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Spousal social support and strain: impacts on health in older couples

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Abstract

Using a nationally representative sample of couples aged 51+ in the United States (N = 1,923 couples), the current study investigated whether both partners' perceptions of relationship support and strain are associated with an individual's self-rated health and functional limitations. The sample had an average age of 67.17 years (SD = 9.0; range 50–97). Actor–Partner Interdependence Models adjusting for couple interdependencies were applied using multilevel models. After accounting for age, education, gender, race, and couple differences in length of marriage, results indicate that individual perceptions of support were significantly associated with higher self-rated health and fewer functional limitations. These individual-level benefits increased if the spouse also perceived positive support and low strain. Finally, the negative association of an individual's perceived support on functional limitations was greater in those with a spouse reporting low levels of perceived strain. Findings are discussed relative to theory on behavioral and psychological pathways between partners' perceptions of support and health.

Keywords

Social support; Health; Older couples; Marriage

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Conflict of interest Authors Lindsay H. Ryan, Wylie H. Wan and Jacqui Smith declare that they have no conflict of interest.

Informed consent All procedures followed were in accordance with ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000. Informed consent was obtained from all patients for being included in the study.

Introduction

Social support is one of the most pervasive psychosocial constructs found to be associated with health in adulthood (Berkman et al., 2000; Cohen, 2004; Pinquart & Duberstein, 2010; Uchino et al., 2012). Social support has been linked to cardiovascular health (Berkman et al., 1992), reduced cancer and infectious disease mortality (Lee & Rotheram-Borus, 2001; Pinquart & Duberstein, 2010), and reduced all-cause mortality (Holt-Lunstad et al., 2010). Given current demographic shifts resulting in projections of higher proportions of older adults in the next few decades, as well as changing compositions of family structures and households (Ryan et al., 2012), developing a clearer understanding of the ways in which social support relates to health in older adults is increasingly important.

A variety of mechanisms have been proposed and tested to explain the association between social support and health. A great deal of research has examined potential psychological pathways, such as the buffering hypothesis that social support results in healthier stress responses (Cohen & Willis, 1985; Cohen, 2004). Others argue that social support benefits health by promoting social control (Lewis & Rook, 1999), thereby motivating healthier behaviors through internal beliefs and external pressures. However, a recent review by Uchino et al. (2012) points out that there is very little evidence that psychological processes explain all or part of the association between social support and health. Potential explanations for the lack of evidence include possible measurement and design problems in previous research, that social support may be in fact directly associated with health, and finally the need for future studies to examine social support science from novel perspectives. One such growing body of research is incorporating the larger social context when examining the effect of social engagement and support on health and well-being. This includes a recent burst in studying interpersonal dyads, such as married partners, to ascertain a more nuanced picture of how the larger social context plays a role in important outcomes. Older spouses typically share lifestyles, environments, and exposure to life events and daily hassles, all of which can affect health and well-being. Recent studies have found evidence that both partners' psychosocial experiences are associated with health (Roberts et al., 2009), well-being (Windsor et al., 2009), and depression (Chung et al., 2009; Hammer et al., 2005).

Perceived social support and health

An important distinction in the social support literature is whether support is received versus perceived (Uchino, 2009; Willis & Shinar, 2000). Whereas received support is context specific and not always appreciated by the recipient (Uchino, 2009), perceived support likely reflects patterns of prior experiences of received support and expectations about future support availability. In this context, perceived social support represents an individual's beliefs about the probability that s/he will have support when needed. It is well-documented that individuals who perceive they are socially and emotionally supported report better physical and psychological health (e.g., Antonucci, 2001; Antonucci et al., 1997; Cohen, 2004; Uchino et al., 1996). Extant research indicates that associations of perceived social support with key outcomes such as physical health and well-being are unique (Reinhardt et al., 2006; Uchino, 2009).

Another important distinction is between the positive and negative sides of social support. Though benefits of social support have been reported throughout the literature, it is also necessary to consider the impact of social strain (i.e., negative social support). Walen and Lachman (2000) examined associations of both social support and strain from friends, family, and partners in a large, nationally representative sample of adults aged 25–75. They found that although partner support was not associated with self-rated health or with health problems, partner strain was significantly associated with having more health problems. Holt-Lunstad et al. (2008) found that married individuals reporting high spousal relationship quality had lower ambulatory blood pressure than single individuals, but that single individuals had lower blood pressure compared to their unhappily married counterparts. However, other research indicates a more nuanced and complex pattern of associations of support and strain with health. Birditt et al. (2012) examined whether perceptions of spouse/partner support and strain affected the association of stress with blood pressure. Results indicate a complex association, such that perceptions of being able to confide in your partner but also having few feelings of being able to rely on your partner attenuated the impact of high stress days on systolic blood pressure. In addition, perceiving that your partner is highly demanding was associated with lower systolic blood pressure on high stress days compared to low stress days. This may indicate that having support but being self-reliant is a better combination for health. In addition, Birditt and Antonucci (2008) found that individuals who reported low levels of positive support and short-term increases in strain from spouse, children and friends were associated with lower likelihoods of survival 19 years later. However, among those with chronic illnesses, higher baseline strain was associated with higher survival. The authors discuss the importance of considering context when examining social support and health, and speculate that their paradoxical finding may indicate that of those with chronic illness, having a demanding and critical partner may promote beneficial health behavioral change. Overall, the pattern of findings provided mixed evidence, which may be the result of a variety of methodological sources, such as meaningful differences in sample composition, whether support and strain are considered as direct or moderating influences on health, as well as a range of health and support measures used across different studies. For example, both Birditt papers utilize nationally representative samples of midlife to older individuals whereas Holt-Lunstad et al. (2008) had a small convenience sample with an age range of 20–68. Furthermore, none of these studies included couples, so the findings are limited to perceptions of the relationship context from a single partner. What is clear is that both support and strain have independent associations across a range of health outcomes. Building on this work, the current study examines the impact of both perceived spousal support and strain from both partners on health in a large, nationally representative sample of older married couples.

Married couples as a relevant social context

The current study follows Uchino et al. (2012) suggestion to focus on the importance of context to examine ways in which social support is linked to health in older adults. In particular, we examine social support and social strain within the context of older married couples and ask if both an individual's and his/her spouse's perceptions of support and strain are related to the individual's health. Couple-hood in midlife and old age is a prevalent social context: sixty-two percent of the U.S. population over 50 is married (U.S. Census Bureau,

2006). In midlife and old age, spouses are the primary source of material, informational, and emotional support needed to function adaptively (Antonucci et al., 2001). Compared to young adulthood, couples in midlife and old age face different health challenges (Berg & Upchurch, 2007), hence the focus of this study lies on the relationship between middle aged and older couples and physical health. Previous work supports the idea that the psychosocial experiences of a partner are particularly important when an individual is experiencing a health crisis. For example, Segrin et al. (2007) examined a sample of married couples where the wife had been diagnosed with stage I-III breast cancer, and found that the husband's anxiety predicted wife's own anxiety as well as depression, fatigue, and symptom management. Similarly, Sanbonmatsu et al. (2011) found that spouses who are more aware of their partners' attitudes had lower measured systolic and diastolic blood pressure than those with little awareness.

Being married is widely acknowledged as beneficial for an older individual's health (Bookwala, 2005; Dupre & Meadows, 2007; Pienta et al., 2000; Waite & Gallagher, 2000). Marriage has been associated with higher income, better health, and longer life expectancy (Waite & Lehrer, 2003). Explanations for the health benefits associated with marriage also highlight the protective resources provided by having a spouse. Married individuals are healthier when their spouse monitors health behaviors, provides care when needed, and acts as a social control by discouraging risky behaviors (Waldron et al., 1996). More importantly, a spouse is expected to be a salient source of support in times of stress (Cohen, 2004; Cutrona, 1996). Research also shows that this positive advantage is modified by factors such as the quality of the marital relationship and specific health challenges that interfere with daily living. However, much knowledge about the associations between marital relationships and health in midlife and old age is derived from research of individuals, rather than partners married to each other, and has focused on patient outcomes (e.g., Berg & Upchurch, 2007; Ruiz et al., 2006).

Given that being married is significantly associated with health, it follows that research should include information directly from both spouses to paint a fuller picture of the social contextual influence on health of married individuals. As previously mentioned, there are few existing studies of middle aged and older married individuals that actually incorporate information from both partners. One reason for this is that analytic techniques to appropriately analyze and deal with partner interdependencies have been underutilized. To address this gap, the present study used a large sample of older couples and paid particular attention to both partners' perceptions of support and strain. We apply the Actor–Partner Interdependence Model (APIM) to account for the interdependence that naturally exists between partners and to estimate the extent to which support and strain perceptions from both partners contribute to an individual's health. Because research has often focused on married individuals rather than married partners, the APIM has generally been underutilized in relationships and health research, and the present study highlights its analytic advantages in testing specific hypotheses about individual, spousal, and spouse interactions on health.

Gender, social support, and health

Finally, it is important to consider whether the associations of individual and spouse perceived support and strain differ across men and women given broad support that individual associations of psychosocial factors and health often vary by gender (Burns & Katkin, 1993; Taylor et al., 2001). The literature examining gender, social support and health is mixed. Studies that focus on structural indicators of social support (marital status, frequency of social contacts, memberships in social groups, etc.) tend to find that associations of social support and health in men and women operate in similar directions but differ in magnitude (Shumaker & Hill, 1991). In a comprehensive review of the literature on marriage and health, Kiecolt-Glaser and Newton (2001) find that women's physiological responses to marital conflict are greater than men's, but that self-report and objective behavioral measures of health do not show these differences. Given the conflicting evidence, it is important that future research continue to examine potential differences in how the marital context affects wives and husbands.

Current study

The current study is unique on several counts. First, we examined couple data on both positive and negative dimensions of spousal support with two indices of health. The data were collected in the 2006 wave of the Health and Retirement Study (HRS), which is a nationally representative study of the population over age 50. Second, multilevel dyadic analyses were undertaken to examine the combined effects of individual and partner perceptions of support and strain among these older couples. Having both spouses in the analysis allowed us to examine both individuals' effects on own health as well as cross-over from a spouse. Finally, we examine two related but distinct indices of health, self-rated health and functional limitations. Admittedly a subjective measure, self-rated health has been significantly associated with a variety of objective health outcomes, including mortality (Idler & Benjamini, 1997). Functional limitations are also self-reported in the current study, but are significantly more specific and objective compared to self-rated health. By including both measures, the current study provides important information on potential similarities or differences in the associations with spousal support, which can then assist in future research questions and theoretical development.

The current paper investigates the ways in which perceptions of spousal support and strain are related to health in older couples. Specifically, this study investigates the following questions: (1) Are an individual's perceptions of spousal support and spousal strain associated with self-rated health and functional limitations in a sample of older adults? It is hypothesized that an individual's perceptions of spousal support will be positively associated with better health (higher self-rated health and fewer functional limitations). Whereas extant research reports mixed findings on the effect of spousal strain/negative support on health (e.g., Birditt et al., 2012), it was hypothesized that individuals with higher levels of perceived spousal strain would be associated with poorer health. (2) Over and above the effect of an individual's spousal perceptions on her/his health, is an older individual's health also influenced by the spousal perceptions of her/his spouse? Based on existing research that illustrates potential associations of spouse psychosocial experiences with partner's health

and well-being, we hypothesized a cross-over effect that a spouse's perceptions of support would be associated with better health and perceived spousal strain would be linked to poorer health in the individual. (3) Do the associations of both partners' perceptions of support and strain on an individual's health differ based on gender of the individual? (4) Are the effects of individual and spouse perceptions of spousal support and strain on health only additive (main effects), or does the combination of individual-spouse perceptions within the couple have a multiplicative effect? Although judgments of individual and spousal support may reflect actual behavior, the current paper is specifically testing whether subjective perceptions of both partners are on their own associated with health.

Methods

Sample

Participants were from the eighth wave of the HRS in 2006. The HRS is a nationally representative longitudinal study of Americans aged 51 and above, as well as their spouses (regardless of age). In 2006, a randomly selected 50 % of the longitudinal HRS sample was visited for an enhanced face-to-face interview. They also received a self-report psychosocial questionnaire in which they were asked to complete and mail to the University of Michigan. The response rate was 90 % (N = 7,881). Of the 7,881 individuals, 2,746 individuals were unmarried and 508 were married but did not have corresponding data available for their spouse.

The present study examined data from heterosexual households in which both husband and wife were over age 50 and both spouses completed all measures of spousal support and health in the psychosocial questionnaire. The resulting sample had 3,846 individuals (1,923 couples), an average age of 67.17 years (SD = 9.0; range 50–97), and on average 13 years of education (SD = 2.0; range 0–17). Ethnicity was 91 % Caucasian. Couples were on average married for 38.63 years (SD = 14.8; range 0.1–70.5).

Measures

Health outcomes—Self-rated health was assessed with a single item: "Would you say your health is excellent, very good, good, fair, or poor?", which was rated from 1 (poor) to 5 (excellent). Functional limitations is a multidimensional concept encompassing mobility, large muscle functioning, fine motor skills, gross motor skills, and the ability to perform activities of daily living (ADLs) and instrumental activities of daily living (IADLs). In HRS, functional limitations is assessed by 23 items adapted from scales developed by Rosnow and Breslau (1966), Nagi (1976), Katz et al. (1963), and Lawton and Brody (1969). Participants were asked whether or not they have any difficulty with a series of activities because of a health problem. Items included running or jogging a mile, walking one block, and climbing one flight of stairs, to picking up a dime, shopping for groceries, dressing, and bathing. For the present analyses, we used a count of reported limitations ($M = 4.13$; SD = 3.85; ranging from 0 to 22). The resulting measure of functional limitations was significantly and negatively correlated with self-rated health ($r = -0.58$, $p < 0.01$).

Perceived spousal support and strain—Spousal support was evaluated in the HRS 2006 self-administered questionnaire with an average across three items ($\alpha = 0.81$): "How much does your spouse really understand the way you feel about things?"; "How much can you rely on your spouse if you have a serious problem?"; and "How much can you open up to your spouse if you need to talk about your worries?" Spousal strain was averaged across four items ($\alpha = 0.78$): "How much does your spouse criticize you?"; "How much do they let you down when you are counting on them?"; 'How often do they make too many demands on you?'; and "How much do they get on your nerves?" Responses for support and strain were coded on a 4-point scale, rated from 1 (not at all) to 4 (a lot). Support and strain are related, but distinct constructs ($r = -0.54$, $p < 0.001$).

Sociodemographic covariates—Age in years was calculated by subtracting the participant's year of birth from the year of interview. Gender was coded as 0 (men) or 1 (women). Education was measured in years, with the highest grade truncated at 17 years. A dichotomous measure of race/ethnicity coded as 0 (White) or 1 (non-White) was created from a series of self-report items. Length of current marriage was calculated by subtracting the participant's year of current marriage from the year of interview.

Analysis strategy

For descriptive analyses, comparisons between husbands and wives were made using one-way ANOVAs. Associations of individual and spouse perceived spousal support with health indices were estimated using Actor–Partner Independence Models (APIMs; Kenny et al., 2006). The APIMs are two-level multilevel models which evaluated individuals (Level 1) nested within couples (Level 2). Interdependence is accounted for in the model both structurally through the regression paths (individual and spouse effects) as well as through the measurement model with correlated residuals and the usual exogenous correlation of the predictors (Snijders & Bosker, 1999).

The APIMs individually modeled self-rated health and functional limitations as the outcome variables and individual and spouse's perceived spousal support and strain as the key predictors. Sociodemographic covariates (age, gender, race, education, and years of marriage) are included in the base model. Predictors were mean centered. A sequential approach to modeling was used, with covariates entered at Step 1, individual perceptions of support and strain added at Step 2, and spouse perceptions of support and strain added at Step 3, thereby simultaneously estimating both individual and spouse effects on individuals' health. Crossproduct interaction terms were then tested to investigate (1) if an individual's gender was associated with differential associations of own and spouse's perceptions of support and strain on health, and (2) if the combination of individual and spousal perceptions of support and strain have a multiplicative effect on health (I-Support × S-Support; I-Support × S-Strain; I-Strain × S-Strain; I-Strain × S-Support). To reduce potential problems of spurious effects resulting from multicollinearity, the crossproduct terms were initially tested in separate models. Interactions that were significant were then included in the final step of the model. Analyses were carried out using SAS proc mixed. A compound symmetry variance structure was applied in the models.

Significant interactions were illustrated by solving the regression equations using different combinations of substantively meaningful values of the predictor variables (±1 SD individual/spouse perceived spousal support). Tests of simple slopes (Preacher et al., 2006) were used to determine whether the slopes of the regression lines were significantly different from zero.

Results

Descriptive analyses and intraclass correlations

Table 1 shows the descriptive statistics for the total sample and separately for husbands and wives, as well as the intra-class correlations of key variables. Analyses examining gender differences revealed that wives were younger than husbands [$F(1, 3,844) = 109.58$, $p < 0.001$]. Husbands reported more perceived support than wives [$F(1, 3,844) = 115.23$, $p < 0.001$], whereas wives reported more perceived strain than husbands [$F(1, 3,844) = 23.72$, $p < 0.001$]. Wives reported better health [$F(1, 3,844) = 9.83$, $p < 0.01$] but more functional limitations [$F(1, 3,844) = 17.93$, $p < 0.001$] than husbands. There were no gender differences in education. Intraclass correlations provide estimates of proportions of variance that are accounted for at the dyad level. The intraclass correlations for key variables ranged between 0.23 and 0.83, indicating a moderate to high level of spousal concordance in sociodemographics, perceived spousal support, and health indices. Multilevel models examining the associations of individual and spousal social support and strain with self-rated health are presented in Table 2 and with functional limitations in Table 3.

Associations of individuals' perceptions of spousal support and strain with health

Based on the full model, individuals' perceived spousal support was associated with the individual's higher levels of self-rated health ($p < 0.01$) and fewer functional limitations ($p < 0.001$). There was no significant association between individuals' perceived spousal strain with own self-rated health or functional limitations. These associations were found after controlling for individual's age, education, gender, race, the couple's length of marriage, and partner reports of support and strain.

Associations of spouses' perceptions of spousal support and strain with health

Partner perceptions of spousal support are associated with higher levels of self-rated health ($p < 0.01$) and fewer functional limitations ($p < 0.001$) in their partners. In addition, spouses' perceptions of spousal strain predicted lower levels of self-rated health ($p < 0.01$) and more functional limitations in their partners ($p < 0.05$).

Multiplicative effects of individuals' and spouses' perceptions of support with health

No interactions between gender and support/strain or between individual by partner support/strain were significant for self-rated health (Step 4 not shown). However, the effect of an individual's perceived spousal support on functional limitations was moderated by level of the spouse's perceived spousal strain ($p < 0.05$). Specifically, simple slopes analysis (Preacher et al., 2006) identified that among individuals reporting at least 1 standard deviation below the mean on perceptions of spousal support, the number of functional limitations did not differ by level of spouse perceptions of strain (simple slope =

0.0647(0.1337), t = 0.4842, p = 0.6), whereas those at least 1 standard deviation above the mean on individual perceptions of spousal support had significantly more functional limitations when her/his spouse's perceived spousal strain was high compared to low [simple slope = 0.4611(0.1407), t = 3.2763, p = 0.0011].

Discussion

The current study examined associations of perceived support and strain with health in the context of couplehood using a large sample of older married couples. Specifically, we were interested in how perceived spousal support and strain from both the individual and spouse perspectives are associated with self-rated health (a subjective health measure) and functional limitations (an objective self-rating of physical functioning). Importantly, the analysis revealed that both individuals' and their spouses' psychosocial experiences play an important role in physical health.

We first examined whether individuals' perceptions of support and strain (from their spouses) were associated with self-rated health and functional limitations. As expected, perceptions of higher levels of support from a spouse were associated with better health (higher self-rated health and fewer functional limitations). This result supports extant research which finds beliefs about support from a spouse is beneficial to a variety of health indices (Kielcolt-Glaser & Newton, 2001; Uchino, 2006). However, counter to existing research, the current study failed to identify any significant associations of an individual's perceptions of spousal strain with her/his own health. This difference could be the result of varying methodologies and indices of health. For example, Birditt et al. (2012) examined blood pressure as an outcome, which is quite different from our focus on self-rated health and functional limitations. It may be that negative social exchanges are impactful on the vascular system but not directly associated with the information individuals use to make judgments about self-rated health or processes associated with functional ability. Our study suggests that if there is a psychological pathway between social relationships and health, it is operating through the positive side, perhaps as a stress buffer (Cohen & Willis, 1985) or through enhanced self-efficacy (Thoits, 1995). The current study was not able to directly test specific mechanisms of the association due to the cross-sectional nature of the data, but does provide additional evidence of a direct link between older adults' perceptions of positive social support and their own health.

We next examined whether a spouse's perceptions of spousal support and strain (from the individual) are also associated with the individual's health. As hypothesized, a spouse's perceptions of both spousal support and strain were significantly associated with their partners' self-rated health and functional limitations in the expected directions. Impressively, the significant associations of spouse perceptions with individuals' health are significant over and above the effect of individuals' own perceptions. And although individuals' own perceptions of spousal strain were not significantly related to health in the current study, their partners' perceptions of spousal strain were significantly associated with poorer health. Similarly, the effect of a spouse's perceived support on the individual's functional limitations looks to be larger than the effect of the individual's own perceptions of support. This pattern of findings indicates that the reports from a spouse may be more

strongly associated with an individual's health than her/his own perceptions. Though at first this may seem surprising, similar findings have been reported in other research. Hammer et al. (2005) examined the individual and spousal associations of work-family conflict and positive spillover with depression in a sample of employed married couples. They found that although an individual's own reports of positive work-family spillover were not related to their own depression 1 year later, the levels of positive work-family spillover in a spouse significantly predicted the individual's depression longitudinally. Relative to the current study, it could be that the spouse reports of support and strain from his/her partner are a better reflection of other factors in the individual's life which are associated with health, such as stress and/or health behaviors. Although the results discussed in this study did not include a measure of chronic stress, the models were also re-run in a follow-up analysis controlling for an individual's stressful life events (e.g. being unemployed, robbed). This follow-up analysis did not substantively change the pattern of findings. Though the current study cannot definitively identify why spouse reports of strain are more indicative of an individual's health compared to her/his own reports, the findings do suggest that incorporating partner reports provide unique and important information about an individual's health.

Interestingly, previous studies have found that the effects of marital quality on health differ for husbands and wives (Kiecolt-Glaser & Newton, 2001; Umberson & Williams, 2005), but the current findings did not support this differential effect. In addition to detecting a significant main effect of gender on functional limitations such that wives had more limitations compared to husbands, we also tested follow-up interactions of gender with individual and spousal support and strain but they were all non-significant. Rather, the current study suggests that the associations of individual and spouse perceived spousal support and strain do not differ for men and women. It is important to note that much of the previous research examining gender differences examined married individuals (e.g., Kiecolt-Glaser & Newton, 2001), rather than both partners as was the approach in the current study. Other studies have also typically considered younger samples (Umberson & Williams, 2005). The lack of gender differences in the current study may reflect these important methodological and analytic differences, and provide important information on how perceptions of spouse support and strain are related to health in intact couples. One study which did examine both partners in older married couples (Tower et al., 2002) generally found similar gender effects of partner closeness on mortality. An important consideration is trying to understand why a spouse's perceptions of the positive and negative sides of the marital relationship are related to their spouses' health. First, a spouse's beliefs about support and strain from a partner may be a reflection of the partner's prior behavior. If this is the case, the current findings would indicate that individuals who engage in supportive behaviors toward their spouse have better health. Within the context of older adults, it is likely that a large proportion of stressful situations encountered in daily life involve the health of one or both of the partners. If a spouse feels supported by her/his partner in times of a health crisis, it may be the case that the partner is more likely to take proactive steps and take better care of him/herself. It may also be that being a supportive spouse, as reflected in a spouse's perception that you are supportive, helps to build a sense of meaning and efficacy

in the individual. This in turn could be associated with enhanced motivation to engage in healthy behaviors.

If the association of a spouse's support and strain beliefs with an individual's health is not operating through actual behavior by the individual, what may explain this finding? Perhaps having a spouse who feels supported and perceives little strain in the marriage helps to create a social environment for both partners that is less prone to adverse reactions to stressful situations. For example, this study found that overall, individuals who perceived less support from their spouses had an overall higher level of functional limitations, regardless of whether their spouses reported low or high levels of strain. However, among individuals who reported high levels of perceived support from a spouse, levels of functional limitations were significantly lower when the individual also had a spouse who reported little marital strain. This combination of an individual feeling supported paired with a spouse reporting little marital strain may be indicative of a marital environment that either has fewer stressful events, or that is better able to cope when challenging situations arise. Although this individual-spouse interaction was interesting, we caution that the effect size was small and future research needs to replicate the result before it can be interpreted as a robust finding.

The current study expands on earlier research by examining aspects of social support within the context of actual marital dyads. By incorporating relevant information of the social context with information from both spouses, the current study adds to the existing literature by replicating findings that an individual's beliefs about spousal support are positively associated with health (Berkman et al., 1992; Holt-Lunstad et al., 2010) and on top of that finds that a partner's perceptions also play an important role. Though we have argued several potential psychosocial mechanisms that could explain the associations of spousal support and strain on health, these have not been directly tested. And although analyzing both partners is a critical advance in this area of research, it is also important to acknowledge the cross-sectional nature of the current study. The findings presented cannot be construed as causal, but rather as additional evidence for the important relationship between beliefs about marital support and strain and health in older adults. As longitudinal data on these constructs become available in the HRS and other surveys, future research can begin to examine the couple-dynamics of these associations.

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Table 1

Descriptive statistics and intraclass correlations for key variables

	Total	Husbands	Wives	Intraclass Correlation
N	3,846	1,923	1,923	
Race				
White	90.87	90.85	90.90	
Non-white	9.13	9.15	9.10	
Age, *M* (*SD*)	67.17 (9.0)	68.67 (9.0)	65.67*** (8.8)	0.83
Years of education, *M* (*SD*)	13.00 (2.9)	13.05 (3.1)	12.95 (2.7)	0.58
Years of marriage, *M* (*SD*)	38.63 (14.8)	38.67 (14.8)	38.59 (14.9)	–
Perceived support, *M* (*SD*)	3.53 (0.6)	3.63 (0.5)	3.43*** (0.6)	0.32
Perceived strain, *M* (*SD*)	1.96 (0.6)	1.91 (0.6)	2.01*** (0.7)	0.38
Self-rated health, *M* (*SD*)	3.32 (1.1)	3.27 (1.1)	3.37** (1.0)	0.23
Functional limitations, *M* (*SD*)	4.09 (3.8)	3.84 (3.7)	4.35*** (3.8)	0.23

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

Table 2

Associations of individual and spouse perceived spousal support with self-rated health

	Self-rated health					
	Step 1		Step 2		Step 3	
	B	SE	B	SE	B	SE
Intercept	3.313***	0.024	3.297***	0.024	3.313***	0.024
Covariates						
Age	–0.016***	0.002	–0.016***	0.002	–0.017***	0.002
Years of education	0.088***	0.006	0 087***	0.006	0.084***	0.006
Gender (wives)	0.067*	0.031	0.096**	0.032	0.059	0.032
Race (non-white)	–0.306***	0.060	–0.275***	0.059	–0.255***	0.059
Years of marriage	0.003*	0.001	0.003*	0.001	0.003*	0.001
Individual effects						
Perceived support			0.132***	0.034	0.105**	0.034
Perceived strain			–0.035	0.030	–0.002	0.030
Spouse effects						
Perceived support					0.094**	0.034
Perceived strain					–0.091**	0.030

Non-significant interactions were not included in the final model

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

Table 3

Associations of individual and spouse perceived spousal support with functional limitations

	Functional limitations							
	Step 1		Step 2		Step 3		Step 4	
	B	SE	B	SE	B	SE	B	SE
Intercept	0.870	0.647	0.802	0.641	0.576	0.640	0.593	0.640
Covariates								
Age	0.095***	0.008	0.095***	0.008	0.095***	0.008	0.095***	0.008
Years of education	–0.277***	0.021	–0.270***	0.021	–0.258***	0.021	–0.257***	0.021
Gender (Wives)	0.770***	0.110	0.659***	0.113	0.822***	0.115	0.811***	0.115
Race (Non-White)	0.939***	0.211	0.813***	0.210	0.729***	0.209	0.720***	0.209
Years of marriage	–0.003	0.005	–0.003	0.005	–0.002	0.005	–0.003	0.005
Individual effects								
Perceived support			–0.476***	0.120	–0.357**	0.121	–0.431***	0.125
Perceived strain			0.200	0.106	0.073	0.108	0.059	0.108
Spouse effects								
Perceived support					–0.510***	0.121	–0.519***	0.121
Perceived strain					0.250*	0.108	0.263*	0.108
Interactions								
I-Support × S-Strain							0.344*	0.148

Non-significant interactions were not included in the final model

I-Support × S-Strain = Interaction between individual perceived spousal support and spouse's perceived spousal strain

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$