


# Differences in Outcomes of Caregiver Support Services for Male and Female Caregivers

SAGE Open  
July-September 2014: 1–10  
© The Author(s) 2014  
DOI: 10.1177/2158244014548169  
sgo.sagepub.com  


Ya-Mei Chen<sup>1</sup>

## Abstract

The objective of this study is to determine whether different types of caregiver support services are associated with different outcomes for male and female caregivers. Information was obtained on 148 caregivers' use of three types of support services provided by government-contracted agencies: counseling and education services, respite and supplemental services, and financial services. Five caregiver outcomes were included. Use of counseling and education services and financial services was associated with better caregiver outcomes in female caregivers, but not male caregivers. Among caregivers using respite and supplemental types of services, male caregivers showed better outcomes than did female caregivers. Female caregivers who used respite and supplemental services showed worse outcomes in caregiver mastery and caregiver satisfaction than those who did not use the services. Male and female caregivers responded differently to the caregiver support service. Providing female caregivers with counseling services along with respite services may result in added benefits for female caregivers.

## Keywords

long-term care service, development management, social sciences, social issues in management, environmental management, sociological practice, sociology, gender differences, policy

## Introduction

An estimated 65.7 million Americans function as informal caregivers of ill or disabled individuals, and more than 3 in 10 U.S. households (31.2%; 36.5 million households) report being served by an unpaid family caregiver. Among these caregivers, 7 in 10 take care of someone 50 years of age or older (AARP, 2009). Caregivers are predominantly female (66%; AARP, 2004, 2009; Coleman & Pandya, 2002). Research has shown differences among populations of male and female caregivers, such as in the types of care they provide to their care recipients. For example, The National Alliance for Caregiving survey has reported that male caregivers are less likely to provide personal care (AARP, 2009). Male and female caregivers also experience caregiving differently (AARP, 2009; de Cordova et al., 2010; Kao, 2003; Kao & McHugh, 2004; Lawrence, Goodnow, Woods, & Karantzas, 2002; Navaie-Waliser, Spriggs, & Feldman, 2002; Vitaliano et al., 2002; Vitaliano, Zhang, & Scanlan, 2003; Wallsten, 2000).

One study using a cross-sectional design interviewed 1,002 randomly selected and nationally representative caregivers and found that female caregivers were significantly more likely to be better educated and unemployed; to provide more intensive and complex care; to have difficulty balancing care provision with other family and employment responsibilities; to suffer from poorer emotional health secondary to

caregiving; and to cope with caregiving responsibilities by forgoing respite and by engaging in increased religious activities (Navaie-Waliser et al., 2002). Studies have also shown that female caregivers, compared with male caregivers, perceive caregiving as more burdensome (Kao, 2003; Kao & McHugh, 2004; Kramer & Kipnis, 1995; Lawrence et al., 2002; Lutzky & Knight, 1994; Nagatomo et al., 1999; Wallsten, 2000) and report higher levels of depression and anxiety and lower levels of subjective well-being (AARP, 2004; Johnson & Wiener, 2006; Yee & Schulz, 2000). Female caregivers who provide 36 or more hours per week of care to a spouse have been shown to have a dramatic increase in risk of mental health problems (Cannuscio et al., 2002). Vitaliano et al. (2002) also found that different factors may result in distress at different times for male and female caregivers. For female caregivers, distress (e.g., burden or sleep problems) resulted directly from the caregiving tasks and lack of social resources. For male caregivers, vulnerability was a factor that resulted in distress initially, while lack of social resources

<sup>1</sup>National Taiwan University, Taipei, Taiwan, Republic of China

## Corresponding Author:

Ya-Mei Chen, Assistant Professor, Institute of Health Policy and Management, College of Public Health, National Taiwan University, Room 633, No. 17, Xu-Zhou Road, Taipei, Taiwan 100, Republic of China.  
Email: chenymeai@ntu.edu.tw



became more important later, resulting in higher distress (Vitaliano et al., 2002).

The older population in the United States is fast increasing, and the caregiver support ratio (The ratio of the population aged 45-64 to the population aged above 80) will plummet when the first baby boomers begin turning 80, the age at which the need for long-term care support increases. The Federal Commission on Long-Term Care has taken an important step to elevate family caregiving as a public issue that can no longer be ignored and to call for research on caregiver interventions to see what supportive services work best and for whom (Redford, Feinberg, & Houser, 2013). Although the magnitude of effects of caregiver support interventions found in the literature is inconsistent, research studies have shown positive effects and that different interventions are associated with different outcomes for caregivers (Cassie & Sanders, 2008; Chen, Hedrick, & Young, 2009; Lopez-Hartmann, Wens, Verhoeven, & Remmen, 2012; Mason et al., 2007; Shaw et al., 2009). However, most studies have focused only on evaluating the effects of caregiver interventions and have not addressed the commission's call to explore the usefulness of different services to different populations of caregivers. To begin to answer this call, in the aim of understanding how different characteristics among caregivers are associated with the outcomes of particular caregiver interventions, the current study explores how male and female caregivers respond to support services. We hope our study findings may be helpful to future development of caregiver support services.

Most research studies have examined caregiver related intervention as a monolithic category or have assessed only one particular outcome, such as caregiver burden (Brodaty, Green, & Koschera, 2003; Burns, Nichols, Martindale-Adams, Graney, & Lummus, 2003; Gallagher-Thompson et al., 2003; Lee & Cameron, 2004; Maas et al., 2004; Newcomer, Yordi, DuNah, Fox, & Wilkinson, 1999; Roberts et al., 1999; Toseland, Blanchard, & McCallion, 1995; Zank & Schacke, 2002). Only a few studies have used multiple measures to examine caregiver support service outcomes. Chen and colleagues developed and tested an evaluation tool to assess multiple outcomes to evaluate different caregiver support services. Their study findings showed that different caregiver support services are associated with different caregiver outcomes (Chen et al., 2009). The current study used the multiple outcome measurements used in Chen and colleagues' study, and further investigated whether different services were associated with different outcomes for male versus female caregivers.

### **Purpose of Study**

The purpose of this study was to determine whether different types of caregiver support services are associated with different caregiver outcomes for male versus female caregivers. We collaborated with Aging and Disability Services (ADS),

the local Area Agency on Aging (AAA) in Seattle, Washington, in a pilot study that evaluated a federally funded and state-funded project, the Family Caregiver Support Program (FCSP), in King County in Washington State. In this region, the FCSP provides various services to caregivers and their care recipients, including adult day care, in-home respite, information services, and financial assistance to caregivers (ADS, 2003).

## **Method**

### **Design, Setting, and Participants**

This study was a descriptive, one-time survey of caregivers living in King County who were reported as having received services from local service agencies of ADS. Four local service agencies agreed to send out an invitation letter and questionnaire to all caregivers who had received FCSP-funded services. The University of Washington Human Subjects Division approved this study.

### **Data Collection Method**

For this study, each agency sent each of their caregiver clients a cover letter, a questionnaire, and a postage-paid return envelope addressed to ADS. To protect client confidentiality, the questionnaires were anonymous, and no follow-up occurred. A total of 866 survey packets were sent out, and 177 questionnaires (20.4%) were returned.

### **Measurements**

The FCSP is a program with multiple components, which include various types of services, and it is likely that caregivers' experiences with the program are multifaceted as well (Van Houtven, Voils, & Weinberger, 2011). The tool used in the current study, the Aging and Disability Services-Caregiver Appraisal Scale (ADS-CAS), assessed multiple aspects of the caregiver experience. The ADS-CAS is based on Lawton and Brody's (1969) Caregiver Appraisal Scale (CAS) for the appropriateness of its language and its coverage of the broad scope of relevant caregiver experiences (Vitaliano, Young, & Russo, 1991). The CAS was developed on the basis of both successful scientific evidence and hands-on experience. The details of the process of developing the ADS-CAS were described in Chen (2009).

The ADS-CAS includes three subscales: Subjective Burden (e.g., "Your health has suffered because of the care you must give to care receiver" or "Very tired as a result of caring for care receiver"), Caregiving Mastery (e.g., "I can fit in most of the things I need to do in spite of the time taken by caring for care receiver"), and Caregiving Satisfaction (e.g., "Helping care receiver has made me feel closer to him/her" or "Care receiver shows real appreciation of what I do for her/him"). The ADS-CAS consists of 34 items, with 13

items, 12 items, and 9 items each for the Subjective Burden, Caregiving Mastery, and Caregiving Satisfaction subscales, respectively.

Participants responded to each item on the ADS-CAS based on a 5-point scale, from *rarely or never* (1) to *most of the time* (5). Higher total and subscale scores represent more positive appraisals, except for the Subjective Burden subscale, where higher scores indicate higher perceived subjective burden.

In addition to the three subscales, the ADS-CAS also surveys information about caregivers' age, gender, and relationship to the care recipient; the types of care provided; and the types of caregiver support services used by the caregivers. Agencies reported providing a list of services, including (a) information about services, (b) assistance in accessing services, (c) caregiver counseling, (d) caregiver education and training, (e) financial assistance, (f) respite services/adult day care, (g) help with housework, (h) delivered meals, (i) transportation, and (j) cash support. Caregivers were asked in the survey whether they had used each of these services. These 10 types of caregiver support services were further grouped in three categories: (a) counseling and education services, (b) respite and supplemental services, and (c) financial support services. The counseling and education services category includes information about services, assistance in accessing services, caregiver counseling, and caregiver education and training. The respite and supplemental services category includes respite services/adult day care, help with housework, delivered meals, and transportation. The financial support services category includes financial assistance and cash support for caregiving. A general service satisfaction question is also included in the ADS-CAS, with a 4-point scale response: *poor* (1), *fair* (2), *good* (3), or *excellent* (4).

After reverse coding and multiple imputation, Cronbach's alphas for the ADS-CAS were .90. The power to detect statistically significant differences between male caregivers and female caregivers was .72, and the power to detect differences between caregivers who reported having used at least one service and those who reported not using any service was .51 and .57 for male and female caregivers, respectively. Details of the psychometric properties of ADS-CAS were reported in Chen (2009).

### Data Analysis

Data analyses were conducted using the Statistical Package for the Social Sciences (SPSS-PC, Version 16.0). Prior to analyzing the data, all items were examined to assess the accuracy of variable calculations and missing values. If variables were missing at a rate larger than 5%, multiple imputation was applied (Rubin, 1977; Schafer, 1997, 1999, 2000).

Descriptive analyses were used to depict the characteristics of the caregivers and the support services they used. Three steps were included in the evaluation method. First, we examined the gender differences in care provided and

services used using the *t* test. Second, we conducted MANCOVA to examine gender difference, comparing ADS-CAS scores between male and female caregivers (a) who reported using any of the 10 caregiver support services, and (b) who had used only one of the three categories of services. Third, we conducted MANCOVA to examine gender differences by stratifying male and female caregivers and comparing their appraisals in the following categories: (a) among those who reported using any of the 10 services versus those who did not; and (b) among those who used only one of the three categories of services versus those who did not use that particular service category. (For example, caregivers who had used services in the financial services category only and no services from other categories were compared with caregivers who reported they had not used any services from the financial services category. Caregivers who were "nonusers" in one category may have used services in other categories, or may have reported not using any services at all.) As recommended by Chen (2010), analysis is focused on categories of service because analyses of individual types of service and of the three service categories revealed similar findings.

Caregivers' age and the number of caregiving activities they provided were controlled as covariates. The outcome measures were (a) the item mean of the ADS-CAS; the item means of each of the three subscales of the ADS-CAS: (b) Subjective Burden, (c) Caregiving Mastery, and (d) Caregiving Satisfaction; and (e) the caregivers' satisfaction with the services they used.

### Results

The survey response rate was 20.4% (177 questionnaires out of 866). Five of the questionnaires were returned blank, and two were returned with no information on ADS-CAS but text information regarding their suggestions for future service development only. Furthermore, six of the responding caregivers stated that they were not providing any care at this point, and 16 did not specify their gender. As a result, only 148 questionnaires were entered for quantitative data analysis. About 81.7% of the responding caregivers were female ( $n = 121$ ), and 18.2% were male ( $n = 27$ ). Their ages ranged from less than 20 to more than 81 years old, with an average age of 57. The average age of male caregivers (65.3 years) was significantly older than the average age of female caregivers (56.4 years). The majority of responding caregivers stated that they were caring either for a spouse/partner (48.8%) or for elderly parents (41.2%). Male caregivers were more likely to care for a spouse/partner (64.3%) than for elderly parents (32.1%), whereas a relatively equal percentage of female caregivers were caring for a spouse/partner (39.2%) and for elderly parents (40.0%; see also Table 1).

About 70% of caregivers provided personal care, 98.2% provided at least one type of instrumental activities of daily living (IADL) care, and 86.6% provided at least three types of IADL care. Caregivers provided from 1 to 10 types of care

**Table 1.** Care Provided by Caregivers.

	Gender differences		Significance
	Male % (n = 27)	Female % (n = 121)	
Age	65.3 (SD = 1.60)	56.4 (SD = 1.46)	.01*
Hours of caregiving per week	46.29 (SD = 37.53)	78.26 (SD = 62.80)	.01*
Care provided by family caregivers			
Personal care	66.7	70.2	.72
Safety/supervision	70.4	72.7	.81
Housekeeping	74.1	77.7	.69
Meal preparation	74.1	75.2	.90
<b>Medication monitoring</b>	<b>92.6</b>	<b>76.9</b>	<b>.02*</b>
Transportation	74.1	85.1	.24
Shopping	70.4	77.7	.42
Financial management	77.8	83.5	.49
Standby help	55.6	63.6	.44

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

to their care recipients, with an average of 6.8 ( $SD = 2.24$ ). About one third provided all 10 kinds of caregiving activities listed in the questionnaire. Male and female caregivers provided an average of 6.6 ( $SD = 2.17$ ) and 6.8 ( $SD = 2.28$ ) types of care to their care recipients, respectively. The most common type of care provided by male and female caregivers was different. The most common types of care provided by male caregivers were medication monitoring (92%) and financial management (77.8%); the most common types of care provided by female caregivers were transportation (85.1%) and financial management (77.7%). The percentage of caregivers providing medication monitoring was significantly higher among male caregivers than female caregivers ( $p < .05$ ). Among male caregivers, 92.6% provided medication monitoring, whereas only 76.9% of women provided such care to their care receivers. The average number of caregiving hours that the caregivers had spent in the previous week was 73.54 hr ( $SD = 60.17$ ), with an average of 46.29 hr ( $SD = 37.53$ ) for male caregivers and 78.26 hr ( $SD = 62.80$ ) for female caregivers ( $p < .05$ ). Forty-three percent of male caregivers provided more than 50 hr of care in the previous week, whereas almost 58% of female caregivers provided more than 50 hr of care in the week preceding the survey.

Caregivers reported using a range of zero to seven ADS caregiver support services, with an average of 1.9 ( $SD = 1.54$ ). Male and female caregivers used an average of 1.8 ( $SD = 1.47$ ) and 1.9 ( $SD = 1.46$ ) types of support services, respectively. The services most commonly used by male and female caregivers were information services (44.4% in male caregiver vs. 54.5% in female caregivers) and respite services (33.3% in male caregivers vs. 28.1% in female caregivers). The percentage of female caregivers receiving cash to support caregiving was significantly higher than male caregivers ( $p < .05$ ). Five male caregivers (18.5%) and 16 female caregivers (13.2%) stated that they had not used any services,

even though all the caregivers surveyed had been identified by agencies as service recipients.

### Gender Differences in the Scores of ADS-CAS

Both male and female caregivers reported moderate levels of subjective burden, caregiver mastery, caregiver satisfaction, and service satisfaction. After controlling for caregivers' age and the number of care activities provided, there were no differences between male caregivers and female caregivers in the ADS-CAS measures or satisfaction toward services, with one exception: Male caregivers perceived a lower subjective burden than did female caregivers ( $p < .05$ ; see Table 2).

### Gender Differences in the Scores of ADS-CAS Among Users

A comparison of male and female caregivers' ADS-CAS scores among those who reported using at least one type of support services (from here on referred to as *caregiver users* vs. *nonusers*) revealed similar information as findings reported above that male caregiver users, compared with female caregiver users, perceived significantly lower subjective burden ( $p < .05$ ). When male and female ADS-CAS scores were compared by service category among those caregivers who used a particular category of support services, the data showed that male caregivers who used respite and supplemental services reported better outcomes than did the female caregivers who used the same service. Better outcomes for male caregivers were found in several categories, including better ADS-CAS score ( $p < .01$ ), less subjective burden ( $p < .01$ ), better caregiving satisfaction ( $p < .05$ ), and better satisfaction toward the support services used ( $p < .05$ ). For the caregivers who used counseling and education services, there were no differences between male and female



**Table 2.** Item Means of the ADS-CAS Scale and Subscales ( $N = 148$ ).

	Minimum	Maximum	M (SD)		Significance ( $p$ value)
			Male	Female	
Caregiver Appraisal Scale	1	5	3.75 (0.57)	3.58 (0.62)	.49
<b>Subjective burden</b>	<b>1</b>	<b>5</b>	<b>2.07 (0.67)</b>	<b>2.42 (0.80)</b>	<b>.049*</b>
Caregiver mastery	1	5	3.60 (0.74)	3.59 (0.68)	.92
Caregiver satisfaction	1	5	3.68 (0.62)	3.57 (0.75)	.47
Service satisfaction	1	4	3.15 (0.77)	2.95 (0.66)	.45

Note. Controlled for caregivers' age and number of caregiving activities provided. ADS-CAS = Aging and Disability Services–Caregiver Appraisal Scale.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Table 3.** MANCOVA Results: Marginal Mean Differences Between Male and Female Users of a Single Service Category.

Service	M	F	CAS	SB	CM	CS	SS
Claimed use at least one services	<b>22</b>	<b>105</b>	<b>9.35</b>	<b>−6.29***</b>	0.94	2.12	0.27
Counseling and education services	7	54	−2.21	−1.40	−3.10	−0.50	−0.31
Respite and supplemental services	7	17	<b>24.83**</b>	<b>−14.31**</b>	4.73	<b>5.79*</b>	<b>0.73*</b>
Financial support services	0	2	X	X		X	X

Note. Controlled for caregivers' age and number of caregiving activities they provided. CAS = Caregiver Appraisal Scale; SB = Subjective Burden; CM = Caregiver Mastery; CS = Caregiver Satisfaction; SS = Service Satisfaction.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ . (Male users' scores − Female users' scores)

caregiver users' outcomes. No male caregivers used financial support services, so outcomes for this category of support services were not compared between male and female caregivers (see Table 3).

### Gender Differences in Mean Scores of Outcome Measures (ADS-CAS) Between Users and Nonusers of Services

Further analysis of use of caregiver support services between users and nonusers of services revealed different outcomes for male and female caregivers. Use of family caregiver support services seemed to result in more significant effects for female caregivers than for male caregivers (see Table 3). After controlling for caregivers' age and the number of care activities provided, female caregivers who used at least one type of service showed significantly lower scores in ADS-CAS ( $p < .01$ ), caregiver mastery ( $p < .05$ ), and caregiver satisfaction ( $p < .05$ ) than did female caregivers not using any service. For male caregivers, those who used at least one type of service showed no difference in outcomes from those who did not use any service.

An analysis of service categories revealed additional statistically significant relationships. The female caregivers who used services in the counseling and education category only perceived less subjective burden ( $p < .05$ ) than did other female caregivers. Female caregivers who used only respite and supplemental services showed lower caregiver mastery ( $p < .05$ ) and caregiver satisfaction ( $p < .05$ ) than did those

not using respite services. Last, female caregivers who used only financial support services showed better appraisals (higher total scores) on the ADS-CAS ( $p < .01$ ), and perceived greater caregiver mastery ( $p < .05$ ) and caregiver satisfaction ( $p < .01$ ) than did those caregivers not using any financial support services (Table 4). The results of our analyses are presented in Table 4 as mean score differences between users of services and nonusers, and between users of a single service category and nonusers of that same service category.

## Discussion

The different findings reported by male and female caregivers adds to the growing body of research in caregiving support and provides suggestions for further service development for male and female caregivers. In the current study, male and female caregivers provided different types of care to their care recipients and used different types of caregiver support services. After controlling for caregivers' age and the number of caregiving activities provided, the findings from the current study reveal that gender differences played a role in caregiver appraisals. Chen (2009) reported that use of different services was associated with different levels of caregiver appraisal, and findings from the current study provide further information regarding gender differences in caregiver appraisals. In the following sections, we further discuss the different outcomes associated with male and female caregivers' use of different caregiving support services.

**Table 4.** MANCOVA Results: Marginal Mean Differences Between Male and Female Caregiver Service Users of Any Services and Nonusers, and Users of a Single Service Category and Nonusers of That Service Category (Male = 27; Female = 121).

Service category	Gender	n		Caregiver Appraisal Scale				
		User	Nonuser	CAS	SB	CM	CS	SS
Claimed use or nonuse of services	M	22	5	12.80	6.91	2.62	3.25	0.43
	F	105	16	<b>-10.60**</b>	-0.47	<b>-5.55*</b>	<b>-4.60*</b>	-0.06
Counseling and education services	M	7	20	-0.12	0.00	-2.93	-1.07	-0.59
	F	54	67	0.15	<b>-4.55*</b>	0.67	0.99	-0.04
Respite and supplemental services	M	7	20	0.36	-5.19	<b>4.49*</b>	2.22	0.57
	F	17	104	-0.27	4.36	<b>-1.07**</b>	<b>-3.82*</b>	-0.15
Financial support services	M	0	20	X	X		X	X
	F	2	119	<b>0.80**</b>	-10.03	<b>12.67*</b>	<b>6.48**</b>	0.05

Note. Controlled for caregivers' age and number of caregiving activities they provided. CAS = Caregiver Appraisal Scale; SB = Subjective Burden; CM = Caregiver Mastery; CS = Caregiver Satisfaction; SS = Service Satisfaction.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ . (Users' scores - nonusers' scores)

### Counseling and Education Services

Female caregivers seemed to benefit more than male caregivers from using counseling and education services. In the current study, female caregivers' subjective burden tended to be higher than that reported by male caregivers, consistent with reports from other studies that female caregivers perceived greater strain and burden from caregiving than did male caregivers (Kao, 2003; Kao & McHugh, 2004; Kramer & Kipnis, 1995; Lawrence et al., 2002; Nagatomo et al., 1999; Wallsten, 2000; Zahid & Ohaeri, 2010). This trend remained among the caregivers in the current study who used at least one type of support service and among those who used respite and supplemental services but not any other type of service. However, the discrepancy between male and female caregivers' perceived subjective burden becomes nonsignificant among caregivers who used counseling and education category only. Further analysis revealed that female users of counseling and education category only reported a significantly lower subjective burden ( $p < .05$ ) than female nonusers, but no differences were found between male users and nonusers. These findings could indicate that use of counseling and education services is beneficial for female caregivers, while the effect of using such services for male caregivers is less obvious. Research findings have shown that counseling and education services are effective in helping caregivers deal with their own psychological needs and improve their relationships with care recipients (Brodaty et al., 2003; Burns et al., 2003; Coon, Thompson, Steffen, Sorocco, & Gallagher-Thompson, 2003). The findings in the current study support this previous research and further indicate gender differences in outcomes of using counseling and education services with further empirical evidences.

It is also important to note the possibility that female caregivers who already perceive less burden may be more likely to use this type of service. Those caring for a recipient with more severe disabilities and those who have fewer sources of

caregiving help may perceive a higher burden and therefore have less energy to use counseling and education services (Markle-Reid & Browne, 2001; Toseland, McCallion, Gerber, & Banks, 2002). However, a recent caregiver report (AARP, 2009) showed that female caregivers who provided care for more than 21 hr a week and who perceived a higher caregiver burden were more likely to use counseling and education services. The report also pointed out that female caregivers are more likely than male caregivers to provide intensive care and provide many hours of care (AARP, 2009). Therefore, the findings from the current study may indicate that female caregivers, more than male caregivers, become more aware of their needs and seek counseling and education services to support themselves to survive as caregivers. Further study to establish a stronger causal inference is merited.

### Respite and Supplemental Services

Although male caregivers did not seem to benefit as much as female caregivers from using counseling and education services, they did seem to benefit from using respite and supplemental services. Among caregivers using respite and supplemental services, male caregivers had higher scores on the ADS-CAS, lower subjective burden, higher caregiver satisfaction, and higher satisfaction toward the services they used than female caregivers. In addition, male caregiver users of respite and supplemental services showed better caregiver mastery than male caregivers who did not use these services. What we did not expect was that female caregiver users of respite and supplemental services showed worse caregiver mastery and caregiver satisfaction than did female caregivers not using these services.

These findings could indicate that male caregivers enjoy using respite services as a means of recharging themselves, whereas female caregivers do not. If this is true, it could be due to traditional role expectations for female caregivers.

Female caregivers are expected to be able to provide care and comfort to their families (Navaie-Waliser et al., 2002). Using respite services might make female caregivers perceive themselves as incompetent. Providing female caregivers with extra counseling services along with respite services may result in added benefits for female caregivers (Cox, 1997). Chen (2010) reported that caregivers who used respite and supplemental services did not report any more positive caregiver appraisals than nonusers did. The current study's findings further indicate that male caregivers, but not female caregivers, who use respite and supplemental services do report more positive caregiver appraisals.

### *Financial Support Services*

Female caregiver users of financial support services reported higher scores on the ADS-CAS, higher caregiver mastery, and higher service satisfaction than nonusers of such services. There were no male caregivers in this study who used this type of service. It could be that male caregivers are more likely than female caregivers to be employed (AARP, 2004). The Organisation for Economic Co-Operation and Development (2011) reported evidence that caregiving leads to lower wages, especially for female caregivers (Organisation for Economic Co-Operation and Development, 2011). Therefore, male caregivers may be more financially stable; they may not need financial support services or may not even be eligible to receive it. However, female caregivers are more likely to need financial support services and may, therefore, benefit more from this type of service. Providing financial services to caregivers is likely to offer them the opportunity to focus on their caregiving activities and to develop higher confidence and satisfaction.

Feminist theory suggests that women have traditionally been cast in the role of caregiver, as a result of traditional gender roles and rigid family structures in which women have been socialized to be responsible for various tasks (Baines, Evans, & Neysmith, 1991). From a feminist point of view, providing financial support to caregivers could further encourage women to fulfill their role as caregivers, and thus perpetuate women's oppression (Mackinnon, 2009). Our findings, showing better caregiver outcomes among female caregivers who received financial support services, provide empirical evidence that female caregivers perceive higher confidence and satisfaction rather than oppression when receiving financial support.

However, we should not ignore another possible explanation—that the caregivers who were able to gain access to financial support funds were competent users of the system who already had higher caregiving mastery and total ADS-CAS scores. Financial support for caregivers is a relatively new service that has been developed in the last 15 years (Doty, Jackson, & Crown, 1998). A limited number of research studies have examined the effect of financial support services for caregivers, and none has looked how gender

differences influence use of these services (Eckert, Morgan, & Swamy, 2004; Mahoney, Simon-Rusinowitz, Loughlin, Desmond, & Squillace, 2004). The findings of this study encourage further investigation of the cost-effectiveness of providing financial support services to caregivers.

Furthermore, although eligibility criteria may prevent male caregivers from using financial support services, both the current study and a national caregiver survey report showed that male caregivers are more likely than female caregivers to help their care recipients with financial management (AARP, 2009). Exploring the possibility that factors other than financial eligibility prevent male caregivers from receiving financial support services could be important for future research studies.

### *Limitations*

Several methodological issues limit the findings in this study. The cross-sectional design made it impossible to draw causal inferences. The long and variable time between the time caregivers received services and the time they responded to the ADS-CAS is a threat to validity. We recommend that future studies add a variable to assess the time between service use and survey response. Moreover, past research has found that caregivers' perceptions of distress may be influenced by different factors at different stages of caregiving (Vitaliano et al., 2002). Therefore, a longitudinal follow-up would help to determine the optimal time to provide certain kinds of services, and this information would be valuable for future policy making.

Another limitation of this study was the low response rate of 20.4%. We have explored potential reasons for the low response rate. The first challenge is the fact that many caregivers do not self-identify with the term *caregiver*. That is possibly why five questionnaires were returned blank. Self-identification has been a recurring theme and challenge for implementing and evaluating family caregiver supports in the United States (Feinberg & Newman, 2006). The low response rate may also have to do with the substantial length of the ADS-CAS questionnaire. Jepson and colleagues (2005) studied the correlation between response rates and questionnaire length and suggested that questionnaires above a threshold of 1,000 words have lower response rates. Our survey questionnaire was over 5,000 words, even after we removed two subscales from the CAS.

Detailed information about care recipients was not collected for the length of our questionnaire. This may limit the generalizability of the study findings. We believe that the characteristics of caregivers in the current study may be close to the general caregiver population; the caregiver demographics in the current study show similar composition of age, gender, and number of services provided and received compared with caregiver demographics in the National Family Caregiver Study (AARP, 2004). There may well be differences in other variables, of course. Increasing the

response rate in future work will be important and can be addressed by further decreasing the length of the questionnaire. Other methods that might increase the response rate in future studies include offering incentive payments, or performing follow-up.

Finally, the power to detect statistically significant differences between male caregivers and female caregivers in this study was lower than .80. This could be due to the limited number of male caregivers who responded to our survey. With further analysis, we found that if the number of male caregivers who claimed to receive services increased from 27 to 30, the statistical power to detect gender differences in caregivers' experiences of using caregiver support service would reach .81. Also, if the number of male and female service nonusers increased to 17 and 36, the power to detect differences between service users and nonusers would increase and exceed .80 for both male and female caregivers. The number of male caregivers who responded to our survey was only about one fifth of our total study sample, which is a little less than the proportion of male caregivers surveyed in the AARP (2004) family caregiver survey. Although information from male caregivers was limited, the message conveyed through our study findings are still valuable for future family caregiver support services, especially for developing gender-sensitive services. For future studies, oversampling of male caregivers is recommended.

## Conclusion

This study found gender differences in caregiver appraisal scores that add to the growing body of research in caregiver support and provide suggestions for further service development. Not only did male and female caregivers report differences in caregiving activities and use of support services but also responded differently to the support services they used. The current study findings could shed some light on future service development for caregivers of different genders. The study's findings can also serve as a basis for more rigorous future evaluations of caregiver support services.

## Acknowledgments

The author greatly appreciates the support and advice of Rosemary Cunningham, Margaret Casey, and all of the team members on the Family Caregiver Support Program at Aging and Disability Services. The author would also like to extend her gratitude to Senior Services, the Evergreen Healthcare-Geriatric Regional Assessment Team, the Northshore Senior Center, and the Kin on Community Caregiver Network-Caregiver Support; their gracious help made this study possible. The author is also very grateful for having great support from Dr. Health Young and Dr. Susan Hedrick.

## Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Funding

The author(s) received no financial support for the research and/or authorship of this article.

## References

- AARP. (2004). *Caregiving in the U.S.: National Alliance for Caregiving and AARP*. Washington, D. C.
- AARP. (2009). *Caregiving in the U.S.: National Alliance for Caregiving and AARP*. Washington, D. C.
- Aging and Disability Services. (2003). *Cash and counseling pilot project*. Seattle, WA: Author.
- Baines, C., Evans, P., & Neysmith, S. (1991). *Women's Caring*. Toronto: McClelland & Stewart.
- Brodsky, H., Green, A., & Koschera, A. (2003). Meta-analysis of psychosocial interventions for caregivers of people with dementia. *Journal of the American Geriatrics Society*, 51, 657-664.
- Burns, R., Nichols, L. O., Martindale-Adams, J., Graney, M. J., & Lummus, A. (2003). Primary care interventions for dementia caregivers: 2-year outcomes from the REACH study. *Gerontologist*, 43, 547-555.
- Cannuscio, C. C., Jones, C., Kawachi, I., Colditz, G. A., Berkman, L., & Rimm, E. (2002). Reverberations of family illness: A longitudinal assessment of informal caregiving and mental health status in the Nurses' Health Study. *American Journal of Public Health*, 92, 1305-1311.
- Cassie, K. M., & Sanders, S. (2008). Familial caregivers of older adults. *Journal of Gerontological Social Work*, 50(Suppl. 1), 293-320. doi:10.1080/01634370802137975
- Chen, Y. M., Hedrick, S. C., & Young, H. M. (2009). A pilot evaluation of the Family Caregiver Support Program. *Evaluation and Program Planning*, 33(2), 113-119.
- Coleman, B., & Pandya, S. M. (2002). *Family caregiving and long-term care*. Washington, DC: AARP Public Policy Institute.
- Coon, D. W., Thompson, L., Steffen, A., Sorocco, K., & Gallagher-Thompson, D. (2003). Anger and depression management: Psychoeducational skill training interventions for women caregivers of a relative with dementia. *Gerontologist*, 43, 678-689.
- Cox, C. (1997). Findings from a statewide program of respite care: A comparison of service users, stoppers, and nonusers. *Gerontologist*, 37, 511-517.
- de Cordova, M. I., Mier, N., Curi, E. J., Gomez, T. G., Quirarte, N. H., & Barrios, F. F. (2010). Personal and social determinants of health services utilization by Mexican older people. *International Journal of Older People Nursing*, 5, 193-201.
- Doty, P., Jackson, M. E., & Crown, W. (1998). The impact of female caregivers' employment status on patterns of formal and informal eldercare. *Gerontologist*, 38, 331-341.
- Eckert, J. K., Morgan, L. A., & Swamy, N. (2004). Preferences for receipt of care among community-dwelling adults. *Journal of Aging & Social Policy*, 16(2), 49-65.
- Feinberg, L. F., & Newman, S. L. (2006). Preliminary experiences of the states in implementing the National Family Caregiver Support Program: A 50-state study. *Journal of Aging & Social Policy*, 18(3-4), 95-113.
- Gallagher-Thompson, D., Coon, D. W., Solano, N., Ambler, C., Rabinowitz, Y., & Thompson, L. W. (2003). Change in indices of distress among Latino and Anglo female caregivers of elderly relatives with dementia: Site-specific results from



- the REACH national collaborative study. *Gerontologist*, 43, 580-591.
- Jepson, C., Asch, D. A., Hershey, J. C., & Ubel, P. A. (2005). In a mailed physician survey, questionnaire length had a threshold effect on response rate. *J Clin Epidemiol*, 58(1), 103-105.
- Johnson, R. W., & Wiener, J. M. (2006). *A profile of older Americans and their caregivers*. Washington, DC: The Urban Institute.
- Kao, H. F. (2003). Institutionalization in Taiwan. The role of caregiver gender. *Journal of Gerontological Nursing*, 29(10), 12-21.
- Kao, H. F., & McHugh, M. L. (2004). The role of caregiver gender and caregiver burden in nursing home placements for elderly Taiwanese survivors of stroke. *Research in Nursing & Health*, 27, 121-134. doi:10.1002/nur.20007
- Kramer, B. J., & Kipnis, S. (1995). Eldercare and work-role conflict: Toward an understanding of gender differences in caregiver burden. *Gerontologist*, 35, 340-348.
- Lawrence, J. A., Goodnow, J. J., Woods, K., & Karantzas, G. (2002). Distributions of caregiving tasks among family members: The place of gender and availability. *Journal of Family Psychology*, 16, 493-509.
- Lawton, M. P., & Brody, E. M. (1969). Assessment of older people; self-maintaining and instrumental activities of daily living. *Gerontologist*, 9(179-186).
- Lee, H., & Cameron, M. (2004). Respite care for people with dementia and their carers. *Cochrane Database Syst Rev* (2), CD004396. doi:10.1002/14651858.CD004396.pub2
- Lopez-Hartmann, M., Wens, J., Verhoeven, V., & Remmen, R. (2012). The effect of caregiver support interventions for informal caregivers of community-dwelling frail elderly: A systematic review. *International Journal of Integrated Care*, 12, e133.
- Lutzky, S. M., & Knight, B. G. (1994). Explaining gender differences in caregiver distress: The roles of emotional attentiveness and coping styles. *Psychology and Aging*, 9, 513-519.
- Maas, M. L., Reed, D., Park, M., Specht, J. P., Schutte, D., Kelley, L. S., . . . Buckwalte, K. C. (2004). Outcomes of family involvement in care intervention for caregivers of individuals with dementia. *Nursing Research*, 53, 76-86.
- Mackinnon, C. J. (2009). Applying feminist, multicultural, and social justice theory to diverse women who function as caregivers in end-of-life and palliative home care. *Palliative & Supportive Care*, 7, 501-512. doi:10.1017/S1478951509990514
- Mahoney, K. J., Simon-Rusinowitz, L., Loughlin, D. M., Desmond, S. M., & Squillace, M. R. (2004). Determining personal care consumers' preferences for a consumer-directed cash and counseling option: Survey results from Arkansas, Florida, New Jersey, and New York elders and adults with physical disabilities. *Health Services Research*, 39, 643-664. doi:10.1111/j.1475-6773.2004.00249.x
- Markle-Reid, M., & Browne, G. (2001). Explaining the use and non-use of community-based long-term care services by caregivers of persons with dementia. *Journal of Evaluation in Clinical Practice*, 7, 271-287.
- Mason, A., Weatherly, H., Spilsbury, K., Arksey, H., Golder, S., Adamson, J., . . . Glendinning, C. (2007). A systematic review of the effectiveness and cost-effectiveness of different models of community-based respite care for frail older people and their carers. *Health Technology Assessment*, 11(15), 1-157; iii.
- Nagatomo, I., Akasaki, Y., Uchida, M., Tominaga, M., Hashiguchi, W., & Takigawa, M. (1999). Gender of demented patients and specific family relationship of caregiver to patients influence mental fatigue and burdens on relatives as caregivers. *International Journal of Geriatric Psychiatry*, 14, 618-625.
- Navaie-Waliser, M., Spriggs, A., & Feldman, P. H. (2002). Informal caregiving: Differential experiences by gender. *Medical Care*, 40, 1249-1259.
- Newcomer, R., Yordi, C., DuNah, R., Fox, P., & Wilkinson, A. (1999). Effects of the Medicare Alzheimer's disease demonstration on caregiver burden and depression. *Health Services Research*, 34, 669-689.
- Organisation for Economic Co-Operation and Development. (2011). Chapter 2. Help wanted? Chapter 2: Sizing up the challenge ahead: Future demographic trends and long-term care costs. In F. Colombo (Ed.), *Help wanted? Providing and paying for long-term care*. EU: OECD. Retrieved from <http://www.oecd.org/health/health-systems/helpwantedprovidingandpayingforlong-termcare.htm>
- Redford, D., Feinberg, L., & Houser, A. (2013). *The aging of the baby boom and the growing care gap: A look at future declines in the availability of family caregivers*. Washington, D. C. AARP Public Policy Institute.
- Roberts, J., Browne, G., Milne, C., Spooner, L., Gafni, A., Drummond-Young, M., . . . Beaumont, L. (1999). Problem-solving counseling for caregivers of the cognitively impaired: Effective for whom? *Nursing Research*, 48, 162-172.
- Rubin, D. B. (1977). Formalizing the subjective notions about the effect of nonrespondents in sample surveys. *Journal of the American Statistical Association*, 72, 538-543.
- Schafer, J. L. (1997). *Analysis of incomplete multivariate data*. London, England: Chapman & Hall.
- Schafer, J. L. (1999). Multiple imputation: A primer. *Statistical Methods in Medical Research*, 8, 3-15.
- Schafer, J. L. (2000). *Software for multiple imputation, 2000*. Retrieved from <http://www.stat.psu.edu/~jls/misofwa.html>
- Shaw, C., McNamara, R., Abrams, K., Cannings-John, R., Hood, K., Longo, M., . . . Williams, K. (2009). Systematic review of respite care in the frail elderly. *Health Technology Assessment*, 13(20), 1-224; iii. doi:10.3310/hta13200
- Toseland, R. W., Blanchard, C. G., & McCallion, P. (1995). A problem solving intervention for caregivers of cancer patients. *Social Science & Medicine*, 40, 517-528.
- Toseland, R. W., McCallion, P., Gerber, T., & Banks, S. (2002). Predictors of health and human services use by persons with dementia and their family caregivers. *Social Science & Medicine*, 55, 1255-1266.
- Van Houtven, C. H., Voils, C. I., & Weinberger, M. (2011). An organizing framework for informal caregiver interventions: Detailing caregiving activities and caregiver and care recipient outcomes to optimize evaluation efforts. *BMC Geriatrics*, 11, Article 77. doi:10.1186/1471-2318-11-77
- Vitaliano, P. P., Scanlan, J. M., Zhang, J., Savage, M. V., Hirsch, I. B., & Siegler, I. C. (2002). A path model of chronic stress, the metabolic syndrome, and coronary heart disease. *Psychosomatic Medicine*, 64, 418-435.
- Vitaliano, P. P., Young, H. M., & Russo, J. (1991). Burden: A review of measures used among caregivers of individuals with dementia. *Gerontologist*, 31, 67-75.

- Vitaliano, P. P., Zhang, J., & Scanlan, J. M. (2003). Is caregiving hazardous to one's physical health? A meta-analysis. *Psychological Bulletin, 129*, 946-972.
- Wallsten, S. S. (2000). Effects of caregiving, gender, and race on the health, mutuality, and social supports of older couples. *Journal of Aging and Health, 12*, 90-111.
- Yee, J. L., & Schulz, R. (2000). Gender differences in psychiatric morbidity among family caregivers: A review and analysis. *Gerontologist, 40*, 147-164.
- Zahid, M. A., & Ohaeri, J. U. (2010). Relationship of family caregiver burden with quality of care and psychopathology in a sample of Arab subjects with schizophrenia. *BMC Psychiatry, 10*, Article 71.
- Zank, S., & Schacke, C. (2002). Evaluation of geriatric day care units: Effects on patients and caregivers. *Journals of Gerontology, Series B: Psychological Sciences & Social Sciences, 57*, P348-P357.

### Author Biography

**Ya-Mei Chen** has taught at the University of Washington in the U.S. and National Taiwan University in Taiwan. Her research focuses on long-term care policy and industry development. She devotes herself into preventing older adults from disabilities as well as providing support to family caregivers who take care of loved ones with long-term care needs.