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The impact of both spousal caregivers' and care recipients' health on relationship satisfaction in the Caregiver Health Effects Study

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Abstract

This study examined, with a sample of older adult, caregiving couples, whether each spouse's health was associated with their own and their partner's relationship satisfaction. Dyads ($n = 233$; age = 64–99 years) in the Caregiver Health Effects Study, ancillary to the Cardiovascular Health Study, reported relationship satisfaction, depressive symptoms, disability, and self-reported health. The cross-sectional Actor–Partner Interdependence Model showed that for both caregivers and care recipients, greater depressive symptoms and lower self-reported health related to lower relationship satisfaction (actor effects). Caregivers had lower relationship satisfaction when they were more disabled (actor effect) and when care recipients were more depressed (partner effect).

Keywords

caregiving; disability; marriage; physical health; relationship satisfaction

There is now tremendous evidence that caring for an older adult spouse with a disability or chronic condition increases one's risk of impaired physical and mental health (Pinquart and Sörensen, 2003; Schulz and Beach, 1999; Schulz and Eden, 2016). There is also evidence that spousal caregiving places a significant strain on the quality of marital relationships (Ascher et al., 2010; Wright and Aquilino, 1998; Zhou et al., 2011). However, most caregiving research assumes that the care recipients' health status is a stressor that affects the caregiver's psychological well-being, with a focus on the caregiver's perspective and needs (Lyons et al., 2002). If relationship satisfaction is measured, it is often only reported by caregivers. No research to our knowledge has considered the associations of both caregivers' and care recipients' health conditions and disability with both partners' relationship satisfaction. This is important because having close, supportive relationships is a central component of older adults' quality of life, regardless of whether older adults fit the traditional criteria of a caregiver or care recipient (Hoppmann et al., 2016). Furthermore,

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according to interdependence theory, which states that close relationship partners interact in ways to maximize rewards and minimize costs to maintain relational harmony, couple members' thoughts, feelings, behaviors, and health are highly interdependent (Kelley and Thibault, 1978; Monin et al., 2014a). A better understanding of bidirectional, reciprocal, and mutual processes between spousal caregivers and care recipients will inform interventions for couples who are struggling with one or both partners' chronic conditions or disability (Martire, 2013).

Defining spousal caregiver and care recipient roles

Defining the caregiver and the care recipient roles among older adult spouses is not always straightforward. Oftentimes caregiving researchers are interested in a specific health context, for example, cancer, arthritis, or dementia, and the spousal caregiver is defined as the partner who does not have the particular health condition. A drawback of this approach is that the caregiver may be dealing with his or her own, perhaps different, chronic condition or disability that may interact or compete with the care recipient's condition. Another common definition for a spouse caregiver is a person who helps their partner with at least on Instrumental Activity of Daily Living (IADL; e.g. shopping, preparing meals, and laundry) because of a chronic condition or disability. This definition may be conflated with gender norms, and it does not provide much information about each person's health or functional ability. Another reason defining spousal caregivers and care recipients can be difficult is that health conditions are not usually static or stable. Both partners may experience alternating and overlapping health issues over time (Berg and Upchurch, 2007; McCarthy et al., 2016). In fact, research shows that when one older adult spouse has a chronic condition or disability, the other spouses is also likely to have a chronic condition or disability (Ayotte et al., 2010; Monin et al., 2016). Although this study accounts for self-reported caregiving and care recipient roles, we take a dyadic approach by considering how both partners' health indicators relate to both partners' relationship satisfaction.

Associations between health and relationship satisfaction in later life

Many studies of individuals show that poor health and disability are related to lower relationship satisfaction across adulthood (Holt-Lunstad et al., 2008), including the later years (Bookwala, 2005). Research on relationship satisfaction and health overwhelmingly examines relationship satisfaction as a predictor of health outcomes or a moderator of the association between stress and health outcomes (Birditt et al., 2014). In other words, it is thought that relationship satisfaction protects individuals from experiencing stress in the first place or that relationship satisfaction helps people cope effectively when they do experience stress, with stress proximally related to physical health outcomes. In the case of spousal caregivers, studies that primarily focus on caregiver outcomes show that caregivers who report greater pre-illness and current relationship satisfaction experience greater burden, depressive symptoms, and potentially harmful behaviors toward their care recipient (Cairo Notari et al., 2016; Quinn et al., 2009; Steadman et al., 2007; Williamson and Shaffer, 2001). Relatedly, it has been shown that when both caregivers and care recipients feel more compassionate love for one another, caregivers report less burden and more positive aspects of caregiving (Monin et al., 2014b).

However, relationship satisfaction and health likely have reciprocal effects. There are a number of pathways through which health conditions and disability can also impact relationship satisfaction (Schulz and Tompkins, 1990). One pathway is through the expression of depressive symptoms. When people are sick or disabled, they are more likely to express depressive symptoms (Ayotte et al., 2010), which decreases relationship satisfaction (Whisman and Uebelacker, 2009). According to emotional contagion theory, depressive symptoms spread from one partner to the other (Hatfield and Cacioppo, 1994), degrading couples' communication and interactions (Ruscher and Gotlib, 1988). In the context of chronic conditions and disability more specifically, symptom expression such as pain can also burden relationships. Spouses of partners who express high levels of pain often become less responsive to their partners over time. A recent study showed that when fibromyalgia syndrome patients experienced high levels of pain and uncertainty about their illness, they reported lower relationship satisfaction, and this was mediated by lower levels of partner supportiveness (Reich et al., 2006). While a fair amount of research shows that relationship satisfaction can influence health and a small amount of research shows that health can influence relationship satisfaction, no research to our knowledge has examined the dyadic associations between health and relationship satisfaction among older caregiving couples.

Hypotheses

Drawing from a large literature on the reciprocal associations between chronic conditions, disability, and depressive symptoms among older adults (Ormel et al., 2002) and relational theories of emotional contagion (Hatfield and Cacioppo, 1994) and interdependence theory (Kelley and Thibault, 1978), we hypothesized that in the context of spousal caregiving relationships, a spouses' health relates to their own and their partners' relationship satisfaction. Specifically, we hypothesized that each spouse's poor health (IADL disability, ADL disability, poor self-rated general health, depressive symptoms) is related to their own (actor effects; Hypotheses 1) and their partner's (partner effects; Hypotheses 2) lower relationship satisfaction. In secondary analysis, we examined whether both partners' relationship satisfaction predicted both partners' health outcomes, examining the reciprocal models. For all hypotheses and secondary analyses, we examined differences by caregiver or care recipient role and gender.

Method

Participants

Participants in this study consisted of 233 older adult spousal caregiving couples, a sub-sample of the Caregiver Health Effects Study (CHES; Schulz et al., 1997), which is ancillary to Cardiovascular Health Study (CHS). The original CHS sample included 5201 individuals who were enrolled in 1989/1990, with an additional cohort of 687 African Americans enrolled in 1992/1993. Eligible participants were sampled from Medicare eligibility lists. Those eligible included all persons living in the household of each individual sampled from the Health Care Financing Administration (HCFA) sampling frame, who were 65 years or older at the time of examination, were non-institutionalized, were expected to remain in the area for the next 3 years, and were able to give informed consent and did not require a proxy respondent at baseline. Potentially eligible individuals who were wheelchair-bound in the home at baseline or were receiving hospice treatment, radiation therapy, or chemotherapy for cancer were excluded. See Fried et al. (1991) for complete information about the CHS sample.

The goal of the CHES study was to recruit approximately 400 caregivers and 400 controls matched for age and gender. All individuals in the CHS sample who shared a household and indicated that they were married and living with their spouse were eligible to be recruited into the caregiving study ($N = 3185$). A screening instrument was used to identify potential caregivers and non-caregiving spouses in which caregivers self-identified as individuals whose spouse had difficulty with at least one Activity of Daily Living (ADL) or IADL “due to physical or health problems or problems with confusion” ($N = 619$ or 19% of married couples).

A total of 819 individuals distributed evenly across the four recruitment sites were enrolled into the CHES study. Based on their status at the time of the baseline interview which occurred approximately 2 weeks after respondents were screened, 395 respondents were classified as potential caregivers and 424 as non-caregivers (the caregiving status of a few individuals changed between screening and the baseline interview). A total of 360 care recipients capable of participating in a structured interview were also approached for participation in the study. Of these, 333 (93%) agreed to participate. In total, 230 caregiver–care recipient pairs had complete data at baseline and the corresponding CHS year (1993–1994) for the variables of interest in this study. Although caregivers and care recipients were followed over multiple time points in the CHES, sufficient dyadic data were not available in more than one CHES wave to test this study hypotheses. Thus, our analysis was cross-sectional.

Measures

Demographics—Sex, age, race, and education were used to describe participants and to explore potential covariates.

Disability—Disability in each partner was assessed with self-reported IADL and Activities of Daily Living (ADL) needs. IADLs were defined as a self-reported difficulty or inability to perform any of the following: heavy or light housework, shopping, preparing meals, paying bills, or using the phone. ADLs were defined as difficulty or an inability with walking around the home, getting out of bed, eating, dressing, bathing, or using the toilet. IADL items were coded as 0 (no difficulty) and 1 (any difficulty) and summed to create a functional impairment index. Higher values indicate greater difficulty to function independently.

Depressive symptoms—Symptoms of depression in each partner were measured with the modified version of the Center for Epidemiology Studies Depression Scale (CES-D; Orme et al., 1986). The scale assessed self-reported depressive symptoms experienced during the preceding 7 days of the CHS clinic visit. The scale consists of 10 symptoms, each scored 0–3, for a maximum of 30 points. Higher scores indicate greater frequency of depressive symptoms and correlate with an increased risk of clinical depression. Cronbach's alpha for depressive symptoms for caregivers was .81 and for care recipients it was .89.

Self-reported poor general health—Each partner reported on their general health by answering the single question: "Would you say, in general, your health is excellent (1), very good (2), good (3), fair (4), or poor (5)?" Higher scores indicated poor health.

Relationship satisfaction—An abbreviated version of the Dyadic Relationship Component of the Family Assessment Measure was used to assess each partner's relationship satisfaction in the spousal caregiving dyad (Skinner et al., 2009; Williamson and Schulz, 1990). Both caregivers and care recipients rated the appropriateness of 14 statements to describe their relationship with their partner on a scale ranging from 1 (strongly disagree) to 4 (strongly agree). A composite score was calculated averaging the 14 items. Higher scores represented a closer relationship between caregiver and care recipient. The items measured quality of the relationship in terms of communication (e.g. "I know what this person means when he/she says something" and "This person takes what I say the wrong way"; reversed), affect expression (e.g. "When I am upset, this person usually knows why" and "When this person gets angry with me, he/she stays upset for days"; reversed), and involvement (e.g. "This person and I aren't close to each other"; reversed and "When I am upset, I know this person really cares"). Cronbach's alphas were .84 for care recipients and .89 for caregivers.

Statistical analysis

To test the main hypotheses, we used a dyadic data analytic technique, the Actor–Partner Interdependence Model (APIM; Kenny et al., 2006) using the mixed procedure in SPSS, which not only deals appropriately with the non-independence of the data but also takes advantage of it to address questions of mutual influence. It is a dual-intercept model that entails calculating "actor effects" and "partner effects." An actor effect represents the influence that an individual's score on a predictor variable has on his/her own score on a dependent variable (e.g. a person's health on their own relationship satisfaction), and a partner effect represents the influence that an individual's score on a predictor has on his/her partner's score on the dependent variable (e.g. a person's health on their partner's relationship satisfaction). For each model, the independent variables were both partner's health variables (e.g. IADLs, ADLs, self-reported health). There were separate models for each health indicator. The outcome is each partner's relationship satisfaction. Covariates were included that were significantly related to both the independent and dependent variables. We also examined interactions with role (care recipient coded as 1 and caregiver coded as 2) to understand whether each effect was specific to care recipients' or caregivers' outcomes. We also examined interactions with gender to explore gender differences.

In secondary analyses, we examined all models with both partners' relationship satisfaction predicting both partners' health outcomes. When using the APIM, it is possible to find different effects when you exchange the explanatory variables with the outcome variables in the models. This is because different partner explanatory variables are being controlled for (e.g. partner relationship satisfaction versus the partner's health indicator) in the two different models. When predicting the presence of any IADL or ADL disability, a variable that was not normally distributed, we used Mplus 7 (Muthén and Muthén, 2005) which allows for dyadic models predicting binary outcomes. For this analysis, three model fit indices are reported: the confirmatory fit index (CFI), the Tucker Lewis Index (TLI), and the root mean squared error of approximation (RMSEA). CFI values greater than .95, TLI values greater than .90, and RMSEA values less than .08 reflect good fit of a specified model to the data (Hu and Bentler, 1999; Kim et al., 2008).

Results

Preliminary analysis

Table 1 shows the participant characteristics at CHES baseline, and Table 2 shows the descriptive statistics for all study variables. Caregivers were younger, more likely to be female, less depressed, less disabled, and reported better general health than care recipients, but there were no significant differences in relationship satisfaction between caregivers and care recipients. Correlational analyses revealed that education and gender were associated with relationship satisfaction and at least one of the health outcomes of interest (depressive symptoms, general health, ADLs, and IADLs) and thus were included in all models as covariates to be consistent. Specifically, male caregivers ($M = 3.14$, standard deviation (SD) = 0.39) reported higher relationship satisfaction than female caregivers ($M = 3.01$, SD = 0.42; $r(233) = .16$, $p = .017$), and female caregivers ($M = 6.39$, SD = 5.11) reported more depressive symptoms than male caregivers ($M = 4.42$, SD = 4.52; $r(233) = .20$, $p = .002$). When care recipients were more educated, caregivers reported higher relationship satisfaction ($r(232) = .16$, $p = .01$). More educated care recipients reported fewer depressive symptoms ($r(232) = .17$, $p = .01$) and better general health ($r(231) = .21$, $p = .001$) and had caregivers with better general health ($r(230) = .22$, $p = .001$). More educated caregivers reported fewer depressive symptoms ($r(232) = .15$, $p = .021$) and better health ($r(230) = .20$, $p = .003$). Caregiver and care recipient relationship satisfaction was significantly positively associated ($r(226) = .38$, $p = .000$). No other demographic variables were associated with both relationship satisfaction and any health indicator.

Main hypothesis testing

Hypothesis 1—As hypothesized, there were significant actor effects between health indicators and relationship satisfaction (see Table 3). For both caregivers and care recipients, own self-rated health and fewer depressive symptoms were associated with greater relationship satisfaction. There was also a significant role-specific actor effect of IADL needs predicting relationship satisfaction. Simple slope analysis (Aiken and West, 1991) showed a near significant association such that caregivers with greater IADL needs had lower relationship satisfaction ($\beta = -0.13$, SE = 0.05, $t(232) = -1.95$, $p = .052$), but the association between IADL needs and relationship satisfaction was not significant for care recipients ($\beta = 0.05$, SE = 0.02, $t(225) = 0.75$, $p = .455$). There were no significant actor effects or role-specific effects with ADLs. There were no significant gender differences.

Hypothesis 2—Partially supporting the hypothesis, there was one significant partner effect (see Table 3). Specifically, there was a role-specific effect for partner depressive symptoms predicting relationship satisfaction. Simple slope analyses revealed that caregivers had lower relationship satisfaction when their care recipients were more depressed ($\beta = -0.19$, SE = 0.01, $t(231) = -2.85$, $p = .005$); but this association was not significant for care recipients' relationship satisfaction ($\beta = 0.01$, SE = 0.01, $t(225) = 0.08$, $p = .93$). There were no other significant partner effects or role-specific partner effects. There were no significant gender differences.

Secondary analysis

Relationship satisfaction predicting health indicators—Results mirrored those in the main analysis. There was a significant actor effect such that for both caregivers and care recipients, relationship satisfaction was related to better self-reported health ($\beta = -0.41$, SE = 0.12, $t(373.94) = -3.54$, $p = .000$). There was also a significant actor effect of greater relationship satisfaction predicting less depressive symptoms ($\beta = -2.85$, SE = 0.64, $t(397.04) = -4.43$, $p = .000$). There was also a role-specific partner effect predicting depressive symptoms ($\beta = -2.46$, SE = 1.18, $t(343.53) = -2.09$, $p = .038$), with the simple slopes following the same pattern as the reciprocal effects. Specifically, there was a significant negative association between caregiver relationship satisfaction and care recipient depressive symptoms, but the association was not significant for the association between care recipient relationship satisfaction and caregiver depressive symptoms. The partner effect ($\beta = 0.36$, SE = 0.36, $t(275.58) = 1.00$, $p = .32$) and role-specific partner effect ($\beta = -0.22$, SE = 0.22, $t(351.18) = -1.01$, $p = .31$) of relationship satisfaction were not significant for general health. There were no significant gender differences.

Because ADLs and IADL scores were not normally distributed, with the sample showing very low levels of disability, we transformed the scores to 0 (no disability) to 1 (any IADL or ADL) when examining disability as a dependent variable. We ran dyadic models in MPLUS, which allows for binary dependent variables. Results of this analysis showed that caregiver greater relationship satisfaction predicted the presence of care recipient disability (estimate = 1.79, SE = 0.63, estimate/SE = 2.82, $p = .01$) and the absence of caregiver disability (estimate = −2.06, SE = 0.68, estimate/SE = −3.04, $p = .00$). The associations between care recipient relationship satisfaction and the presence of care recipient disability (estimate = 0.64, SE = 1.07, estimate/SE = 0.60, $p = .55$) and caregiver disability (estimate = 0.46, SE = 1.79, estimate/SE = 0.26, $p = .80$) were not significant. The variance in the model for care recipient relationship satisfaction was .13, and the variance for caregiver relationship satisfaction was .17. The model fit indices indicated good fit (RMSEA = .04; CFI = .99, TLI = .94).

Discussion

Taken together, the results of this study showed that for both caregivers and care recipients, own health and relationship satisfaction are related. Specifically, for both caregivers and care recipients, rating general health as poor and reporting more depressive symptoms are related to lower relationship satisfaction. However, caregivers' relationship satisfaction seems to be uniquely negatively associated with their own disability and their partner's depressive symptoms. There was also evidence that caregivers were more satisfied when the traditional caregiving roles were met—the caregiver had no disability and the care recipient had at least one ADL or IADL need.

The results of this study are in line with previous research showing that one's own physical health and mental health have reciprocal effects with relationship satisfaction in late-life marriage (Bookwala, 2005; Schulz and Tompkins, 1990). For both individuals, it may be that health problems and depression are stressors that degrade their relationship quality (Schulz and Tompkins, 1990), poor relationship quality is a stressor that impairs health and leads to disability, or poor relationship quality fails to buffer older spouses from the stress of poor health and disability (Birditt et al., 2014). The results of this study extend past findings regarding relationship satisfaction and health among older couples, by showing that these associations are pervasive even in couples in which partners are viewed as having imbalanced needs for assistance, where couples identify as caregivers and care recipients.

The results also highlight that caregivers' relationship satisfaction may be uniquely impacted by both partners' health problems. Caregivers who were more disabled and had partners who were more depressed reported lower relationship satisfaction, but this was not the case for care recipients. These findings contradict past findings showing that caregivers' relationship strain was not associated with care recipient health outcomes (Lyons et al., 2002), but it is consistent with past research showing that caregivers' strain was associated with their own health problems (Lyons et al., 2002). Our findings are also consistent with past research showing that caregiving wives are more satisfied with their marriage when their care recipient husbands are more emotionally supportive (Wright and Aquilino, 1998). Although we did not measure emotional support specifically and our finding was not gender specific, it may be that in our sample, care recipients who were more depressed were not able to provide emotional support to their caregivers.

The findings that caregivers with higher IADL needs had lower relationship satisfaction also suggest that caregivers with more disability may struggle to take care of themselves as well as their partners. It may be the case that both partners need a third-party caregiver, but the burden has been placed on one partner who is merely less disabled than the other. In contrast, caregivers appeared to be more satisfied when they had no disability themselves and their partner had at least one ADL or IADL need, fulfilling the traditional caregiving norms. These findings suggest that more needs to be done to involve outside family members or services to assist spousal caregivers when caregivers are also disabled. Compared to other relationship types, spouse caregivers, especially wives, are least likely to receive outside help with caregiving duties (Schulz and Eden, 2016). With woman also facing more disability than men in old age (Murtagh and Hubert, 2004), caregiving wives may be a particularly vulnerable group to psychological distress. Interventions and resources with the aim of empowering families to share the responsibilities of caregiving are becoming more popular. One answer may be Caregiver Family Therapy, a systematic approach for clinicians to enlist the help of family members in assisting primary caregivers and care recipients (Qualls and Williams, 2013). Using this approach, clinicians work with families to identify care challenges and resources and clarify values and strategies for addressing each challenge, restricting family roles, and balancing each members' caregiving with self-care.

Taken together, it appears that caregivers' satisfaction is more sensitive to the emotional and physical demands in the dyad. We did not find that care recipients' relationship satisfaction was associated with caregiver health. This may reflect asymmetry in terms of who is responsible for attending to both partners' demands, with caregivers expected to maintain not only well-being of the self but also the relationship. It may also be that caregivers develop a more interdependent self-construal than care recipients, where caregivers are increasingly defining themselves by their role as a support provider to their spouse (Cross and Madson, 1997). This finding has implications for current thinking about gender differences in attunement to relationship partners' negative emotions within marriage (Monin and Clark, 2011). Our findings suggest that the role of being responsible for the partner's care is likely more important than inherent sex differences in predicting who is more sensitive to negative emotion expression in daily interactions.

Future research should examine other potential mechanisms for the link between relationship satisfaction and health. For example, in addition to depressive symptoms, past research suggests that pain expression, as well as the expression of other physical symptoms such as fatigue, may also link health conditions and disability with poor relationship quality. In doing so, researchers will also need to account for the fact that depressive and physical symptoms are not independent from one another. It will also be important to understand how structural factors, such as economic pressures, which often follow from health problems, impact relationship quality, especially as money is one of the most pervasive and problematic areas of conflict for intimate partners (Papp et al., 2009). In addition, it will be important to examine other aspects of physical and psychological health. Here, we focus on functional disability, self-reported health, and depressive symptoms. Assessing specific physical symptoms, illness perceptions, and subjective well-being may provide additional information about how health relates to relationship satisfaction. Similarly, future work will need to unpack the concept of relationship satisfaction in its relation to the health of caregivers and care recipients. For example, what aspects of relationship satisfaction are most likely to affect or be affected by each partner's health? Are communication, involvement, and emotion expression more or less important for caregivers and care recipients?

A limitation of this study is that it was cross-sectional, so we could not infer causality or the direction of effects. Although CHES and CHS are longitudinal datasets, there was a significant drop in complete data for linked dyads that had complete information from both CHES and CHS from 1 year to the next. Another limitation is that the sample was almost entirely white and highly educated, limiting the generalizability of the sample. For instance, higher education was found to be associated with less depressive symptoms and greater relationship satisfaction in this sample, replicating previous findings (Taylor et al., 1997). Also, these data were obtained over two decades ago. Historical changes in relationship dynamics among older caregiving couples, as well as gender roles, may have occurred since these data were collected. Strengths of this study include the large sample size of older adult pairs in which the same measures were assessed with both partners, the use of a dyadic analysis technique that accounts appropriately for non-independent data and takes advantage of this non-independence to examine partner influences, and the use of a multidimensional measure of relationship satisfaction that measured multiple facets of relationship quality.

In conclusion, this study highlights the importance of considering relationship satisfaction as an important outcome and antecedent of both caregivers and care recipients' health outcomes in late-life marriage. It is important to move beyond the traditional caregiving model which focuses mainly on how care recipient health stressors influence caregivers' psychological health and better understand the reciprocal influences of both couple members. Especially in late-life marriage, it is rare for one partner to be perfectly healthy and the other partner to be dependent. Understanding mutual caregiving processes will help in the design of interventions that address both partners' needs.

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Table 1

Participant characteristics at CHES baseline.

	Caregivers (*N* = 233)	**Care recipients (*N* = 233)**	***p* value**
Age in years, mean (SD)	72.76 (5.43)	73.98 (5.75)	.000
Female gender	122	111	.000
Race or ethnic group			
White	213	213	
Black	19	20	
Mixed (Black and White)	1	0	
Education (years), mean (SD)	13.54 (4.58)	13.59 (4.75)	.73

Statistical analyses included paired *t*-tests for continuous variables.

Table 2

Descriptive statistics for study variables.

	Caregivers (*N* = 233)	**Care recipients (*N* = 233)**	***t* (df)**	***p* value**
Activities of daily living	0.10 (0.40) (range = 0–3)	0.45 (0.93) (range = 0–5)	5.23 (232)	.000
Instrumental activities of daily living	0.28 (0.52) (range = 0–3)	1.03 (1.33) (range = 0–6)	8.23 (232)	.000
Depressive symptoms	5.45 (4.93) (range = 0–25)	6.52 (5.54) (range = 0–27)	2.58 (231)	.011
Self-rated poor general health	2.81 (0.85) (range = 1–5)	3.22 (1.07) (range = 1–5)	5.06 (229)	.000
Relationship satisfaction	3.07 (0.41) (range = 1.64–4)	3.11 (0.36) (range = 1.64–4)	1.37 (225)	.173

Table 3

Simplified Actor–Partner Interdependence Models predicting relationship satisfaction.

	β	SE	df	*t*	*p*
Model 1 (self-reported poor health)					
Intercept	3.40	0.13	268.57	25.27	.00
Role (CR = 1; CG = 2)	−0.06	0.03	226.43	−2.19	.03
Care recipient (male gender)	−0.07	0.03	225.82	−1.74	.08
Actor education	−0.00	0.00	389.67	−0.31	.76
Partner education	0.01	0.00	394.20	1.67	.10
Actor self-reported poor health	−0.07	0.02	383.36	−3.66	.00
Partner self-reported poor health	−0.02	0.02	423.50	−1.05	.30
Model 2 (depressive symptoms)					
Intercept	3.08	0.10	354.34	29.83	.00
Role	0.04	0.05	290.42	0.85	.39
Care recipient (male gender)	−0.08	0.04	232.06	−1.96	.05
Actor education	0.00	0.00	383.90	−0.32	.75
Partner education	0.01	0.00	390.75	2.08	.04
Actor depressive symptoms	−0.02	0.01	417.23	−4.59	.00
Partner depressive symptoms	0.02	0.01	275.05	2.41	.02
Role × partner depressive symptoms	−0.02	0.01	342.65	−2.77	.01
Model 3 (ADLs)					
Intercept	3.07	0.09	335.50	35.42	.00
Role	−0.03	0.03	226.24	−1.11	.27
Care recipient (male gender)	−0.09	0.04	227.07	−1.92	.06
Actor education	0.00	0.00	385.85	0.23	.82
Partner education	0.01	0.00	395.12	1.92	.06
Actor ADLs	−0.01	0.03	288.03	−0.24	.81
Partner ADLs	−0.05	0.03	314.04	−1.81	.07
Model 4 (IADLs)					
Intercept	3.01	0.09	349.68	31.92	.00
Role	0.01	0.04	0.04	264.63	.87

	β	SE	df	t	p
Care recipient (male gender)	−0.07	0.04	228.57	−1.74	.08
Actor education	0.00	0.00	384.80	0.33	.74
Partner education	0.01	0.00	394.47	1.92	.06
Actor IADLs	0.11	0.06	385.11	1.87	.06
Partner IADLs	−0.02	0.02	301.05	−1.26	.21
Role × actor IADLs	−0.10	0.05	274.74	−1.98	.05[a]

ADLs: activities of daily living; IADLs: instrumental activities of daily living; SE: standard error; CR: care recipient; CG: caregiver.

[a] $p = .049$.