Research & Reviews: Journal of Social Sciences

Caregiver Burden among Chinese Adult Children in Greater Chicago Area- the Piety Study

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Research Article

Received date: 02/06/2016
Accepted date: 07/06/2016
Published date: 18/06/2016

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Keywords: Caregiving, intergenerational, minority, Chinese.

ABSTRACT

This study explores caregiver burden among U.S. Chinese adult children. Utilizing a community-based participatory research approach, the Piety study conducted interviews with 546 Chinese adult children in the Greater Chicago area from 2012 to 2014. Caregiver burden was measured by the 24-item Caregiver Burden Inventory from Novak and Guest in five domains: time-dependence, developmental, physical, social, and emotional burden. Among participants, the average age was 47.6 years (SD±10.4) and 65.5% were female. Overall feelings of burden were correlated with older age, fewer household members, living longer in the U.S., and time spent providing care regarding ADL/IADL limitations. This study shows that U.S. Chinese adult children in the Greater Chicago area experience caregiver burden, which has wide implications for clinical practice and policy. Future research should examine the risk factors for and consequences of caregiver burden and its subtypes, as well as caregiver and care-receiver dyads to further understand caregiving in the U.S. Chinese community.

INTRODUCTION

As the older adult population in the U.S. rapidly grows [1], the issue of caregiving for this population and related physical and psychological outcomes for caregivers are becoming a larger public health concerns. According to AARP, 34.2 million Americans have provided unpaid care to an adult age 50 or older in the previous year, with nearly half providing care for a parent or parent-in-law [2]. Research has found that adult children caregivers experience emotional, physical, financial, and social difficulties as a result of their caregiving duties [3], which is often referred to as caregiver burden [4]. Currently, there is a lack of government policy and funding support to address the growing magnitude of this issue, especially among vulnerable populations such as immigrant or ethnic minority communities. The Asian American older adult population is expected to grow 352% over the next 50 years to 7.3 million older adults [5]. Chinese constitute the largest Asian American ethnic subgroup 65 years and older; however, there is a paucity of data about the experience of caregiving for this population. Existing research concerning caregivers of Chinese older adults is often focused on dementia caregiving burden [6-11]. However, Chinese older adults in the U.S. face high levels of impairment in many areas including cognitive function [12], physical function [13], and other medical conditions or symptoms [14-16], which may require caregiving from family members. Similar to the general population, Chinese adult children often provide care for their elderly family members, often influenced by traditional Confucian values [17]. The degree to which U.S. Chinese adhere to these patterns and values is unknown, but may be shifting due to immigration and acculturation. Studies conducted in China have examined caregiving by adult children and found that many adult children find this care to be burdensome [18-21]. This issue is expected to worsen in China, as political and social changes have affected the capacity and willingness of families to provide substantial caregiving for elderly [22]. For immigrant Chinese, caregiver burden likely remains an issue due to these considerations, as well as access barriers to linguistic and culturally relevant support services [23]. Research among Chinese adult children in Canada indicates that burden is significant [24,25], but to our knowledge, no similar studies have been conducted in the United States, which may be unique due to demographic characteristics. To address this research gap, this study aims to 1) evaluate the prevalence of caregiver burden; 2) determine the validity of the Caregiver Burden Inventory; and 3) examine the correlations between caregiver burden, caregiving practices, and socio demographic characteristics among Chinese adult children.

METHOD

Population and Settings

The Piety Study is a cross-sectional study of Chinese adult children, who have at least one living parent in the Chicago area. In order to ensure study relevance to the well-being of the Chinese community and enhance participation, the project adopts a community-based participatory research approach with the synergistic efforts of Rush Institute for Healthy Aging, Northwestern University, and many community-based social services agencies and organizations throughout the greater Chicago area.

Study Design and Procedure

Participants were recruited from community centers, through local advertisement in the Greater Chicago area or referred by other participants. Participants were eligible for this study if they: (1) were 21 years and over; (2) reside in the Greater Chicago area; and (3) at least one parent aged 60 years or older who is Chinese. The individuals who met the inclusion criteria were invited to participate in this study. Bilingual and bicultural research assistants conducted in-person or telephone interviews to ensure cultural and linguistic sensitivity of this study by administering questions in the participant's preferred language or dialect. All participants consented and received $15 as incentive after the interview. The study was approved by the Institutional Review Board of Rush University Medical Center.

MEASUREMENTS

Socio-demographic characteristics, self-reported health status, and caregiving practice

Basic demographic information was collected, including age (in years), gender, education level (in years), annual income from all sources (in USD), marital status, number of children, living arrangement, country of origin, and language preference. Overall health status was measured by "In general, would you say your health is on a four-point scale. Quality of life was assessed by "The quality of my life is also on a four-point scale. Health changes in last year was measured by asking "Compared to one year ago, how would you rate your health now?" on a five-point scale (1 = much worse; 2 = somewhat worse; 3 = about the same; 4 = somewhat better; and 5 = much better than one year ago), which were then categorized into three groups. Participants were also asked to report how many hours a week they help their parents in regard to Activities of Daily Living (ADL), which includes tasks like walking and bathing, and Instrumental Activities of Daily Living (IADL), which includes shopping, preparing meals, and housework [26].

Caregiver Burden

Caregiver burden was measured by the 24-item Caregiver Burden Inventory developed by Novak and Guest [26] and validated for use among Chinese primary caregivers in Taiwan [27]. The scale consists of five factors: time-dependence, developmental, physical, social, and emotional burden. Time-dependence burden refers to a substantial amount of time spent caregiving. Developmental burden refers to life course development and the individual's feelings about their life course relative to some normative expectation. Physical burden describes any impact on physical health. Social burden refers to conflicts within relationships that occur due to caregiving. Last, emotional burden refers to any negative feelings toward the participant's parents due to caregiving.

Each factor consisted of five questions except physical burden, which had four. Possible responses are ranged from 0 to 4. Mean scores for time-dependence, developmental, social, and emotional burden could range from 0-20, while mean score for physical burden ranged from 0-16. For analysis, physical burden scores were adjusted by multiplying the score by 1.25 to have a score from 0-20. A complete list of questions is included in **Table 2.** Cronbach's alpha was $\alpha = 0.92$.

DATA ANALYSIS

Descriptive univariate statistics were utilized to summarize socio demographic characteristics and the average level of types of caregiver burden among the sample population. Chi-squared tests were used to compare the bivariate sociodemographic differences with the average level of caregiver burden and the Pearson Correlation coefficients were used to examine the correlations between socio-demographic variables and level of burden. Statistical analyses were conducted using SAS, Version 9.2 (SAS Institute Inc., Cary, NC).

RESULTS

Sociodemographic Characteristics of Study Population by Burden Types

In total, 546 participants were enrolled in present study with mean age of 47.6 (SD=10.4) years. Out of these participants, 65.5% were female, 81.5% were married, and 27.1% had and annual income below $10,000. Overall caregiver burden level was

$\bar{x}$=8.53, with time-dependence burden $\bar{x}$=4.55, developmental burden $\bar{x}$=1.29, physical burden $\bar{x}$=0.82, social burden $\bar{x}$=0.88, and emotional burden $\bar{x}$=1.00. The mean burden scores for each factor by socio demographic characteristics is presented in **Table 1.** Participants ages 65-79 reported greater caregiver burden than those ages 21-34 in regard to time-dependence, developmental, and physical burden. Further, participants who have lived in the U.S. for at least 31 years reported higher levels of physical and social burden compared to those who have lived in the U.S. for 10 or fewer years.

Table 1. Sociodemographic Characteristics of Study Population by Burden Types.

	Time-Dependence Burden	p value	Developmental Burden	p value	Physical Burden	p value	Social Burden	p value	Emotional Burden	p value
Age, M (SD)										
21-34 (N=55)	3.00 (4.04)		0.82 (1.54)		0.50 (1.83)		0.49 (1.40)		0.96 (1.88)	
35-49 (N=277)	3.44 (4.15)		1.08 (2.67)		0.70 (2.19)		0.82 (2.17)		0.97 (2.19)	
50-64 (N=184)	6.17 (5.49)		1.68 (3.12)		1.53 (3.13)		1.08 (2.21)		1.14 (2.26)	
65-79 (N=30)	7.48 (6.90)	<0.001	1.70 (3.87)	0.04	1.81 (4.09)	0.002	1.00 (1.93)	0.24	0.52 (1.18)	0.65
Gender, M (SD)										
Male (N=189)	4.23 (4.67)		1.21 (2.77)		0.74 (2.13)		0.86 (2.12)		1.05 (2.39)	
Female (N=357)	4.68 (5.19)	0.61	1.33 (2.87)	0.37	1.17 (2.91)	0.09	0.90 (2.10)	0.66	0.98 (2.00)	0.35
Education, M (SD)										
0-6 (N=47)	5.17 (5.81)		0.87 (1.95)		1.01 (2.52)		0.53 (1.21)		0.57 (1.31)	
7-12 (N=315)	4.42 (4.80)		0.91 (2.24)		0.77 (2.17)		0.61 (1.83)		0.64 (1.57)	
13-16 (N=133)	4.63 (5.34)		1.97 (3.84)		1.48 (3.49)		1.38 (2.72)		1.61 (3.01)	
17+ (N=51)	4.37 (4.76)	0.94	2.22 (3.20)	<0.001	1.32 (2.97)	0.17	1.57 (2.19)	<0.001	2.08 (2.37)	<0.001
Income, M (SD)										
$0-$9,999 (N=148)	5.71 (5.41)		1.41 (3.03)		1.20 (2.98)		0.76 (2.00)		0.97 (2.04)	
$10,000-$19,999 (N=189)	4.61 (5.25)		1.14 (2.78)		1.09 (2.76)		0.73 (2.02)		0.77 (1.98)	
$20,000-$29,999 (N=94)	3.51 (4.08)		0.74 (1.68)		0.63 (1.82)		0.86 (1.92)		0.67 (1.42)	
$30,000-$75,000 (N=112)	3.80 (4.52)	0.005	1.88 (3.32)	0.01	1.03 (2.70)	0.73	1.32 (2.50)	0.006	1.75 (2.81)	0.001
Marital Status, M (SD)										
Married (N=446)	4.32 (4.89)		1.11 (2.43)		0.92 (2.49)		0.85 (1.95)		0.90 (1.88)	
Not Married (N=47)	6.45 (5.75)		2.15 (4.20)		1.65 (2.71)		0.64 (1.33)		1.23 (2.28)	
Never Married (N=53)	4.60 (5.09)	0.04	2.00 (4.06)	0.04	1.32 (2.98)	0.19	1.38 (3.49)	0.98	1.64 (3.57)	0.51
Household Composition, M (SD)										
0 (N=15)	6.27 (5.81)		2.33 (3.99)		2.50 (4.51)		1.87 (4.39)		2.20 (4.43)	
1 (N=76)	5.80 (5.82)		2.11 (3.71)		2.03 (3.99)		1.54 (2.75)		1.47 (2.51)	
2-3 (N=254)	4.37 (5.00)		1.22 (2.54)		1.00 (2.47)		0.76 (1.88)		0.92 (1.86)	
4+ (N=201)	4.13 (3.57)	0.13	1.00 (2.65)	0.004	0.56 (1.90)	0.001	0.72 (1.80)	0.13	0.85 (2.04)	0.16
Children, M (SD)										
0 (N=80)	4.21 (5.01)		2.01 (3.89)		1.47 (3.19)		1.34 (3.28)		1.58 (3.20)	
1-2 (N=373)	4.53 (5.00)		1.24 (2.58)		0.97 (2.61)		0.79 (1.75)		0.95 (1.95)	
3+ (N=93)	4.80 (5.09)	0.68	0.86 (2.62)	0.004	0.82 (2.38)	0.18	0.87 (2.11)	0.85	0.71 (1.59)	0.20

Prevalence of Caregiver Burden Reported by Adult Children Overall, 73.1% of participants endorsed any caregiver burden item, with 67.6% endorsing time-dependence burden, 27.6% endorsing developmental burden, 18.1% endorsing physical burden, 23.2% endorsing social burden, and 27.4% endorsing emotional burden. The prevalence of caregiver burden by each item is shown in **Table 2.**

Table 2. Prevalence of Caregiver Burden Reported by Adult Children, N (%).

Time-Dependence Burden	Never	Rarely	Sometimes	Often	Always
My parents need my help to perform many daily tasks	258 (47.4)	85 (15.6)	109 (20.0)	56 (10.3)	36 (6.6)
My parents are dependent on me	254 (46.7)	102 (18.8)	85 (15.6)	61 (11.2)	42 (7.7)
I have to watch my parents constantly	295 (54.2)	68 (12.5)	76 (14.0)	57 (10.5)	48 (8.8)
I have to help my parents with many basic functions	337 (62.0)	80 (14.7)	58 (10.7)	37 (6.8)	32 (5.9)
I don't have a minutes break from my parents' chores	427 (78.5)	57 (10.5)	37 (6.8)	15 (2.8)	8 (1.5)
Developmental Burden					
I feel that I am missing out on life	457 (84.0)	44 (8.1)	28 (5.2)	11 (2.0)	4 (0.7)
I wish I could escape from this situation	482 (88.6)	39 (7.2)	15 (2.8)	5 (0.9)	3 (0.6)
My social life has suffered	462 (84.9)	41 (7.5)	28 (5.2)	9 (1.7)	4 (0.7)

I feel emotionally drained due to caring for my care-receiver	443 (81.4)	41 (7.5)	40 (7.4)	16 (2.9)	4 (0.7)
I expected that things would be different at this point in my life	468 (86.2)	34 (6.3)	28 (5.2)	10 (1.8)	3 (0.6)
Physical Burden					
I’m not getting enough sleep	473 (87.0)	28 (5.2)	26 (4.8)	14 (2.6)	3 (0.6)
My health has suffered	486 (89.3)	28 (5.2)	21 (3.9)	9 (1.7)	0 (0.0)
Caregiving has made me physically sick	498 (91.6)	29 (5.3)	12 (2.2)	5 (0.9)	0 (0.0)
I’m physically tired	463 (85.1)	35 (6.4)	31 (5.7)	12 (2.2)	3 (0.6)
Social Burden					
I don’t get along with other family members as well as I used to	493 (90.6)	31 (5.7)	15 (2.8)	4 (0.7)	1 (0.2)
My caregiving efforts aren’t being appreciated by others in my family	473 (87.1)	28 (5.2)	28 (5.2)	10 (1.8)	4 (0.7)
I don’t do as good a job at work as I used to	496 (91.2)	26 (4.8)	15 (2.8)	5 (0.9)	2 (0.4)
I feel resentful of other relatives who could but do not help	472 (86.8)	36 (6.6)	24 (4.4)	10 (1.8)	2 (0.4)
I’ve had problems with my marriage	494 (91.0)	32 (6.9)	11 (2.0)	6 (1.1)	0 (0.0
Emotional Burden					
I feel embarrassed over parents’ behavior	476 (87.5)	32 (5.9)	31 (5.7)	4 (0.7)	1 (0.2)
I feel ashamed of my parents	491 (90.3)	31 (5.7)	20 (3.7)	2 (0.4)	0 (0.0)
I resent my parents	480 (88.2)	22 (4.0)	22 (4.0)	19 (3.5)	1 (0.2)
I feel uncomfortable when I have friends over	502 (92.3)	26 (4.8)	12 (2.2)	3 (0.6)	1 (0.2)
I feel angry about my interactions with my parents	441 (81.1)	49 (9.0)	44 (8.1)	8 (1.5)	2 (0.4)

Caregiver burden scale item-total correlations and correlation coefficients

Caregiver burden item-total correlations and correlation coefficients are presented in **Table 3.** Alpha for each subscale ranged from 0.77 to 0.88. Within each subscale, all items were significantly correlated with each other at $p<0.001$. For time-dependence burden, correlations ranged from $r=0.43$ to $r=0.71$. Correlations for developmental burden ranged from $r=0.52$ to $r=0.65$, and for physical burden ranged from $r=0.59$ to $r=0.79$. Social burden correlations ranged from $r=0.18$ to $r=0.59$, while emotional burden correlations ranged from $r=0.26$ to $r=0.78$.

Table 3. Caregiver Burden Item-Total Correlations and Correlation Coefficients.

Burden Type	**Total α**	**Item α**	**1**	**2**	**3**	**4**	**5**
Time-Dependence Burden	0.88						
1. My parents need my help to perform many daily tasks		0.83	1.00				
2. My parents are dependent on me		0.84	0.69#	1.00			
3. I have to watch my parents constantly		0.83	0.70#	0.64#	1.00		
4. I have to help my parents with many basic functions		0.84	0.67#	0.59#	0.71#	1.00	
5. I don’t have a minutes break from my parents’ chores		0.89	0.43#	0.48#	0.46#	0.45#	1.00
Developmental Burden	0.87						
1. I feel that I am missing out on life		0.84	1.00				
2. I wish I could escape from this situation		0.85	0.65#	1.00			
3. My social life has suffered		0.84	0.65#	0.54#	1.00		
4. I feel emotionally drained due to caring my care-receiver		0.84	0.58#	0.55#	0.63#	1.00	
5. I expected that things would be different at this point in my life		0.85	0.55#	0.58#	0.52#	0.59#	1.00
Physical Burden	0.88						
1. I’m not getting enough sleep		0.85	1.00				
2. My health has suffered		0.82	0.71#	1.00			
3. Caregiving has made me physically sick		0.86	0.59#	0.79#	1.00		
4. I’m physically tired		0.85	0.67#	0.69#	0.61#	1.00	
Social Burden	0.79						
1. I don’t get along with other family members as well as I used to		0.72	1.00				
2. My caregiving efforts aren’t being appreciated by others in my family		0.72	0.58#	1.00			
3. I don’t do as good a job at work as I used to		0.75	0.53#	0.46#	1.00		
4. I feel resentful of other relatives who could but do not help		0.71	0.52#	0.59#	0.50#	1.00	
5. I’ve had problems with my marriage		0.81	0.26#	0.28#	0.18#	0.30#	1.00
Emotional Burden	0.77						
1. I feel embarrassed over parents’ behavior		0.71	1.00				
2. I feel ashamed of my parents		0.70	0.78#	1.00			
3. I resent my parents		0.78	0.26#	0.32#	1.00		
4. I feel uncomfortable when I have friends over		0.71	0.49#	0.49#	0.46#	1.00	
5. I feel angry about my interactions with my parents		0.75	0.39#	0.37#	0.33#	0.49#	1.00

Note: * $p<0.05$, + $p<0.01$, # $p<0.001$

Correlations between Caregiver Burden, Socio demographic and Health Variables

Correlations between caregiver burden, socio demographic characteristics, and self-reported health variables are presented in **Table 4.** Older age was correlated with time, physical, and overall burden. Fewer household members were correlated with developmental, physical, emotional, and overall burden. Living longer in the U.S. was correlated with time, developmental, physical, social, emotional, and overall burden. All subscales were significantly and positively correlated with each other and overall burden. Hours spent caring for ADL impairment was correlated with time, developmental, physical, social, and overall burden; hours spent caring for IADL impairment was correlated with time, developmental, physical, and overall burden.

DISCUSSION

According to our findings, caregiver burden is prevalent among Chinese adult children in the U.S. and was endorsed by three in four of our participants. In addition, certain socio demographic characteristics were correlated with higher burden. The Caregiver Burden Inventory also showed internal consistency for use among U.S. Chinese adult populations. Last, our findings show that multiple subtypes of caregiver burden are experienced by U.S. Chinese adult children.

Our study shows that older age, fewer household members, and more years in the U.S., which is consistent with previous literature. Older age of adult children and living more years in the U.S. likely corresponds with caring for oldest older adults, who likely experience worsening health status [28]. Fewer household members may be indicative of fewer people able to share caregiving duties or less social support, which may contribute to experiences of caregiver burden [29]. Future longitudinal and qualitative research should focus on the unique characteristics of adult children caregivers, which may help provide a more targeted approach in providing intervention or support for these families.

Interestingly, female gender was not correlated with overall burden or any subtypes, contrary to existing literature. A multinational review of dementia caregiver burden research revealed that female caregivers, especially in Asian societies, experience a particularly significant amount of burden, which may be due to division of labor, where women are expected to take on more household duties [30]. Indeed, our findings do show that time spent for ADL and IADL impairments is correlated with female gender, but gender is not correlated to burden. Previous literature has posited that increased feelings of burden for women may be due to decreased utilization of formal services [31] but it is unknown if formal service use may mediate gender differences in caregiver burden among Chinese as well. Future research should examine the role of gender in providing caregiving for elderly parents, as well as potential mediators like formal or informal services and support among the U.S. Chinese population.

Last, our study provides evidence regarding the multidimensionality of caregiver burden. Our study measures five types of caregiver burden, all of which are prevalent among our study population. However, the relationship between socio demographic characteristics, time spent caregiving, and specific subtypes of caregiver burden vary greatly. Of note, time spent providing care regarding ADL and IADL tasks was correlated to emotional burden. Since eligibility for social service use or in-home help often pertains to physical or cognitive impairment [32] and level of care-receiver frailty is an important indicator of formal service use [33], current social service availability may overlook caregivers who experience emotional burden and subsequent mental health distress· Our findings suggest that it may be appropriate to target support for caregivers depending on their specific experience of burden and that future research should examine possible specific risk factors of various types of burden. Our study has some limitations. First, this study is cross-sectional, so we are unable to examine how caregiver burden may change over time. Second, our data are not generalizable to other Chinese populations due to the likely influence of available caregiving resources by location or to Chinese adult children caregiving for parents with specific illness like dementia. Third, we did not examine the relationship between caregiver burden and specific care-receiver medical conditions. Despite these limitations, our findings have significant implications for research, policy, and practice. To our knowledge, our study is the first of its kind to investigate the experience of caregiver burden among U.S. Chinese adult children caring for their aging parents. We found that U.S. Chinese adult children experience caregiver burden in many ways, which likely adds to the complexity of providing formal support for this population. Eligibility for eldercare programs and support services emphasize physical function or cognitive function [32]; this may not adequately address caregiver burden, which may be influenced by factors other than the care-receiver's frailty. As articulated by Novak and Guest [26], the multidimensionality of caregiver burden indicates that various forms of support, including mental health counseling, may be necessary to address the problem of caregiver burden. Future research should examine caregiver burden over time, as well as the influence of formal eldercare service usage; policy and governmental support should consider the influence of caregiving and related burden on the mental and physical health of family caregivers and provide increased support in linguistic and culturally appropriate ways. Our study shows that caregiver burden is prevalent among U.S. Chinese adult immigrants, especially those who have lived longer in the U.S., have higher education, and live with fewer household members, and points to a need for further research and support regarding the multidimensional effects of caring for aging parents. Current literature regarding caregiver burden places an emphasis on dementia-related caregiving, which has obfuscated an understanding of caregiver burden resulting from many different care-receiver characteristics. As the population rapidly ages and grows, further support for informal caregivers are needed, especially for vulnerable populations such as recent immigrants and minorities like the U.S. Chinese community.

Table 4. Correlations between Caregiver Burden, Sociodemographic Characteristics and Health Variables

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	Age	1.00																				
2	Female	0.04	1.00																			
3	Education	-0.35#	-0.03	1.00																		
4	Income	-0.25#	0.02	0.41#	1.00																	
5	Married	0.11+	-0.03	-0.05	0.03	1.00																
6	House Mem.	-0.19#	-0.01	-0.05	0.04	0.24#	1.00															
7	Children	0.28#	0.03	-0.23#	-0.07	0.36#	0.46#	1.00														
8	Years U.S.	0.35#	0.02	0.10*	0.16#	-0.09*	0.17#	0.16#	1.00													
9	Born China	-0.01	0.03	-0.21#	-0.04	0.20#	0.12+	0.13+	-0.28#	1.00												
10	Lang Pref	-0.04	-0.06	-0.21#	-0.07	0.02	0.06	0.07	-0.02	0.16#	1.00											
11	OHS	-0.19#	-0.01	0.20#	0.15#	0.02	0.00	0.01	-0.07	-0.03	-0.12+	1.00										
12	QoL	0.06	-0.05	0.03	-0.08	-0.01	-0.04	-0.02	0.01	-0.10*	-0.09*	-0.10*	1.00									
13	HC	-0.16#	-0.08	0.13+	0.03	0.00	0.06	-0.04	0.00	-0.05	-0.01	0.27#	-0.11*	1.00								
14	Time Burden	0.26#	0.02	0.01	-0.14+	-0.08	-0.08	0.07	0.10*	-0.07	0.00	0.02	0.12+	-0.06	1.00							
15	Dev Burden	0.08	0.04	0.19#	0.05	-0.11*	-0.16#	-0.11*	0.10*	-0.16#	-0.09*	0.01	0.15#	-0.05	0.47#	1.00						
16	Phys Burden	0.16#	0.07	0.08	-0.02	-0.08	-0.16#	-0.05	0.11+	-0.15#	-0.07	0.01	0.15#	-0.09*	0.51#	0.69#	1.00					
17	Soc Burden	0.06	0.02	0.21#	0.14+	0.01	-0.07	-0.01	0.19#	-0.17#	-0.13+	-0.02	0.18#	-0.05	0.34#	0.55#	0.54#	1.00				
18	Emo Burden	-0.04	0.04	0.26#	0.10*	-0.05	-0.10*	-0.08	0.10*	-0.07	-0.07	0.00	0.14+	-0.07	0.29#	0.49#	0.38#	0.55#	1.00			
19	Overall Burd	0.20#	0.01	0.12+	-0.04	-0.07	-0.10*	0.02	0.14+	-0.10*	-0.04	0.02	0.17#	-0.07	0.90#	0.68#	0.64#	0.59#	0.56#	1.00		
20	ADL Hours	0.26#	0.12+	-0.03	-0.16#	-0.06	-0.18#	-0.03	0.03	-0.07	-0.10	-0.01	0.06	-0.07	0.48#	0.23#	0.41#	0.14#	0.08	0.42#	1.00	
21	IADL Hours	0.13+	0.11+	-0.02	-0.13+	-0.05	-0.04	0.01	-0.03	0.00	0.04	0.04	0.05	0.02	0.51#	0.14+	0.25#	0.08	0.06	0.41#	0.43#	1.00

* p<0.05, + p<0.01, # p<0.001

Note: House Mem. = Household Composition, Children = Number of Children, Years U.S. = Years in the U.S., Born China = Country of Origin, Lang Pref = Language Preference, OHS = Overall Health Status, QoL = Quality of Life, HC = Changes in health over the past year, Time Burden = Time-Dependence Burden, Dev Burden = Developmental Burden, Phys Burden = Physical Burden, Soc Burden = Social Burden, Emo Burden = Emotional Burden; Overall Burd = Overall Burden; ADL Hours = Hours spent providing ADL care; IADL hours = Hours spent providing IADL care.

CONFLICT OF INTEREST

The authors report no conflicts of interest.

ACKNOWLEDGEMENT

We are grateful to Community Advisory Board members for their continued effort in this project. Particular thanks are extended to Bernie Wong, Esther Wong, Vivian Xu, and Yicklun Mo with the Chinese American Service League (CASL); Dr. David Lee with the Illinois College of Optometry; David Wu with the Pui Tak Center; Dr. Hong Liu with the Midwest Asian Health Association; Dr. Margaret Dolan with John H. Stroger Jr. Hospital; Mary Jane Welch with the Rush University Medical Center; Florence Lei with the CASL Pine Tree Council; Julia Wong with CASL Senior Housing; Dr. Jing Zhang with Asian Human Services; Marta Pereya with the Coalition of Limited English Speaking Elderly; and Mona El-Shamaa with the Asian Health Coalition.

FUNDING

Dr. Dong was supported by National Institute on Aging Grants R01 AG042318, R01 MD006173, R01 NR 14846, R01 CA163830, R34MH100443, R34MH100393, and RC4 AG039085; a Paul B. Beeson Award in Aging; the Starr Foundation; the American Federation for Aging Research; the John A. Hartford Foundation; and the Atlantic Philanthropies.

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