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From Serving in the Military to Serving Loved Ones: Unique Experiences of Older Veteran Caregivers

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Abstract

Objective—We examined whether older caregiving veterans differ from non-caregiving veterans in terms of health and psychosocial factors; and how these factors and caregiving aspects (i.e., hours, relationship type) relate to caregiving strain and reward. We also evaluated the hypotheses that: (1) combat exposure provides protection from emotional caregiving strain; and (2) grandparenting is particularly rewarding.

Design—Cross-sectional web survey of a nationally representative sample of older veterans in the United States.

Setting—Data were drawn from the National Health and Resilience in Veterans Study.

Participants—2,025 U.S. veterans aged 60 or older (mean age=71.0; SD=7.1; range=60-96).

Measurements—Participants completed measures of caregiving status, socio-demographic characteristics, combat exposure, physical and mental health, cognitive status, and psychosocial characteristics. Caregivers reported caregiving hours, caregiving type, emotional and physical strain, and reward.

Results—A total of 20.4% of U.S. older veterans are caregivers. As predicted, among the veteran caregivers, (1) combat exposure was associated with less emotional caregiving strain (odds ratio [OR]=0.57); and (2) grandparenting was associated with increased perception of caregiving reward (OR=5.28). Resilience was negatively associated with physical strain, while depressive symptoms were associated with greater emotional strain; gratitude, happiness, and social support

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There are no conflicts of interest relevant to this work.

were additionally associated with greater reward. Caregivers were more likely to be married and highly educated than non-caregivers, but did not differ with respect to health or psychosocial characteristics.

Conclusions—One in five older U.S. veterans is a caregiver. Older veterans' combat exposure may decrease the emotional demands of caregiving, and grandparenting is perceived as particularly rewarding. Results suggest that older veterans are an important caregiving resource that deserves tailored resources.

Although previous studies have examined the mental and physical health consequences of providing care to older veterans [1, 2], no study of which we are aware has examined the unique experiences of older veterans *who provide care* to their family members. This is important because the percentage of older veterans is growing [3] and it is not clear how earlier experiences as a soldier might influence caregiving in later life. Thus, the aims of this study were to examine whether older caregiving veterans differ from non-caregiving veterans with respect to health and psychosocial functioning; and how these factors and caregiving aspects, such as caregiving hours and relationship type, relate to caregiving strain and reward. Specifically, we examined the hypotheses that: (1) combat exposure would provide protection from emotional caregiving strain; and (2) grandparenting would be particularly rewarding compared to other caregiving types.

The Caregiving Experience of Veterans: A Gap in Research

Researchers and clinicians have often observed that caregiving has all the features of a chronically stressful experience. Providing care is often associated with physical and psychological strain over extended periods of time; may be accompanied by high levels of unpredictability and uncontrollability; has the capacity to generate secondary stress in multiple life domains; and frequently requires high levels of vigilance on the part of the caregiver [4, 5]. It is also generally acknowledged that caregiving can be a positive experience [6] and psychosocial factors such as optimism [7] and perceived support [8] may protect against caregiving stress.

Most of what is known about caregiving is based on research examining the experiences of female caregivers over the age of 50 who did not serve in the military. This is not surprising given that this group is most representative of the overall US caregiving population [9]. However, it is also important to understand the unique needs of older veteran caregivers, as a considerable proportion of this population has been exposed to past stressors such as combat, which may affect their caregiving experience [10]. Veterans may also have suffered physical and psychological injuries that may affect caregiving-related challenges, as well as rewards. It is estimated that 11% of all US caregivers have served in the military, representing a substantial proportion of people who may face added challenges as caregivers [9].

Although a large literature has shown that caregiving is perceived as both burdensome and rewarding [6, 11,12] and is related to negative mental [13] and physical health consequences [4], little is known about how early-life stressors relate to caregiving experiences. To date, only one study of which we are aware has evaluated whether experiencing trauma during

childhood influences the emotional demands of caregiving later in life. In that study, experiencing childhood adversity was associated with increased risk for depressive symptoms, inflammation (i.e., heightened interleukin-6 and tumor necrosis factor-α), as well as shorter telomeres in response to caregiving strain; these changes were indicative of a 7 to 15 year difference in life span between caregivers who reported childhood adversity and those who did not [14].

A former stressor that pertains uniquely to veterans and that may influence caregiving is combat exposure. Similar to the negative emotional effects of childhood adversity [15], numerous studies have shown that combat exposure may have long-term negative effects on veterans' mental health and their ability to regulate stress [16,17]. Following this logic, combat exposure may place veterans at increased risk for caregiving burden, although there is evidence that exposure to combat may also enhance veterans' resiliency to stress in later life [18-21]. A growing number of studies has shown that combat veterans can experience posttraumatic growth [22, 23], which is defined as "positive psychological change experienced as a result of the struggle with highly challenging life circumstances" [24]. This often includes a perception of increased personal strength, positive changes in one's views about life, spiritual development, and importantly, improved interpersonal relationships marked by more compassion and emotional connection [25]. The importance of interpersonal relationships for veterans' emotional resilience is also evidenced by research suggesting that combat exposure has positive effects on older veterans' mental and physical health when veterans report high generativity (i.e., increased interest in a world beyond the self and a desire to make a contribution to future generations) [26, 27]. This work, however, did not examine caregiving experiences.

The Potential Advantage of Grandparenting for Veterans

A prime example of generativity is caregiving, especially grandparenting, as grandchildren are likely to be minors with long lives ahead of them. In line with this idea, Hierholzer [10] wrote a letter to the Editor of the *American Journal of Psychiatry* regarding the potential benefits of veterans who care for grandchildren. He proposed that caring for grandchildren may be helpful, especially among combat veterans, for two central reasons. First, he argued that childcare may be an effective distraction from ruminative thinking because it is so demanding. He then gave an example of a veteran who stated that "the laughter" of his grandchildren is helpful; and another who indicated that knowing that his grandson would miss him prevents him from killing himself. Second, he discussed how veterans report that young children are unconditionally accepting and nonjudgmental, which may in turn help counteract their sense of personal guilt and of being judged by society as "baby killers". A goal of our study was to extend these case studies to evaluate the potential rewards of grandparenting in a large, nationally representative sample of older veterans in the United States.

The Present Study

We sought to examine the proportion of older veterans in the United States who are caregivers, and whether caregivers differed from non-caregivers with respect to socio-

demographic characteristics, combat exposure, mental and physical health, cognitive status, and psychosocial functioning. We also examined whether these factors, as well as caregiving aspects (i.e. hours and relationship type) were related to physical and emotional caregiving strain and perceived caregiving reward among older veteran caregivers. In particular, we tested the hypotheses that older veterans who were exposed to combat would experience less emotional strain than veteran caregivers not exposed to combat [18, 25]. We also tested the hypothesis as proposed by Hierholzer [10] and based on Erikson's theory of generativity [26, 27] that grandparenting would be particularly rewarding for older veterans.

Method

Participants

Data were drawn from the National Health and Resilience in Veterans Study (NHRVS), a nationally representative study of 3,157 U.S. veterans that was conducted in October-December 2011. The majority of this sample (n=2,025; 64.1%) was comprised of veterans aged 60 or older (mean age=71.0; SD=7.1; range=60-96); data from these respondents were analyzed in this study. The NHRVS sample was drawn from a research panel of more than 80,000 households that is developed and maintained by GfK Knowledge Networks, Inc., a survey research firm based in Menlo Park, CA. GfK Knowledge Networks, Inc. maintains KnowledgePanel®, a nationally representative sample of U.S. adults that includes cell-phone only households. Panel members are recruited through national random samples, originally by telephone and now almost entirely by postal mail. Households are provided with access to the Internet and computer hardware if needed. Unlike Internet convenience panels, also known as "opt-in" panels that include only individuals with Internet access who volunteer themselves for research, KnowledgePanel® recruitment uses dual sampling frames that includes both listed and unlisted telephone numbers, telephone and non-telephone households, and cell-phone-only households, as well as households with and without Internet access. Inclusion for the current study required that participants (1) self-identified themselves as veterans during their initial assignment to the panel by reporting that they had previously served in the U.S. Armed Forces, Military Reserves, or National Guard; and (2) that they were aged 60 or older. A total of 3,188 individuals in the full Knowledge Networks panel answered "Yes" to an initial screening question that confirmed veteran status: "Have you ever served on active duty in the U.S. Armed Forces, Military Reserves, or National Guard?" Of these, 3,157 (99.0%) completed the survey. To permit generalizability of study results to the entire population of U.S. veterans, post-stratification weights were applied based on demographic distributions (i.e., age, gender, race/ethnicity, education, Census region, and metropolitan area) drawn from the most recent (October 2010) Current Population Survey [28]. All participants provided informed consent and the study was approved by the local institutional review board.

Measures

Socio-demographic characteristics and combat exposure—All participants answered questions about socio-demographic (e.g., gender, education, income) and military (e.g. combat exposure) characteristics (see Table 1). Combat exposure was assessed by asking veterans: "Did you ever serve in a combat or war zone?"

Health, cognitive status, and psychosocial factors—Several physical health, mental health, cognitive, and psychosocial variables were assessed. In order to reduce the number of variables considered for inclusion in this study, particularly those that were highly correlated, we employed principal components analyses as a data reduction technique. Raw scores on each of the component measures were entered into these analyses; for example, for the *physical health difficulties factor*, number of medical conditions and scores on the Somatization scale of the Brief Symptom Inventory-18 were analyzed. Factors with eigenvalues >1.00 were extracted and the factor scores, which represent standardized scores, were analyzed in this study.

The *physical health difficulties factor* (eigenvalue=1.41, 70.5% variance explained) included (a) the number of medical conditions assessed by the sum of medical conditions endorsed (e.g., arthritis, cancer, diabetes, heart disease, asthma, kidney disease; range: 0-20 conditions; factor loading=.839); and (b) somatic symptoms (scores on the Somatization subscale of the Brief Symptom Inventory-18 [29]; factor loading=.839). Higher scores, which represent standardized factor scores, indicate greater physical health difficulties.

The *mental health difficulties* factor (eigenvalue=2.22, 74.1% variance explained) included (a) depression (factor loading=.901) and anxiety (factor loading=.905) symptoms (scores on Patient Health Questionnaire-4 [30]); and (b) PTSD symptoms (factor loading=.769; score on Posttraumatic Stress Disorder Checklist [31]). Higher scores, which represent standardized factor scores, indicate greater mental health difficulties.

Cognitive functioning was assessed with The Medical Outcomes Study Cognitive Functioning Scale-Revised (MOS-COG-R) [32]. Higher scores indicate better cognitive functioning.

Psychosocial variables were separated into two factors: *positive psychological* and *social support*. The *positive psychological* factor (eigenvalue=2.94; 58.8% variance explained) included (a) resilience (score on Connor-Davidson Resilience Scale-10 [33]; factor loading=.746); (b) purpose in life (score on Purpose in Life Scale-Short Form [34]; factor loading=.806); (c) dispositional gratitude (question: “I have so much in life to be thankful for” from the Gratitude Questionnaire-6 [35]; factor loading=.755); (d) happiness (question: “In general, I consider myself …” [Not a very happy person] … [A very happy person] from the Subjective Happiness Scale [36]; factor loading=.803); and (e) optimism (question: “In uncertain times, I usually expect the best.” from the Life Orientation Test-Revised [37]; factor loading=.719). Higher scores, which represent standardized factor scores, indicate greater positive psychological characteristics.

The *social support* factor (eigenvalue=1.61; 53.6% variance explained) included (a) structural social support (question: “About how many close friends and relatives do you have -- people you feel at ease with and can talk to about what is on your mind?”; factor loading=.662); (b) attachment style assessed by endorsement of one of three statements that best describes one’s feelings and attitudes in relationships: (1) feeling that it is easy to get close to others and feeling comfortable with them (secure); (2) feeling uncomfortable being close to others (avoidant); or (3) feeling that others are reluctant to get close (anxious/

ambivalent) [38]; factor loading=.764); and (c) perceived social support (score on an abbreviated 5-item version of the Medical Outcomes Study social support survey [39]; factor loading=.765). Higher scores, which represent standardized factor scores, indicate more social support.

Caregiving characteristics—Caregiving status was assessed with the question, "Do you provide personal care or other help on a regular basis for any persons other than yourself?" If participants said yes to the previous statement, they were asked who they cared for the most (response options: spouse, parents, siblings, children, grandchildren, other relatives, neighbors/friends), and how many hours a week they spent providing personal care to people other than themselves (responses were open-ended).

Caregiving physical strain, emotional strain, and reward—Caregivers indicated how much physical strain they experienced in taking care of the person (response options: no strain, some strain, a lot of strain). The same question was asked regarding emotional strain. Finally, respondents were asked how rewarding it was for them to take care of the person (response options: not at all rewarding, somewhat rewarding, very rewarding).

Analysis Plan

First, descriptive statistics were computed to summarize variables for the entire sample. To compare caregiving and non-caregiving veterans on all measures, we conducted χ^2 analyses for categorical variables and analyses of covariance (ANCOVAs) for continuous variables; socio-demographic characteristics that differed between caregiving and non-caregiving veterans were entered as covariates in the ANCOVAs.

Second, to examine how our hypothesized factors (combat exposure and caring for a grandchild vs. other), as well as other factors, were related to caregiving strain and reward, we conducted a series of multivariable logistic regression analyses among caregivers only. Separate models were used to evaluate determinants of physical strain, emotional strain, and reward. The following variables were entered simultaneously in each model: age, gender, education, marital status, income, combat exposure, caregiving hours, caring for a grandchild or other, and scores on physical health, psychological health, cognitive functioning, the positive psychological factor, and social support factor. When an independent variable that was a factor score (e.g., positive psychological factor) was found to be significantly associated with any of the outcomes, a post-hoc multivariable logistic regression analysis was conducted to examine which specific indicator variable(s) that loaded on this factor was associated with this outcome. To reduce the likelihood of making a Type I error, α was set to .01 for these analyses.

Results

Caregiving veterans versus non-caregiving veterans

As shown in Table 1, caregivers were more likely to be married and to have some college or higher level of education than non-caregivers, but they did not differ with respect to other socio-demographic, military, health, or psychosocial characteristics.

Caregiving characteristics

Four hundred and thirty one (weighted percentage=20.4%) veterans identified as caregivers. As shown in Table 2, most caregivers provided care to their spouses. The next most common care-recipients were neighbor(s)/friend(s), grandchildren, parent(s), children, other relative(s), and sibling(s). Caregivers provided an average of 18.9 caregiving hours per week, though there was substantial variability in this number. Whereas many caregivers reported no physical and emotional strain (60.8% and 46.8%, respectively), there were a substantial number of caregivers who reported at least some strain in these areas. The vast majority (95.8%) of caregivers reported that it was “somewhat” or “very” rewarding to provide care to their relative.

Determinants of caregiving strain and reward

As hypothesized, combat exposure was negatively associated with emotional strain; and grandparenting was associated with greater likelihood of endorsing a “very rewarding” caregiving experience relative to other caregiving types (see Table 3). Analyses also revealed the following significant determinants of physical and emotional strain, and reward:

Physical strain—Greater household income, caregiving hours, grandparenting, and greater physical health difficulties were associated with increased likelihood of physical strain, and the positive psychological factor with decreased likelihood of physical strain. Post-hoc analysis revealed that greater severity of somatic symptoms (Wald χ^2=7.75, df=1, p=.005; OR=1.09, 95%CI=1.02-1.15) was positively related to physical strain, while greater resilience was negatively related to physical strain (Wald χ^2=18.26, df=1, p<.001; OR=.92, 95%Cl=.88-.96). None of the other variables were associated with this outcome, all Wald χ^2’s<2.16, all p’s>.14.

Emotional strain—Non-white race, greater caregiving hours, and current mental health difficulties were associated with increased likelihood of emotional strain. Post-hoc analysis revealed that current depressive symptoms were independently related to emotional strain (Wald χ^2=10.86, df=1, p=.001; OR=1.59, 95%Cl=1.18-2.14). None of the other variables were significant, all Wald χ^2’s<3.28, all p’s>.07.

Reward—Greater caregiving hours, better cognitive functioning, and higher scores on the positive psychological and social support factors were associated with increased likelihood of a “very rewarding” caregiving experience. Post-hoc analysis revealed that higher trait gratitude (Wald χ^2=19.12, df=1, p<.001; OR=2.17; 95%CI=1.51-3.13), happiness (Wald χ^2=15.48, df=1, p<.001; OR=1.68; 95%CI=1.21-2.34), and perceived social support (Wald χ^2=16.65, df=1, p<.001; OR=1.18; 95%CI=1.11-1.26) were independently associated with this outcome. None of the other variables were significant, all Wald χ^2’s<2.09, all p’s>.14.

Discussion

We found that 1 in 5 older veterans in the United States are caregivers, which is comparable to the proportion of male caregivers in the US overall [9]. Yet, results suggested that some

of the experiences of older veteran caregivers are unique. As hypothesized, we found that combat exposure was associated with less emotional strain, even after adjustment for socio-demographic characteristics, health, and cognitive functioning. This finding, which is the first of which we aware to link combat exposure to caregiving strain, accords with prior research suggesting that exposure to trauma earlier in life may foster greater emotional resilience to later-life stressors [26], and possibly greater appreciation of interpersonal relationships [18-20, 25]. Experiencing a significant stressor such as combat might help engender a different perspective on emotional stress in relationships, as well as a greater appreciation of one's care-recipients. Not only does this finding suggest combat-related resilience and growth may benefit caregiving relationships for older veterans, it also adds to the debate about whether exposure to a former stressor is protective or harmful for older caregivers in general [14].

We also found support for our second hypothesis that having a care-recipient who was a grandchild compared to other types of care-recipients was associated with increased perceptions of caregiving-related reward. This finding provides support for Hierholzer's [10] proposition that grandparenting, despite its physical demands, may increase older veterans' sense of purpose and meaning, and possibly enhance their feelings of generativity. This suggests that, although all types of caregiving may provide distraction from rumination of combat experiences, grandparenting may be especially rewarding because it increases perceived generativity more so than other forms of caregiving, as grandchildren are children who are just beginning their lives.

Caregivers in our sample were almost entirely male, married, and highly educated. The finding that the majority of the sample was married may reflect that these caregivers were most likely to provide care to spouses. That they were more educated may reflect that they may have more socioeconomic resources than non-caregivers, fitting with past findings that male caregivers are more likely to provide financial support to care-recipients than female caregivers [9]. However, caregivers did not differ from non-caregivers with respect to health, cognitive, or psychosocial characteristics, suggesting these factors may not play a role in their decision to provide care or that caregiving may not be associated with such difficulties in this group. Most caregivers provided an average of 18.9 hours of care per week, which is comparable to the national average of 20.4 hours per week [9]. However, there was substantial variability in the number of caregiving hours reported (1 hour to 168 hours, SD= 27.1), thereby highlighting the heterogeneity of this group and of the types of support resources that they may require. Like most caregivers, older veterans viewed caregiving as both burdensome, as reflected by physical and emotional strain, as well as rewarding [11]. Although the majority of caregivers felt "very rewarded" in their caregiving role (67%), a considerable proportion also reported caregiving-related strain, with 39% of caregivers reporting at least some physical and 53% reporting at least some emotional strain. These figures are slightly lower than national averages of 56% of caregivers indicating at least some physical strain, and 75% reporting at least some emotional strain [9]. One interpretation for these results is that older veteran caregivers, who are predominantly male, may be less likely to experience or less willing to express vulnerability than female caregivers [41, 42]. This may also reflect, at least in part, the stoic mentality of this military cohort [43, 44].

Consistent with prior research on non-veteran samples, we also found that greater number of caregiving hours was associated with greater physical and emotional strain [45, 46], as well as perceived reward, suggesting that more time with a care-recipient can be both negative and positive. On the one hand, more responsibility for the care-recipient may increase stress, particularly if the care-recipient is suffering [47]. On the other hand, spending more time with the care-recipient may engender greater feelings of interpersonal commitment and closeness. We also found that mental health difficulties, specifically greater severity of depressive symptoms, were related to increased emotional strain [48], and that greater severity of somatic symptoms was related to increased physical strain [49]. Caregiving may be associated with added burden to those who are not coping well themselves [50]; alternatively, the emotional burden associated with caregiving may give rise to depressive symptoms. Likewise, having greater somatic difficulties may increase the physical burden of caregiving, and/or greater caregiving-related physical burden may exacerbate somatic symptoms [5]. Trait positivity, particularly gratitude and happiness [51], and perceived support [8] were also associated with increased perceptions of caregiving-related reward. This finding suggests that older veterans who are positive and feel adequately supported may perceive greater benefits from their roles as caregivers. Further, the finding that gratitude is related to caregiving reward is consistent with the notion that posttraumatic growth and generativity may enhance caregiving relationships (18, 25-27). Finally, non-white race was associated with more emotional strain, in contrast to past research showing that minority status is typically associated with lower reported caregiving burden [e.g., 52] or no reliable differences [see 53 for a review]. Further research will be useful in evaluating factors associated with minority veteran caregivers' perceiving more strain than minority non-veteran caregivers. Of note, in our sample, minority caregiving veterans scored higher on the mental health difficulties factor than non-minority caregiving veterans (M=.51, SD=1.83 vs. M=.03, SD=.96; $t(429)$=3.06, p=.002). Thus, greater mental health difficulties may engender greater emotional caregiving strain among minority caregivers or alternatively, greater emotional caregiving strain may engender greater mental health difficulties in this subset of the older veteran population. Taken together, these findings highlight that both the caregiving context (i.e., hours, relationship type) and caregivers' attitudes may contribute to strain and reward [54]. Further, that physical or cognitive difficulties did not dissuade veterans from providing care to their family members suggests that older veterans should be included as an important care resource in our aging society.

A limitation of this study is that there is not information about the type of health conditions that led to caregiving. It will be important to assess this information in future research, as some conditions, such as Alzheimer's disease, may be more burdensome for caregivers than others [55]. Future research could also examine among veteran caregivers multiple caregiving roles, which has been associated with additive caregiving stress, especially among the "sandwich generation" in which adults are taking care of both their parents and their children [56]. Another future direction is to examine the prospective relation between caregiving and health outcomes. With cross-sectional data, it is not possible to determine whether caregiving influences health outcomes or vice versa. Finally, collection of detailed information about older caregiving veterans' needs, as well as their feelings of post-traumatic growth and generativity, will be useful in elucidating the mechanisms underlying

the relation between earlier life stressors such as combat and caregiving-related strain in later life.

In summary, this study is the first to our knowledge to examine the caregiving experiences of older veterans and how the former stressor of combat exposure may impact these experiences. Overall, we found that there are a substantial number of older male veteran caregivers who perceive caregiving to be both burdensome and rewarding. Further, combat exposure was inversely related to caregiving-related emotional strain, suggesting that significant early-life stressors may help confer greater resilience to the emotional demands of caregiving in older age. Finally, we found that for veterans in general, grandparenting is associated with higher rewards than other forms of caregiving. Understanding the unique aspects of older veterans' caregiving experiences is important in light of a recent Department of Veterans Affairs initiative to alleviate caregiver burden [57]. This initiative has focused on the needs of family caregivers of veterans through interventions, support groups, online resources, and telephone hotlines. Veterans, especially those who provide care to their family members, may also benefit from these resources.

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Table 1

Veteran characteristics: Caregivers versus non-caregivers

	Caregivers raw n (weighted % or mean [SD])	Non-caregivers raw n (weighted % or mean [SD])
N	431 (20.4%)	1585 (79.6%)
Demographics		
Age	71.0 (7.4)	71.0 (7.0)
Male gender	416 (97.3%)	1537 (96.0%)
Caucasian race/ethnicity	369 (81.7%)	1431 (85.4%)
Some college or higher education*	381 (74.9%)	1347 (65.2%)
Married/living with partner*	371 (85.8%)	1247 (75.6%)
Retired	348 (81.5%)	1190 (80.1%)
Metropolitan residence	356 (80.4%)	1331 (80.9%)
Household income>$60K	218 (43.9%)	796 (38.5%)
Military characteristics		
Enlisted in military	340 (76.2%)	1255 (79.4%)
Branch		
Army	180 (40.9%)	680 (41.3%)
Navy	93 (25.1%)	371 (25.0%)
Air Force	114 (23.4%)	388 (23.8%)
Marine Corps	33 (8.2%)	91 (5.7%)
Other Branch	11 (2.4%)	55 (4.2%)
Combat Veteran	179 (39.7%)	612 (37.6%)
Health characteristics[a]	Mean (SD)	Mean (SD)
Physical health difficulties factor	.14 (1.7)	.03 (1.2)
Mental health difficulties factor	.11 (1.7)	.08 (1.2)
Cognitive functioning	89.5 (22.8)	90.8 (15.9)
Psychosocial characteristics	Mean (SD)	Mean (SD)
Positive psychological factor	.03 (1.0)	-.01 (1.2)
Social support factor	.05 (1.2)	-.02 (1.2)

Note. SD=standard deviation. degrees of freedom for F statistics=1,704; degrees of freedom for chi-squared tests=1;

*Groups differ significantly, p<.05. Continuous variables were compared using analyses of covariance; and categorical variables were compared using chi-squared tests.

[a]Means are adjusted for education and marital status.

Table 2

Caregiving descriptives among older veteran family caregivers (n=431)

	Raw n (weighted % or mean [SD])
Relationship type of care recipient	
Spouse	212 (49.6%)
Neighbor(s)/friend(s)	54 (13.7%)
Grandchildren	46 (11.7%)
Parent(s)	53 (9.1%)
Children	26 (7.1%)
Other relative(s)	30 (6.0%)
Sibling(s)	9 (2.8%)
Hours per week providing care	18.9 (27.1)*
Physical caregiving strain	
No strain	248 (60.8%)
Some strain	169 (37.3%)
A lot of strain	11 (1.9%)
Emotional caregiving strain	
No strain	205 (46.8%)
Some strain	180 (44.9%)
A lot of strain	40 (8.3%)
Positive appraisal of caregiving	
Not at all rewarding	19 (4.2%)
Somewhat rewarding	129 (28.4%)
Very rewarding	281 (67.4%)

Notes. SD=standard deviation.

*Range= 1-168 hours per week

Table 3

Logistic regression models predicting caregiving physical strain, emotional strain, and positive appraisal

	Physical strain			Emotional strain			Positive appraisal		
	Wald χ^2(df=1), p	**OR**	**95% CI**	**Wald χ^2(df=1), p**	**OR**	**95% CI**	**Wald χ^2(df=1), p**	**OR**	**95% CI**
Age	.05, .82	1.00	.96-1.03	.72, .40	.99	.95-1.02	.55, .46	1.01	.98-1.05
Male gender	.00, .95	1.05	.20-5.53	1.14, .29	2.37	.49-11.52	1.44, .23	3.96	.42-37.48
White race	2.34, .13	0.61	.33-1.15	**8.76, .003**	**.38**	**.20-.72**	.30, .58	1.22	.60-2.45
Some college or higher education	.01, .92	1.03	.57-1.85	.79, .37	1.30	.72-2.34	.42, .52	1.25	.63-2.49
Married/living with partner	.06, .80	1.10	.53-2.25	.03, .86	.94	.46-1.89	1.13, .29	1.52	.70-3.31
Household income ≥ $60,000	**3.91, .048**	**1.70**	**1.01-2.86**	2.98, .08	1.57	.94-2.61	.59, .44	.79	.44-1.43
Combat veteran	1.06, .30	.77	.46-1.27	**4.19, .041**	**.59**	**.36-.98**	.01, .91	.97	.55-1.71
Hours caregiving	**17.64, <.001**	**1.03**	**1.01-1.04**	**13.65, <.001**	**1.03**	**1.01-1.04**	**6.16, .013**	**1.02**	**1.01-1.03**
Grandchild as recipient	**4.95, .026**	**2.32**	**1.11-4.89**	2.10, .15	1.78	.82-3.88	**9.60, .002**	**5.25**	**1.84-14.97**
Physical health factor	**5.44, .020**	**1.41**	**1.06-1.88**	2.05, .15	1.23	.93-1.64	2.01, .16	1.27	.91-1.77
Mental health factor	2.32, .13	.80	.61-1.07	**12.51, <.001**	**1.68**	**1.26-2.25**	.00, .96	.99	.69-1.42
Cognitive functioning	.92, .34	.99	.96-1.01	.01, .91	1.00	.97-1.02	**7.91, .005**	**1.04**	**1.01-1.08**
Protective psychological factor	**9.48, .002**	**.60**	**.43-.83**	3.24, .07	.74	.54-1.03	**23.59, <.001**	**2.62**	**1.78-3.87**
Social support factor	.42, .52	1.09	.84-1.43	.24, .62	.94	.72-1.22	**12.89, <.001**	**1.76**	**1.29-2.39**

Note. OR=odds ratio; 95%CI=95% confidence interval.
Statistically significant ORs are highlighted in bold font.