted. It is likely that husband caregivers will increase in the future. Additionally, since the 1980s, there has been an increasing number of divorces among couples married for over 20 years in Japan (Cabinet Office, Government of Japan, Quality-of-Life Policy Bureau, 2002). An increased number of divorces would warrant further research to consider the family structure and relationships, and the influence of changing gender roles, which will influence the children's generations.

In conclusion, wives cared for their husbands with higher needs, although husbands used home-care services more often and had less depression associated with providing spousal care.

This study provides contemporary information about family caregiving, reflecting a new trend toward the married couple as a family unit.

FUNDING

This research was substantially supported by KAKENHI(B): (20390570).

ACKNOWLEDGMENT

We thank the staff of the Welfare for the Aged office of Higashi-Osaka city and citizens from Higashi-Osaka for their cooperation in completing the questionnaires. K.S. planned the study, performed all statistical analyses, and wrote the paper. M.I. supervised all statistical analyses and also participated in writing the paper. M.K. helped plan the study and revise the manuscript. H.M. supervised the entire study and revised the manuscript.

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REFERENCES

Asai, M. O., & Kameoka, V. A. (2007). Sekentei and family caregiving of elders among the Japanese: Development and psychometric evaluation of the Sekentei scale. *Journals of Gerontology: Social Sciences, 56B*, S140–S150.

Barusch, A. S., & Spaid, W. M. (1989). Gender differences in caregiving: Why do wives report greater burden? *The Gerontologist*, *29*, 667–676.

Billings, A. G., & Moos, R. H. (1984). Coping, stress, and social resources among adults with unipolar depression. *Journal of Personality and Social Psychology*, *46*, 877–891.

Bookwala, J., & Schulz, R. (2000). A comparison of primary stressors, secondary stressors, and depressive symptoms between elderly caregiving husbands and wives: The caregiver health effects study. *Psychology and Aging*, *15*, 607–616.

Bryman, A., & Cramer, D. (2001). *Quantitative data analysis with SPSS release 10 for Windows*. New York: Routledge.

Cabinet Office, Government of Japan, Quality-of-Life Policy Bureau. (2002). *Heisei 13nendo kokumin seikatsu hakusho* [White paper on the national lifestyle] [In Japanese]. Tokyo: Gyosei.

Chang, C. F., & White-Means, S. I. (1991). The men who care: An analysis of male primary caregivers who care for frail elderly at home. *Journal of Applied Gerontology*, *10*, 343–358.

Demura, S., Sato, S., Tada, N., Matsuzawa, J., & Hamasaki, H. (2006). Agreement in depression determination among four self-rating depression scales applied to Japanese community-dwelling elderly. *Health and Preventive Medicine*, *11*, 177–183.

Ducharme, F., Levesque, L., Lachance, L., Zarit, S., Vézina, J., Gangbè, M., & Caron, C. D. (2006). Older husbands as caregivers of their wives: A descriptive study of the context and relational aspect of care. *International Journal of Nursing Studies*, *43*, 567–579.

Gray, D. E. (2003). Gender and coping: The parents of children with high functioning autism. *Social Science & Medicine*, *56*, 631–642.

Harris, P. B., & Long, S. O. (1999). Husbands and sons in the United States and Japan: Cultural expectations and caregiving experiences. *Journal of Aging Studies*, *13*, 241–267.

Honma, A. (1996). Seisinteki syougai (chihou) no hyoukahou to jittai [Development and evaluation of the screening instrument for cognitive impairment and dementia in Japanese older adults community residents] [in Japanese] In Tokyo Metropolitan Institute of Gerontology (Ed.), *Koureisha no kazoku kaigo to kaigo saabisu niizu* (pp. 123–129). Tokyo: Kouseikan.

Houde, S. C., Gautam, R., & Kai, I. (2007). Long-term care insurance in Japan: Implications for U.S. long-term care policy. *Journal of Gerontological Nursing*, *33*, 7–13.

Ihara, K. (1993). Chiikikoureisha no yokuutu joutai to sono kanren youin ni kansuru ekigakuteki kenkyu [Depressive states and their correlates in elderly people living in a rural community] [in Japanese]. *Japanese Journal of Public Health*, *40*, 85–94.

Inoue, T. (2007). *Sekentei no kozo* [The structure of sekentei] [in Japanese]. Tokyo: Kodansha.

Institute for Health Economics and Policy. (2004). *Kateinai ni okeru koureisha gyakutai ni kansuru chousa houkokusho* [A survey of elder abuse in the home] [in Japanese]. Tokyo: Institute for Health Economics and Policy.

Jette, A. M., Tennstedt, S., & Crawford, S. (1995). How does formal and informal community care affect nursing home use? *Journals of Gerontology: Psychological Sciences*, *53B*, S4–S12.

Kajiya, H., Suzuki, M., & Kanamori, M. (2004). Todoufukenbetsu shakai kanren toukei sihyou wo mochiita kaigo hoken service riyou sentaku youin ni kansuru kenkyu [The factor of selections of long-term care insurance services using the statistical indicator associated with society in each prefecture in Japan] [in Japanese]. *Journal of Public Health Practice*, *68*, 651–659.

Kasuga, K. (1997). *Kaigo to gender* [The relationship between care and gender] [in Japanese]. Hiroshima, Japan: Kazokusha.

Kasuga, K. (2003). Chou kourei shakai to kaigo [The relationship between super-aging society and caregiving] [in Japanese]. In M. Tao, S. Nishimura, & A. Fujita (Eds.), *Chou kourei shakai to mukiau* (pp. 143). Nagoya, Japan: University of Nagoya Press.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer.

Little, R. J. A., & Rubin, D. B. (1987). *Statistical analysis with missing data*. Hoboken, NJ: Wiley-Interscience.

Marks, N. F., Lambert, J. D., & Choi, H. (2002). Transitions to caregiving gender and psychological well-being: A prospective U.S. national study. *Journal of Marriage and the Family*, *64*, 657–667.

Midorikawa, J. (1993). Zaitaku shougai roujin no kazoku kaigosha no taisho (coping) ni kansuru kenkyu [A study of coping for family caregivers who care for impaired older adults] [in Japanese]. *Social Gerontology*, *37*, 16–26.

Miller, B. (1990). Gender differences in spouse caregiver strain: Socialization and role explanations. *Journal of Marriage and the Family*, *52*, 311–321.

Ministry of Health, Labour and Welfare. (2004). *Kokumin seikatsu kiso chousa* [Comprehensive survey of living conditions of the people on health and welfare 2004] [in Japanese]. Tokyo: Health & Welfare Statistics Association.

Mui, A. C. (1995). Caring for frail elderly parents: A comparison of adult sons and daughters. *The Gerontologist*, *35*, 86–93.

Murata, Y. (2005). Koureisha short-stay no genjoh to kadai [The current situation and issue of short-stay service for older adults] [in Japanese]. *Health Care*, *47*, 187–191.

National Institute of Population and Social Security Research. (2007). *Jinkou no doukou* [The trend of Japanese population] [in Japanese]. Tokyo: Health & Welfare Statistics Association.

Nishimura, S. (2003). Yutaka nanoka, mazushii noka: Koureisha no keizai joukyo [Wealth or poverty: The economic situation of older adults] [in Japanese]. In M. Tao, S. Nishimura, & A. Fujita (Eds.), *Chou kourei shakai to mukiau* (pp. 47–64). Nagoya, Japan: University of Nagoya Press.

Okabayashi, H., Sugisawa, H., Takanashi, K., Nakatani, Y., & Shibata, H. (1999). Zaitaku shougai koureisha no shu-kaigosha ni okeru taishohouryaku no kouzou to moetsuki he no kouka [The factor structure of coping strategies and their effects on burnout among primary caregivers of impaired older adults] [in Japanese]. *Journal of Psychology*, *69*, 486–493.

Oomoto, K. (1988). Netakiri ro-jin no zaitaku kaigo to kakei kouzou. [Home care and structure of finance for bedfast older adults] [in Japanese]. *Quarterly of Social Security Research*, *24*, 205–220.

Pinquart, M., & Sorensen, S. (2006). Gender differences in caregiver stressors, social resources, and health: An updated meta-analysis. *Journals of Gerontology: Psychological Sciences*, *61*, P33–P45.

Pinquart, M., & Sorensen, S. (2007). Correlates of physical health of informal caregivers: A meta-analysis. *Journals of Gerontology: Psychological Sciences*, *62B*, P126–P137.

Saito, M. (2007). *Danseikaigosha zenkoku chousa* [A nationwide survey of male caregiver in the home] [in Japanese]. Kyoto, Japan: Ritsumeikan University, Institute of Human Sciences.

Stephens, M., Franks, M., & Atienza, A. (1997). Where two roles intersect: Spillover between parent care and employment. *Psychology and Aging*, *12*, 30–37.

Stoller, E. P. (1990). Males as helpers: The role of sons, relatives, and friends. *The Gerontologist*, *30*, 228–235.

Sugisawa, A., Sugisawa, H., Nakatani, Y., Maeda, D., & Shibata, H. (1997). Chiikikoureisha ni okeru sintai sikkan to yokuutsu shoujoh [Evaluation of physical disease and depressive symptom in older adults living in a rural community] [in Japanese]. *Journal of Health and Welfare Statistics*, *44*, 44–48.

Sugiura, K., Ito, M., & Mikami, H. (2004). Zaitaku kaigo no joukyou oyobi kaigo stress ni kansuru kaigosha no seisa no kentou [Evaluation of gender differences of family caregivers with reference to the mode of caregiving at home and caregiver distress in Japan] [in Japanese]. *Japanese Journal of Public Health*, *51*, 240–251.

Sugiura, K., Mikami, H., Ito, M., Adachi, T., Kutsumi, M., Nakashita, Y., Tanigawa, M., & Yamahira, Y. (2002). *Higashi-osaka city ni okeru kyotakukaigo saabisu no riyou ni kansuru ankeeto chousa kekka* [Report of the utilization of in-home care services provided by long-term care insurance in Higashiosaka city in Japan 2002] [in Japanese]. Suita: Osaka University, Division of Health Promotion Science, Nursing Science, Course of Health Science, Graduate School of Medicine.

Sung, K. (2000). An Asian perspective on aging east and west: Filial piety and changing families. In V. L. Bengtson, K. Kim, C. M. George, & K. Eun (Eds.), *Aging in east and west: Families, states, and the elderly* (pp. 45–47). New York: Springer.

Suzuki, H. (2001). *Kazoku-fukushishakai-gaku no genzai* [The current situation of family and welfare sociology] [in Japanese]. Kyoto, Japan: Minerva.

Tsutsui, T., & Muramatsu, N. (2007). Japan's universal long-term care system reform of 2005: Containing costs and realizing a vision. *Journal of the American Geriatrics Society*, *55*, 1458–1463.

Ueda, T., Hashimoto, M., Goto, H., Nakazono, N., & Kosaka, M. (1993). Zaitaku shougairoujin no shisetsu nyuusho ni kansuru kaigokazoku no kibou to sono kanrenyouin [Correlates associated with desire by caregivers to transfer older adults from home care to institutions] [in Japanese]. *Japanese Journal of Public Health*, *40*, 1101–1110.

Yamada, M. (1997). *Mikonkashakai no oyako kankei* [The filiation of the situation of increased unmarried people] [in Japanese]. Tokyo: Yuhikaku.

Yamada, Y., Sugisawa, H., Sugihara, Y., Fukaya, T., & Nakatani, Y. (2006). Haiguusha to shiteno koureisha kaigo stress—seisa he no chakumoku [Caregiving stress among older spouse caregivers—In consideration of gender differences] [in Japanese]. *Japanese Journal of Social Welfare*, *46*, 16–27.

Yamato, R. (2006). Changing attitudes towards elderly dependence in postwar Japan. *Current Sociology*, *54*, 273–291.

Yatomi, N., Liang, J., Krause, N., & Akiyama, H. (1993). CES-D ni yoru nihon-rojin no utsu shoujou no sokutei [The evaluation of depressive symptoms in Japanese older adults using CES-D] [in Japanese]. *Social Gerontology*, *37*, 37–47.

Yee, J. L., & Schulz, R. (2000). Gender differences in psychiatric morbidity among family caregivers: A review and analysis. *The Gerontologist*, *40*, 147–164.

Received January 28, 2008
Accepted August 14, 2008
Decision Editor: Kenneth F. Ferraro, PhD