

A National Profile of Sandwich Generation Caregivers Providing Care to Both Older Adults and Children

**Appendices**

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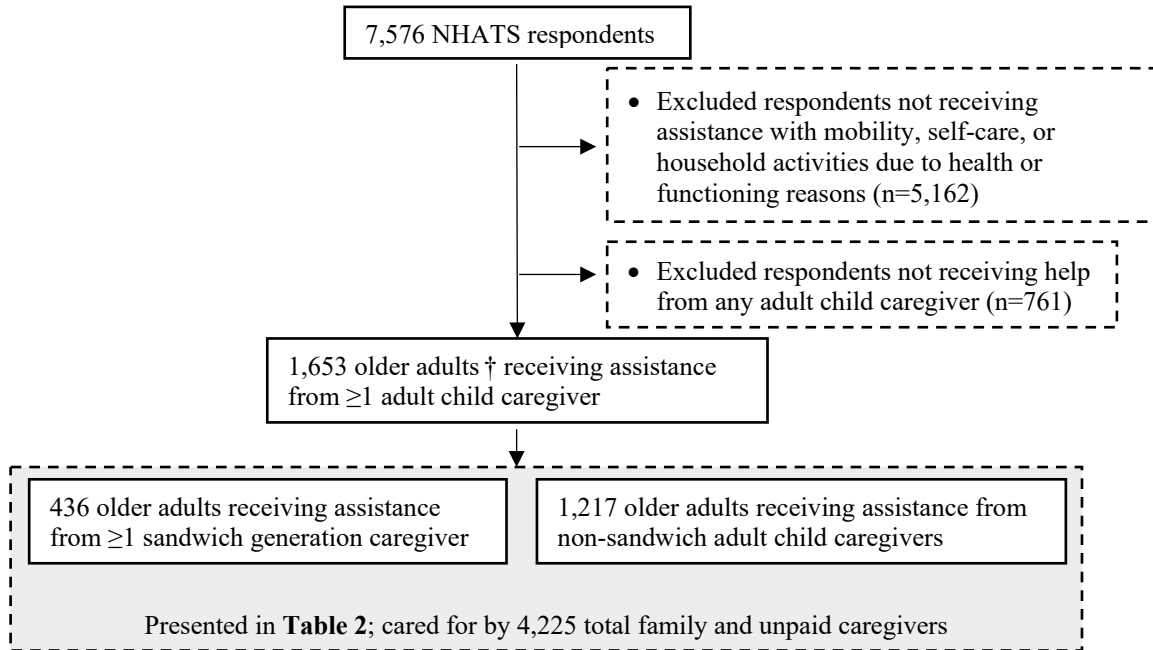
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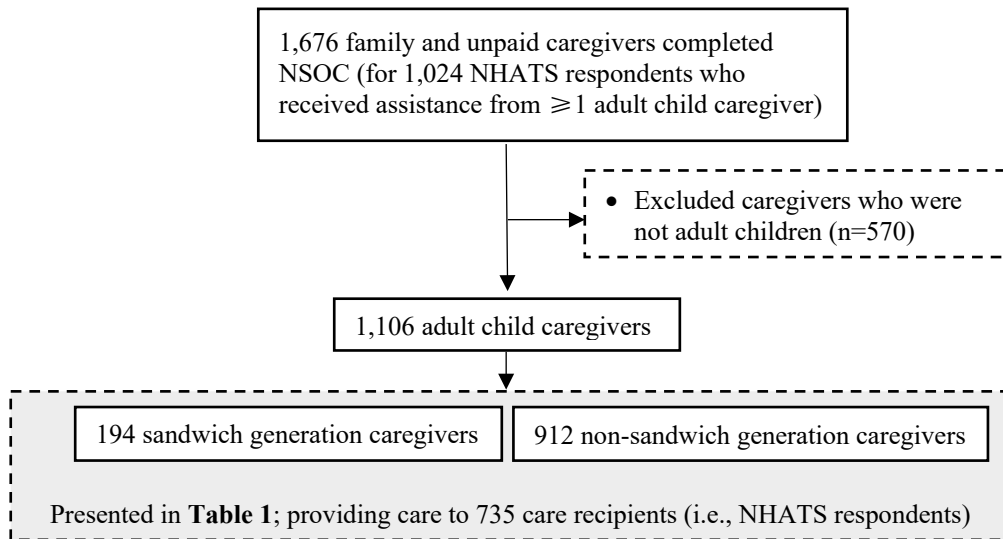
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**Figure S1. Study Cohorts**

**NHATS 2015**



**NSOC 2015**



*Notes:* NHATS = National Health and Aging Trends Study; NSOC = National Study of Caregiving.

† Due to the sampling strategy and nonresponse among those family and unpaid caregivers eligible to participate in NSOC, the caregivers and care recipients included in Table 1 (which required participation in NSOC and NHATS) are a subset of those included in Table 2 (which required participation in NHATS alone).

**Table S1. Characteristics of Adult Child, Child-in-law, and Grandchild Caregivers With and Without Minor Children in a Nationally Representative Sample, 2015**

	Adult Child, Child-in-law, and Grandchild Caregivers (N=1,403)				
	Sandwich generation		Non-sandwich generation		P-value
	Respondents, N (weighted %)	National estimate, millions	Respondents, N (weighted %)	National estimate, millions	
Overall	284 (26.7)	3.5	1,119 (73.3)	9.7	—
<b>Demographics</b>					
Female, No. (%)	192 (62.8)	2.2	770 (63.2)	6.1	0.93
Age, years (SD)	43.8 (7.7)	—	53.9 (13.7)	—	<0.001
<45, No. (%)	126 (50.1)	1.8	125 (17.3)	1.7	<0.001
45-64, No. (%)	154 (49.1)	1.7	739 (66.0)	6.4	
65+, No. (%)	—†	—†	255 (16.7)	1.6	
Race/ethnicity, No. (%)					
Non-Hispanic white	143 (59.6)	2.1	667 (67.9)	6.6	0.33
Non-Hispanic black	97 (14.6)	0.5	319 (12.2)	1.2	
Hispanic	26 (14.3)	0.5	63 (11.0)	1.1	
Other	18 (11.6)	0.4	70 (9.0)	0.9	
<b>Socioeconomic status</b>					
Married, No. (%)	170 (67.5)	2.4	601 (57.0)	5.6	0.02
Some college or above, No. (%)	203 (71.3)	2.5	743 (67.0)	6.5	0.45
Family income, \$, mean (SD)	\$71,815 (\$54,534)	—	\$62,889 (\$75,497)	—	0.07
Medicaid enrollment, No. (%)	63 (22.6)	0.8	127 (12.5)	1.2	0.003
<b>General health status, No. (%)</b>					
Very good or excellent	159 (61.7)	2.2	615 (55.5)	5.4	0.10
Good	75 (24.0)	0.8	275 (22.2)	2.1	
Poor or fair	50 (14.3)	0.5	229 (22.2)	2.2	
<b>Caregiving characteristics</b>					
Co-residence with care recipient, No. (%)	98 (33.4)	1.2	392 (29.3)	2.8	0.45
Care recipients living in the community, No. (%)	265 (92.1)	3.3	914 (78.6)	7.6	<0.001
Duration of caregiving, years (SD)	5.9 (5.4)	—	7.6 (8.9)	—	0.01
Hours of care provided in the last month, n (SD)	71.9 (101.3)	—	67.4 (115.1)	—	0.60
Proportion of total help hours provided, % (SD)	36.1 (30.5)	—	41.5 (37.0)	—	0.09
Sole caregiver, No. (%)	27 (8.6)	0.3	148 (11.5)	1.1	0.31
Primary caregiver, No. (%)	114 (35.3)	1.3	588 (44.0)	4.3	0.051
Functional disability-related activities helped:					
Mobility (0-3), n (SD)	0.5 (0.7)	—	0.5 (0.8)	—	0.70
Self-care activities (0-4), n (SD)	0.3 (0.7)	—	0.4 (0.9)	—	0.23
Household activities (0-5), n (SD)	1.5 (1.3)	—	1.6 (1.6)	—	0.54

Notes: Authors' analysis of data from the 2015 National Study of Caregiving (NSOC) for a cohort of adult child, child-in-law, and grandchild caregivers. Adjusted Wald tests were performed to compare continuous characteristics and Rao-Scott chi-square tests were performed to compare categorical characteristics among adult child, child-in-law, and grandchild caregivers with and without any minor child under 18 years of age (i.e., sandwich vs. non-sandwich generation caregivers). Data were weighted using the NSOC survey analytic weights.

† Estimates based on too few cases (< 11) may not be reported, per NHATS.

**Table S2. Characteristics of Caregiving-related Experience and Employment Participation among Adult Child, Child-in-law, and Grandchild Caregivers With and Without Minor Children in a Nationally Representative Sample, 2015**

	Adult Child, Child-in-law, and Grandchild Caregivers (N=1,403)				
	Sandwich generation		Non-sandwich generation		p-value
	Respondents, N (weighted %)	National estimate, millions	Respondents, N (weighted %)	National estimate, millions	
Overall	284 (26.7)	3.5	1,119 (73.3)	9.7	—
<b>Caregiving-related difficulties</b>					
Reported financial difficulties, No. (%)					
None	203 (69.3)	2.4	921 (83.5)	8.1	<0.001
Some	26 (12.3)	0.4	56 (4.3)	0.4	
Substantial	55 (18.4)	0.7	142 (12.2)	1.2	
Reported emotional difficulties, No. (%)					
None	148 (52.6)	1.9	623 (54.2)	5.3	0.29
Some	39 (11.7)	0.4	184 (15.3)	1.5	
Substantial	97 (35.7)	1.3	312 (30.5)	3.0	
<b>Caregiver role overload</b>					
Composite overload score (0-8), n (SD)	2.6 (2.1)	—	2.2 (2.3)	—	0.03
Exhausted, No. (%)	83 (26.2)	0.9	215 (17.6)	1.7	0.02
More than they can handle, No. (%)	64 (23.0)	0.8	182 (15.5)	1.5	0.02
No time for self, No. (%)	62 (16.8)	0.6	196 (15.3)	1.5	0.61
Care recipient's needs change frequently, No. (%)	27 (7.7)	0.3	109 (9.7)	0.9	0.40
<b>Caregiving-related gains</b>					
Composite gains score (0-8), n (SD)	6.4 (1.7)	—	6.0 (2.1)	—	0.045
More confident, No. (%)	146 (49.6)	1.8	550 (43.7)	4.2	0.19
Deal with difficult situations, No. (%)	174 (61.2)	2.2	655 (52.3)	5.1	0.08
Closer to care recipient, No. (%)	216 (74.9)	2.6	788 (68.1)	6.6	0.13
Satisfaction, No. (%)	260 (89.6)	3.2	985 (86.0)	8.4	0.24
<b>Use of supportive services, No. (%)</b>					
Support group participation	11 (4.2)	0.1	42 (3.2)	0.3	0.51
Respite care	58 (15.9)	0.5	237 (18.8)	1.8	0.41
Caregiving training	27 (8.9)	0.3	90 (6.2)	0.6	0.21
Identify potential financial support for care recipient	66 (20.9)	0.7	164 (15.3)	1.5	0.08
Use of ≥1 supportive services	115 (35.6)	1.2	405 (32.6)	3.2	0.47
<b>Employment and participation in other activities</b>					
Work for pay, No. (%)	185 (67.6)	2.4	540 (54.9)	5.3	0.003
Caregiving prevents from working, No. (%)	41 (13.3)	0.5	121 (10.4)	1.0	0.26
Among those who worked:					
Missed work due to caregiving, No. (%)	40 (12.7)	0.3	189 (15.0)	0.8	0.54
Absenteeism, % (SD)†	1.6 (5.8)	—	1.3 (4.5)	—	0.73
Presenteeism, % (SD)‡	5.0 (13.9)	—	7.1 (19.5)	—	0.21
Caregiving preventing from participation in valued activities, No. (%)§	57 (17.9)	0.6	273 (19.5)	1.9	0.64

Notes: Authors' analysis of data from the 2015 National Study of Caregiving (NSOC) for a cohort of adult child, child-in-law, and grandchild caregivers. Adjusted Wald tests were performed to compare continuous characteristics and Rao-Scott chi-square tests were performed to compare categorical characteristics among adult child, child-in-

law, and grandchild caregivers with and without any minor child under 18 years of age (i.e., sandwich vs. non-sandwich generation caregivers). Data were weighted using the NSOC survey analytic weights.

† Absenteeism referred to the proportion of hours of work missed because of caregiving in the last month among total hours worked typically.

‡ Presenteeism referred to the degree to which the caregiver reported caregiving affected productivity when at work.

§ Valued activities included visiting with friends or family, attending religious services, participating in group activities, and going out for enjoyment.

**Table S3. Characteristics of Caregiving-related Experience and Employment Participation among Adult Child Caregivers With and Without Minor Children: Adjusted Analysis**

	Adult Child Caregivers (N=1,106)		
	Sandwich generation Adjusted mean or % (95% Confidence Interval)	Non-sandwich generation (95% Confidence Interval)	p-value
Survey respondents, N (weighted %)	194 (24.3)	912 (75.7)	—
National estimate, millions	2.5	7.7	—
<b>Caregiving-related difficulties</b>			
Reported financial difficulties, %			
None	67.8 (59.2-76.3)	82.4 (78.9-86.0)	<0.01
Some	10.9 (4.9-16.9)	4.8 (3.0-6.6)	0.07
Substantial	21.3 (14.2-28.4)	12.8 (9.6-15.9)	0.02
Reported emotional difficulties, %			
None	44.6 (35.5-53.7)	50.9 (46.1-55.7)	0.21
Some	12.4 (6.9-18.0)	16.6 (13.4-19.9)	0.20
Substantial	43.0 (33.9-52.1)	32.5 (27.9-37.1)	0.03
<b>Caregiver role overload</b>			
Composite overload score (0-8), n			
Exhausted, %	30.0 (19.5-40.5)	18.9 (15.4-22.5)	0.06
More than they can handle, %	28.3 (17.4-39.1)	16.0 (13.0-19.1)	0.04
No time for self, %	19.4 (12.8-26.1)	16.4 (13.1-19.7)	0.42
Care recipient's needs change frequently, %	7.9 (3.2-12.6)	10.4 (7.4-13.4)	0.39
<b>Caregiving-related gains</b>			
Composite gains score (0-8), n			
More confident, %	41.2 (31.5-51.0)	45.0 (40.2-49.8)	0.50
Deal with difficult situations, %	56.3 (46.4-66.2)	53.3 (48.3-58.4)	0.63
Closer to care recipient, %	70.2 (61.1-79.2)	67.4 (62.5-72.2)	0.62
Satisfaction, %	85.7 (78.6-92.8)	87.9 (85.2-90.7)	0.57
<b>Use of supportive services, %</b>			
Support group participation	4.5 (0.8-8.1)	3.7 (1.9-5.5)	0.72
Respite care	20.4 (13.1-27.7)	19.5 (15.9-23.1)	0.83
Caregiving training	10.9 (4.3-17.6)	6.5 (4.4-8.7)	0.23
Identify potential financial support for care recipient	22.8 (15.5-30.2)	15.2 (11.5-18.9)	0.07
Use of ≥1 supportive services	41.3 (31.6-50.9)	33.6 (28.9-38.3)	0.16
<b>Employment and participation in other activities</b>			
Work for pay, % (95% CI)	63.9 (55.2-72.6)	55.8 (51.3-60.3)	0.09
Caregiving prevents from working, %	18.9 (11.6-26.1)	11.1 (8.3-13.9)	0.052
Among those who worked:			
Missed work due to caregiving, %	18.9 (9.5-28.2)	16.1 (11.4-20.7)	0.61
Absenteeism, %†	2.1 (0.6-3.7)	1.6 (1.0-2.1)	0.49
Presenteeism, %‡	7.9 (3.9-11.9)	6.5 (4.1-8.8)	0.55
Caregiving preventing from participation in valued activities, %§	22.6 (14.6-30.6)	20.8 (17.3-24.2)	0.68

Notes: Authors' analysis of data from the 2015 National Study of Caregiving (NSOC) for a cohort of adult child caregivers. We examined caregiver outcomes between adult child caregivers with and without any minor child under 18 years (i.e., sandwich vs. non-sandwich generation caregivers) using linear, logistic, and multinomial logistic regression models for continuous, binary, and categorical variables, respectively. Covariates adjusted for included caregiver demographics (sex, age, race/ethnicity), socio-economic status (marital status, education, Medicaid enrollment), general health status, whether co-residing with care recipient, and care recipient characteristics including whether living in the community, functional status (mobility, self-care, and household activities), and number of comorbidities. We calculated the mean adjusted outcomes for sandwich and non-sandwich generation caregivers. Ninety-five percent confidence intervals were reported in brackets. Differences in adjusted outcomes

between sandwich and non-sandwich generation caregivers were tested by the marginal effects. Data were weighted using the NSOC survey analytic weights, which accounted for differential probabilities of selection and nonresponse; and standard errors were adjusted to account for the complex survey design.

† Absenteeism referred to the proportion of hours of work missed because of caregiving in the last month among total hours worked typically.

‡ Presenteeism referred to the degree to which the caregiver reported caregiving affected productivity when at work.

§ Valued activities included visiting with friends or family, attending religious services, participating in group activities, and going out for enjoyment.