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Accentuate the positive: The association between informal and formal supports and caregiving gains

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Abstract

Background: To promote resilience among caregivers for persons living with dementia (PLWDs), we examine how formal and informal supports are linked to caregiving gains, and whether gender moderates the association between supports and gains.

Methods: Using the National Health and Aging Trends Study and associated National Study of Caregiving, sources of informal (emotional support, practical support, and help with the PLWD) and formal support (respite care, training program, support group) are considered as predictors of caregiving gains, with gender as a moderator of these associations. The sample included 707 caregivers for 502 PLWDs.

Results: Greater caregiving gains were significantly associated with emotional support from friends/family ($\beta=0.14$, $SE=0.09$, $p=.03$). Further, attending a caregiver training program was only associated with increased caregiving gains among men ($\beta=0.11$, $SE=0.08$, $p=.02$).

Conclusions: Emotional support from family/friends appears particularly consequential for caregiving gains, and male caregivers may benefit most from programs that emphasize skill building.

Keywords

dementia caregiving; caregiving gains; informal support; caregiving support services

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Stress, burden, and depression have been well documented in dementia caregivers (Pinquart & Sorensen, 2003a). However, the majority of caregivers are able to identify at least one positive result of providing care such as increases in emotional growth, life purpose, and patience (Cohen, Colantonio, & Vernich, 2002). While positive outcomes are important to caregivers' well-being, maintenance of the care role, and have implications for interventions, they have received less empirical attention (Mausbach et al., 2004; Pinquart & Sorensen, 2003b; Quinn & Toms, 2018; Rapp & Chao, 2000). To promote positive outcomes among dementia caregivers, it is important to understand facilitators of the experience of gains. The Stress Process Model of caregiving posits that sources of social support may moderate the effect of caregiving outcomes (Pearlin, Mullan, Semple, & Skaff, 1990). Yet a better understanding of how these supports are related to caregiving gains is needed and may support advocacy for funding for services or incorporation into multi-component interventions. The aim of the current study is to extend prior research by exploring how individual sources of informal and formal supports are associated with caregiving gains, and whether these associations vary by gender.

Caregiving gains.

Positive aspects of caregiving, or caregiving gains, is a multidimensional construct defined in an integrative review as perceived benefits of the care role or ways that care positively influences the caregiver's life (Yu, Cheng, & Wang, 2018). This may include dimensions of: knowing the care recipient is well cared for, feeling appreciated for care, sense of life purpose, and enhanced relationship quality (Cohen et al., 2002; Kramer, 1997; Yu et al., 2018). Given the complexity and multidimensionality of caregiving gains, researchers suggest that one underlying theoretical paradigm may not fully explain the construct (Kramer, 1997; Yu et al., 2018). However, the Meaning Making Model (Park, 2013) posits that individuals utilize meaning-focused coping to reappraise how one looks at stressful situations considering the internal growth such a challenge may develop. A new life purpose, increased relationship quality, and other components of caregiving gains may reflect this reappraisal. Gains are a critical outcome to consider as they can buffer against negative caregiver outcomes, delay institutionalization, improve quality of care provision, increase quality of life, and may be modifiable through intervention (Cohen et al., 2002; Mausbach et al., 2004; Pinquart & Sorensen, 2003b; Quinn & Toms, 2018; Rapp & Chao, 2000).

Social supports for caregivers and care outcomes.

In the current study, we consider whether sources of support, formal services and social support, are associated with increased caregiving gains. With the Stress Process Model (Pearlin et al, 1990), the Transactional Model of Stress and Coping may theoretically explain an association of services and supports with caregiving gains. Lazarus and Folkman's (1984) model suggests that individuals experience stress based on an appraisal of whether their resources are sufficient to cope with a challenge. Caregiving gains may constitute a positive second appraisal after successful coping with the initial challenge (Yu et al., 2018). Supports and services that increase caregivers' efficacy and adaptive care management strategies may therefore build caregivers' coping resources leading to more appraised gains.

Social support is a multidimensional construct, defined through Cohen's theory as social resources available and/or provided to an individual by non-professionals, such as instrumental (e.g. tangible support), emotional (e.g. empathy or encouragement from friends/family), or informational support (e.g. advice or guidance) (Gottlieb & Bergen, 2010). Broad scales of perceived social support encompassing these multi-dimensions have been found to reduce burden in dementia caregivers (Han et al., 2014). Additionally, social support moderates the association between stressors of care (e.g. PLWD cognitive decline) on caregiver burden, depression, and anxiety such that stressors impacted negative mental health symptoms more when caregiver's had low levels of social support (Li et al., 1997; Wang et al., 2018). However, less is known about whether specific types of social support received by caregivers (e.g. facets of instrumental or emotional support) are associated with caregiving gains. Yet, family members and friends may promote gains by encouraging caregivers, offering appreciation, boosting confidence, or instrumentally providing aid (Shirai, Silverberg Koerner, & Baete Kenyon, 2009).

Indeed, a Delphi consensus study identified social support as a key factor that facilitated resilience (Joling et al., 2017). Emotional support specifically has been associated with increased caregiving satisfaction and well-being (Harwood et al., 2000; Kaufman et al., 2010). However, we identified few studies that examined the relationship between social support and caregiving gains, with effects varying by demographic context. Cho, Ory, & Stevens (2016) found that for White caregivers, satisfaction with social support was most impactful, whereas for Black caregivers, actual received social support was associated with positive aspects of care. Increased satisfaction with social support received, as targeted through intervention, was associated with greater gains for spousal and adult-child caregivers, however an increase in the actual amount of help provided was only associated with gains among adult-child caregivers (Savundranayagam, 2014). Further, emotional support offered by family members, but not friends, was associated with greater experiences of caregiving gain (Shirai et al., 2009). Given that gender may affect the receipt and benefit of social support, we sought to explore the associations of specific facets of emotional and instrumental support with caregiving gains, and to see whether that association varied by gender.

Formal support services and caregiving outcomes.

In addition to informal supports, formal support services can also mitigate the impact of stressors on negative care outcomes. Community agencies and health centers commonly provide services to support caregivers such as caregiver support groups, respite care, or training programs, though availability and financial aid may vary. In fact, over 40% of caregivers state they could not care for a care recipient at home without the use of support services and over 75% say these services help them provide care over a longer period of time than they would otherwise be able (Department of Health and Human Services, 2019). Respite care, such as Adult Day services, is generally reported by caregivers to be most helpful (Department of Health and Human Services, 2019). Adult day services have been shown to reduce care-related stressors, lower anger and depressive symptoms, and even normalize physiological responses such as diurnal cortisol patterns (Klein et al., 2014; Zarit, Kim, Femia, Almeida, & Klein, 2014). Two recent reviews suggest that respite programs are

efficacious in reducing caregiver burden, behavioral and psychological symptoms of dementia among care recipients, and in some cases, decrease time to institutionalization (Tretteteig, Vatne, & Rokstad, 2016; Vandepitte et al., 2016).

Support groups have also been shown to reduce depressive symptoms and delay key transitional outcomes such as institutionalization among dementia caregivers (Brodaty, McGilchrist, Harris, & Peters, 1993; Winter & Gitlin, 2007). Considering support groups and educational programs as one combined resource, Liew et al. (2010) found that caregiver attendance at educational support programs was associated with more caregiving gains (i.e. personal growth and higher order gains such as altruism) among dementia caregivers. These programs may increase caregiver's knowledge and applied skills, lead to inspiration from other group members for new support strategies, and offer mutual emotional understanding among group members. Indeed, two recent reviews of online and in-person dementia caregiving training programs found that these programs increased caregiver's self-efficacy and coping skills and reduced a range of stress outcomes, but a better understanding of how they may be associated with caregiving gains is needed (Egan et al., 2018; Sousa, Sequeira, Ferré-Grau, Neves, & Lleixà-Fortuño, 2016).

Gender differences in care management and outcomes.

Meta-analysis results suggest that utilization of informal and formal supports do not differ significantly by gender (Pinquart & Sörensen, 2006). However, men and women may be impacted by care and respond to supports and services differently, thus we also seek to understand whether gender moderates the association between sources of support utilized and caregiving gains. For example, relative to male caregivers, women caregivers report more burden, strain, depressive symptoms, worse mental and physical health, and participate in fewer positive health behaviors (Gibbons et al., 2014; Robinson, Bottorff, Pesut, Oliffe, & Tomlinson, 2014). However, it has been posited that men may be less likely to disclose depressive symptoms and feelings of burden, and thus could have more of these symptoms than it appears (Robinson et al., 2014). The benefit male and female caregivers ascertain from supports and services may also differ.

A review on gender differences in care found that men tended to appreciate the sharing of helpful advice and feedback in a support group setting more than emotional disclosure (Mc Donnell & Ryan, 2011). One study found that female caregivers received fewer hours of assistance with care, though men and women reported equal satisfaction with the support they received (Gibbons et al., 2014). Reviews of gender differences in care suggest that men might be more likely to seek support services in face of a crisis, considering it as a "concession", and thus what they stand to gain from such services (e.g. respite or training to manage a specific care challenge versus emotional and social support) may differ from women (Carpenter & Miller, 2002; Mc Donnell & Ryan, 2011). However, in general studies examining gender differences in the effects of forms of formal and informal supports are limited, and it is unknown whether the association between receipt of supports and services with positive aspects of caregiving such as caregiving gains differs by gender (Pinquart & Sörensen, 2006). A recent review of National Institutes of Health funded caregiver interventions, for example, reported that more than two-thirds of studies did not report

differences by gender, yet among the few studies that did, more than half found significant differences (Gilmore-Bykovskiy, Johnson, Walljasper, Block, & Werner, 2017). Importantly, adapting effective caregiver support programs by gender was a key recommendation that came out of the 2017 National Institute on Aging Research Summit on Dementia Care on building evidence for services and supports (Gitlin & Maslow, 2018).

Thus, understanding whether gender moderates the association between supports and services with caregiving gains is key as in order to promote resilience among caregivers and determine how we might target and tailor services and supports based on contextual factors such as gender. Using the National Health and Aging Trends Study (NHATS) and associated National Study of Caregiving (NSOC), we consider sources of informal and formal support as predictors of caregiving gains. As informal and formal supports can provide respite, bolster resources and skillsets, and provide emotional support, we hypothesize that both informal and formal sources of support will be associated with greater caregiving gains. We additionally consider whether gender may moderate the association between supports and gains and hypothesize that task-oriented service approaches such as training programs or respite care may be particularly helpful to men's experience of gains.

Methods

Procedures and Sample

Data are drawn from the 2011 National Study of Caregiving (NSOC) which is affiliated with the 2011 National Health and Aging Trends Study (NHATS). NHATS samples a nationally representative group of Medicare beneficiaries who are 65 years of age and older. During the NHATS 2011 in-person interview, participants are asked if an unpaid family member or non-family helper provided them with assistance on household chores, mobility or self-care tasks. If so, NHATS participants gave the names of individuals who helped them with these tasks. If more than 5 names were listed, 5 were randomly selected for inclusion in NSOC such that each care recipient included in NSOC could have up to 5 caregivers represented. As we were specifically interested in caregivers for PLWD, we selected caregivers of the 502 NHATS participants classified with probable dementia. A classification of probable dementia is based on report of a diagnosis, scores on the AD8, and performance on other tests as described by Kasper and colleagues (2013a). Of the 2007 caregivers in the NSOC study interviewed by telephone, 1268 were excluded due to not providing care for an individual with probable dementia, and an additional 34 were excluded due to missing data on study variables. Thus the current study includes 705 caregivers of PLWD with complete data on all study variables and covariates. University of Michigan IRB policies do not require ethical approval as only publicly available secondary data was analyzed with no known identifiers.

Measures

Outcomes.—Caregiving gains was measured with a mean score on a four item scale affirming whether caregiving “gives confidence in abilities, helps you deal better with difficult situations, helps bring you closer to the care recipient, and helps you feel satisfied

that your care recipient is well cared for” on a likert scale of 0 (not so much) to 2 (very much) ($\alpha=0.70$).

Covariates.

Controls.: Caregivers’ age in years, gender (female=1, male=0), education (college or greater, high school, with less than high school as reference), employment (employed=1, not employed=0) and relation to the care recipient (spouse, child, with other as reference) were considered as controls. Caregivers’ provision of activities of daily living (ADL) and mobility support and instrumental activities of daily living (IADL) support were also considered as separate covariates. Caregivers provided IADL support on up to 5 activities including laundry, shopping, meals, finances, and medications (summed score of areas of assistance; range 0–5). Caregivers provided ADL and mobility support on up to 7 activities including eating, bathing, toileting, dressing, mobility outside, mobility inside, and help in and out of bed (summed score of areas of assistance; range 0–7).

Caregiver informal and formal support resources.: We examined three informal and three formal supports that caregivers could report receiving. Informal supports included having friends or family to: talk to about important things in life, help with daily activities (such as running errands), and help in care provision for the care recipient. Formal supports included three services caregivers endorsed as having used in the past year, including a support group for people who provide care, a respite service that helped the caregiver take time away from care provision, and a training program that helped the caregiver take care of the care recipient. All responses indicated whether or not the caregiver received the support [yes (1) or no (0)].

Statistical Analysis

First, descriptive statistics were run for all study variables and frequency of formal and informal supports are reported. Next, linear regressions were run with survey procedures such that all models were weighted with the NSOC caregiver sampling analytic weight to adjust for differential probabilities of survey design and sample selection (Kasper, Freedman, & Spillman, 2013b). Clustering and stratification of the sample design are also accounted for such that standard errors are computed appropriately. Linearity assumptions and collinearity diagnostics were tested on study variables and found acceptable. Model 1 includes all controls and each informal and formal support as an individual predictor of caregiving gains. Model 2 includes interactions to test whether gender moderates the association between each of the informal and formal supports and caregiving gains. All interaction terms were entered one by one and insignificant interaction terms were trimmed for parsimony of the final model. Unstandardized and standardized coefficients are provided for individual predictors and an F test is presented for overall goodness of fit of the models.

Results

Caregivers were 57 (SE= 1.16) years old on average, nearly two-thirds were female (63.7%), and assisted with approximately two ADLs (1.6, SE=0.1) and IADLs (2.4, SE= 0.1). Full sample characteristics are reported in Table 1. Caregivers reported higher receipt of informal

support than utilization of formal supports. The most commonly reported informal support was having friends and family to talk to (86.2%), followed by having friends and family to help with the care recipient (76.5%), and friends and family to help with household activities (55.7%). Whereas more than half of all caregivers received each informal support, only one in five had used a respite service in the past year (21.6%), with even less having received a care training (8.7%) or attending a support group (5.3%). Rates of service use by gender were similar, however more women reported having friends and family to talk to (91 vs 82%), whereas more men reported receiving tangible sources of support (e.g. help with the care recipient 82% vs 74%; full gender comparisons provided in Table 2).

As shown in Model 1 (Table 3), caregivers who provided more ADL assistance ($B=0.03$, $\beta=0.12$, $SE=0.01$, $p=.04$), and had friends and family to talk to ($B=0.20$, $\beta=0.14$, $SE=0.09$, $p=.03$) reported more caregiving gains. Caregivers with college ($B=-0.29$, $\beta=-0.26$, $SE=0.07$, $p<.001$) and high school ($B=-0.12$, $\beta=-0.12$, $SE=0.06$, $p=.047$) education had less caregiving gains relative to those with less than a high school education. None of the formal supports had a significant main effect on caregiving gains. However, in Model 2, after trimming for insignificant interactions, a significant gender by training program interaction was found ($B=-0.42$, $\beta=-0.20$, $SE=0.16$, $p=.01$; Figure 1). The interaction revealed that having attended a caregiver training program in the past year was associated with greater caregiving gains for male caregivers ($B=0.19$, $\beta=0.11$, $SE=0.08$, $p=.02$) but not female caregivers ($B=-0.21$, $\beta=-0.12$, $SE=0.13$, $p=.10$). Thus, attending a training was associated with an increased gains score of 0.19 for men (scale range 0–2).

Discussion

In the current study, receipt of informal support was very common for dementia caregivers while past year formal service use was much less common. Even with high informal support in the sample, however, almost a quarter of caregivers reported not having someone to help them with care tasks for the care recipient, and almost half didn't have any help with household tasks. Male caregivers reported receiving slightly more tangible social support (e.g. help around the house), whereas more female caregivers reported having friends and family to talk to. Emotional support from family and friends appears particularly consequential for caregiving gains. Having friends and family to talk to was linked with caregiving gains over and above other types of formal and informal support and demographic controls. Therefore, those who did not have friends and family to talk to (14%) may be more isolated and in particular need of intervention and support.

On the other hand, receipt of formal care support services was significantly less common. For example, only 5% attended a support group in the prior year and approximately 9% had attended a caregiving specific training program. While small numbers may limit the ability to find a significant main effect of each type of service utilization on caregiving gains and in line with prior research we did not find a gender association with caregiving gains, we did find a significant interaction (Rapp & Chao, 2000). A crossover interaction is found, in spite of insignificant main effects, when the effect of the main effect is opposite depending on the value of the modifier (Loftus, 1978). In our case caregiving training programs were related to more gains for male, but not for female caregivers. Men typically have a more

instrumental and managerial approach to caregiving (Carpenter & Miller, 2002; Corcoran, 1992). Thus men may be more likely to participate in a training focused on skill building, and this approach may result in more experienced gains for men if it aligns with their natural care style. For example, a popular caregiving manual among men is the “Coach Broyles’ Playbook for Alzheimer’s Caregivers” which uses a “no-nonsense”, sports playbook style approach to offer practical skill-building tips (Broyles, 2006). This finding is consistent with work by Gant, Steffen, and Lauderdale (2007) who interviewed male caregivers and found they preferred skill building workshops and trainings to more emotion focused interventions.

Yet, an equal proportion of male and female caregivers in our sample attended a caregiver training (9%), and future work might consider how to best target and recruit male caregivers to these programs given their propensity to experience greater caregiving gains. Recruiting men for these programs through local service clubs or medical appointments, rather than through other services like support groups (which only 4% of our male sample had attended) may be more effective. Of note, Robinson et al. (2014) suggest that men noticed and recognized symptoms as stemming from dementia later in the disease course than female caregivers, and thus tended to seek formal assistance more quickly once this was recognized. Thus, physicians providing a dementia diagnosis to a care recipient of a male caregiver may utilize this time to preemptively suggest skill-based community programs that may be of benefit to male caregivers. Ensuring that programs which include male caregivers have applied skill building elements may encourage them to attend and be most helpful to increase confidence and efficacy in the care role. Further, our 4-item measure of gains, though short, aligns well with Park’s Meaning Making Model (2013) of reappraising stressors in light of growth. Thus training programs might also aim to guide caregivers towards recognizing how new skills may apply to other areas of the caregiver’s life or grow confidence in one’s abilities to enhance the experience of caregiving gains. Additionally, as the interaction did not suggest an association between a training program for women caregivers and greater caregiving gains, future intervention studies might consider how these trainings can be adapted and individualized such that all participants derive benefit. Other positive outcomes such as reduced burden or overload, however, may have had varying effects across gender but were not examined.

While prior research suggests gender differences in preferences for, receipt of and benefit from supports (Carpenter & Miller, 2002; Chen, 2014; Gibbons et al., 2014; Mc Donnell & Ryan, 2011), we did not find significant interactions between gender and other sources of formal and informal support in predicting caregiving gains. Even though men reported less friends and family to talk to, this type of support had a main effect with caregiving gains suggesting equal benefit to both men and women. Previous studies suggest differences in the impact of received versus perceived support (Cho, Ory, & Stevens, 2016; Savundranayagam, 2014). For example, Savundranayagam found that increases in both received and perceived support were associated with caregiving rewards among adult-children, but only increases in perceived support mattered for spouse caregivers. Similarly, in association with positive aspects of caregiving Cho and colleagues found that received support was beneficial for Black caregivers while satisfaction with support was more important with White caregivers. While our items asked whether they had the various types of social support or used the different formal supports in the past year, it may be that gender differences would have been

found regarding satisfaction with the supports received, not just availability. The small number of caregivers utilizing support groups and respite care may limit the power to detect such effects and interactions. Further we don't know at what point during the prior year or for how long caregivers utilized such services, the intensity of informal support, or the network size.

In the current study, provision of more ADL assistance, lower education, and employment were also associated with caregiving gains. It may be that more intensive care contexts (e.g. decline of the PLWD, more care provision) allow for the experience of greater gains, or that caregivers who provide more assistance cope by focusing on the gains they experience. This finding also aligns with prior research showing an association between a higher number of medical/nursing tasks (e.g., administering injections, wound care) and greater caregiving gains (Polenick, Leggett, & Kales, 2017). Similarly, employed caregivers may spend less time in direct care and experience job-care conflicts leading to less experienced gains (Pearlin et al., 1990). Further, caregivers with low educational attainment may have more to gain from caregiving. This aligns with intervention research showing that caregivers with lower education levels gained more from the intervention (Gitlin et al., 2003).

Limitations

There are several limitations to this study that should be mentioned. First, the analysis was a cross-sectional design and thus we cannot imply that supports lead to positive outcomes. We don't know when in the past year individuals used these services and there is the potential for recall bias towards more recent utilization of informal and formal support. Caregiver race was not measured in the 2011 NSOC wave and thus racial differences in gains and supports should be considered in future research. The caregiving gains measure was a small scale thus findings should be replicated with a more robust measure of gains. Due to the small number of training service users, the interaction may be biased or overestimated. Future studies examining the efficacy of caregiver training programs might specifically evaluate gender differences to better understand key components that might increase gains for men and for women.

Though we only included caregivers of individuals with probable dementia in our sample, NSOC was not designed to assess caregiving for PLWD specifically, and thus we were unable to consider some dementia specific aspects of the care context that may relate to caregiving gains (e.g. behavioral and psychological symptoms of dementia). Further, multiple caregivers per care recipient can be included in NSOC and how these care partners collaborate to provide care is not detailed. Support items were not asked regarding dementia specifically and thus caregivers may have attended a broader caregiver training program as opposed to a dementia focused one. Despite these caveats, this study adds to prior literature by drawing from a nationally representative survey of Medicare eligible adults and considers specific types of informal and formal supports as they may associate with caregiving gains with enough men to test for gender interactions.

In conclusion, this study suggests that having family and friends in whom to confide may be important for all caregivers, and for men in particular, skills-based programs may lead to

more caregiving gains. While two-thirds of dementia caregivers are women, the number of men taking on this role is substantial and it is critical to understand how to individualize services and supports to best meet the needs of all (Alzheimer's Association, 2019). Though a caregiving role may be new to them, Mc Donnell and Ryan (2011) have found men are willing and eager to improve their ability to provide personal care. Thus, primary care providers and other practitioners involved with the care dyad should stay attentive to psychosocial needs such as support networks of the dyad and community resources that can offer a combination of emotional and tactical support.

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Figure 1.
Gender as a Moderator of the Association between Past Year Caregiving Training Program Attendance and Caregiving Gains

Table 1.

Sample characteristics for caregivers of persons living with dementia, National Study of Caregiving (2011); (N = 705)

Variable	Mean or %	Standard Error	Range
Age	57.33	1.16	18–95
Female	63.72		
Education			
Less than high school	11.41		
High school	63.44		
College	25.15		
Employed	45.36		
Relation to PLWD			
Spouse	15.61		
Adult child	55.38		
Other	29.01		
Married or Living with Partner	66.90		
Number in household	2.79	0.11	1–12
Assistance with IADLs	2.37	0.10	0–5
Assistance with ADLs and mobility tasks	1.62	0.14	0–7
<i>Informal support</i>			
Friends and family to talk to	86.18		
Friends and family to help with activities	55.68		
Friends and family to help with the care recipient	76.48		
<i>Formal support</i>			
Support group	5.25		
Respite service	21.62		
Training	8.72		
Caregiving gains	1.53	0.03	0–2

Table 2.

Utilization of Informal and Formal Sources of Support by Gender

	Male (N, %)	Female (N, %)	χ^2, p
<i>Informal support</i>			
Friends and family to talk to	178, 82%	442, 91%	10.35**
Friends and family to help with activities	133, 61%	284, 58%	0.59
Friends and family to help with the care recipient	177, 82%	362, 74%	4.55*
<i>Formal support</i>			
Support group	9, 4%	25, 5%	0.31
Respite service	46, 21%	119, 24%	0.85
Training	20, 9%	45, 9%	0.00

Note. The sample includes 217 male and 488 female caregivers.

*
 $p < .05$,

**
 $p < .01$,

 $p < .001$.

Table 3.

Gender as a Moderator of the Association of Informal and Formal Caregiving Supports with Caregiving Gains

	Caregiving Gains					
	Model 1			Model 2		
	B	β	SE	B	β	SE
Intercept	1.45***	0.00	0.13	1.43***	0.00	0.13
Age	-0.00	-0.03	0.00	-0.00	-0.00	0.00
Female	0.04	0.04	0.06	0.08	0.08	0.06
Education ^a						
College	-0.26***	-0.23	0.06	-0.25***	-0.22	0.06
High School	-0.11	-0.11	0.06	-0.10	-0.10	0.06
Employed	-0.09*	-0.09	0.04	-0.09*	-0.09	0.04
Relation to PLWD ^b						
Spouse	0.04	0.03	0.10	0.03	0.03	0.10
Child	0.03	0.03	0.06	0.03	0.03	0.06
IADL support	0.02	0.06	0.02	0.01	0.05	0.02
ADL support	0.03*	0.12	0.01	0.03	0.11	0.01
Friends and family to talk to	0.20*	0.14	0.09	0.18*	0.13	0.09
Friends and family to help with activities	0.03	0.03	0.05	0.03	0.03	0.07
Friends and family to help with PLWD	0.03	0.03	0.06	0.03	0.03	0.07
Attended support group	-0.10	-0.04	0.13	-0.08	-0.04	0.11
Utilized respite care	-0.10	-0.08	0.05	-0.10	-0.09	0.05
Attended caregiver training program	-0.06	-0.04	0.09	0.21*	0.12	0.08
Gender*training program	--	--	--	-0.42*	-0.20	0.16
<i>Goodness of Fit</i>						
Cohen's f^2	0.01			0.01		
F(df)	3.93(15), $p < .001$			4.08(16), $p < .001$		

Notes. Model 1 includes all covariates, Model 2 includes the significant gender by training program interaction, other insignificant interactions were removed for parsimony of the final model;

* $p < .05$,

** $p < .01$,

*** $p < .001$;

B= beta estimate, β = standardized beta estimate, SE= standard error for unstandardized estimates, PLWD= person living with dementia;

^a less than high school is the reference group;

^b other relation to PLWD is the reference group; less than high school is the reference group