

ASSOCIATIONS BETWEEN PERCEIVED SUPPORT IN OLDER ADULT MARRIAGES
AND DYADIC CO-VARIATIONS IN MOMENTARY AFFECT AND ACHES

by

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Abstract

Spousal support within marriage may be particularly important in old age when spouses become more likely to rely on each other's help. However, spousal support does not have to be unanimously positive. In fact, very little is known about co-variations in spousal affect and aches as couples engage in their daily routines and environments. Up to 27 simultaneous, momentary assessments from 49 older adult married couples (M age = 72 years (60-83); M relationship duration = 42 years) were used taking into account the perspective of both partners. This research shows that social support within marriage was associated with reduced overall levels of negative affect but unrelated to positive affect. Interestingly, high spousal support was both associated with reduced overall negative affect means but also with an increased co-variation in negative affect between partners. No similar co-variations were observed for aches and positive affect. Spousal support may be a double-edged sword; it is associated with reduced overall negative affect, but it may also lead to more permeable boundaries between spouses that seem to be specific to negative affect.

Preface

This thesis is based on secondary use of non-identifiable information from a study on collaborative problem solving in couples aged 60 and above that was supported by a National Institutes of Health grant (R01 AG15019) awarded to Dr. Fredda Blanchard-Fields. The study was ethics approved and conducted at the Georgia Institute of Technology, Atlanta, GA. The work presented henceforth constitutes a novel approach to the existing data set. The thesis has been regarded as consistent with UBC's standard for ethical research.

I am the first author of a shorter version of this manuscript in *The Journals of Gerontology: Series B Social and Psychological Sciences*.

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Chapter 1: Introduction

Social support within marriage is generally associated with higher well-being and better health (Robles, Slatcher, Trombello, & McGinn, 2013). Spousal support may be particularly important in old age, when both partners may increasingly rely on each other for help and share a long history of joint experiences (Berg & Upchurch, 2007). However, higher levels of support may not be unanimously positive (DeLongis, Capreol, Holtzman, O'Brien, & Campbell, 2004). For example, spouses may drag each other down when getting involved in each other's stressors or problems (Larson & Almeida, 1999). The purpose of the present research therefore was to examine the possibly double-edged nature of perceived spousal support for momentary affect and aches in older couples. Specifically, this thesis examined associations between perceptions of spousal support and up to a total 27 repeated daily life assessments of negative affect, positive affect, and aches that take the perspectives of both members of the couple into account.

1.1 Spousal Support and Health

Marriage is a very special social relationship that is characterized by spousal associations in physical and mental health, as well as high likelihood of interrelated experiences in older couples (Gerstorf, Hoppmann, Kadlec, & McArdle, 2009; Hoppmann, Gerstorf, Willis, & Schaie, 2011; Berg & Upchurch 2007; Lam, Lehman, Puterman, & DeLongis, 2009). Spousal support is a prime mechanism linking marriage with well-being and health, especially so in old age when spouses are operating at the limits of their individual capacities (Berg & Upchurch, 2007; Hoppmann & Gerstorf, 2014). Spousal support is generally associated with higher well-being and better health, but may not be unanimously positive and can come at a cost with poor quality social interactions outweighing the risks of poor health behaviors (DeLongis et al., 2004; Holt-Lunstad, Smith, & Layton, 2010; Rafaeli & Gleason, 2009). There may also be circumstances when unwanted support can be interpreted as a negative reflection of one's own

competencies, thereby undermining self-esteem, especially given growing concerns about independence with aging (Smith & Goodnow, 1999). Taken together, spousal support may confer benefits for health and well-being in older adulthood, but it may have detrimental shades as well.

1.2 Mechanisms Underlying Spousal Co-Variations

Spousal support may make older adults more attuned to how the respective partner is feeling, thereby creating more permeable boundaries that particularly facilitate the transmission of negative affect (NA) (Larson & Almeida, 1999). Indeed, past research suggests that NA, but not positive affect (PA), co-varies within couples coping with prostate cancer, particularly when partners report many spousal collaborations (Berg, Wiebe, & Butner, 2011). Such spousal co-variation in emotional experiences may be considered through the lens of several mechanisms. For example, one may envision a couple in which both partners are involved with each other's problems, and are thus both affected emotionally (Monin & Schulz, 2009; Hicks & Diamond, 2008; Zaki, Bolger, & Ochsner, 2008). Alternatively, spousal co-variations may operate in the context of a joint problem (e.g., barriers to shared goals), in that the difficulties of one spouse actually affect the entire dyad (Hoppmann & Gerstorf, 2013; Schindler, Berg, Butler, Fortenberry, & Wiebe, 2010). It is also possible that in order to understand and be helpful, partners need to be in sync with each other's emotional experiences (Randall, Post, Reed, & Butler, 2013). Finally, spousal co-variations might follow from emotion transmission, or contagion, where the emotional states of one spouse travel to the other (Larson & Almeida, 1999). Hence, although spousal support may be beneficial in general, it may also create more permeable boundaries particularly for NA, thereby making it likely that NA co-varies within couples reporting high spousal support.

1.3 Aches and Perceived Spousal Support

Physical health experiences can also be intricately tied to perceptions of spousal support (Martire, Schulz, Wrosch, & Newsom, 2003) as well as emotional well-being (Affleck, Tennen, Urrows, & Higgins, 1992; Zautra, Smith, Affleck, & Tennen, 2001). This may be especially true for older married couples in which one or both partners is suffering from debilitating chronic pain, such as with arthritis conditions. For example, daily spousal support satisfaction has been linked with pain and NA in individuals suffering from rheumatoid arthritis (Holtzman & DeLongis, 2007). Furthermore, the display of pain behaviours by a spouse suffering from a chronic condition such as osteoarthritis have been found to predict emotional congruence in older married couples (Druley, Stephens, Martire, Ennis, & Wojno, 2003). It has also been found that discordance between patient and spouse perceptions of arthritis condition manifestations is associated with problematic spousal support for rheumatoid arthritis patients (Lehman, Pratt, DeLongis, Collins, Shojania, Koehler, Offer, & Esdaile, 2011), and poorer emotional outcomes for women who suffer from osteoarthritis (Cremeans-Smith, Stephens, Franks, Martire, Druley, & Wojno, 2003). Ultimately, pain, affect, and spousal support can be intimately related between spouses in their day-to-day lives.

1.4 Objectives and Hypotheses

One way to capture associations between perceived spousal support and fluctuating affective and ache experiences that occur both between and within marital partners over time is to use simultaneous repeated daily-life assessments from both spouses (Laurenceau & Bolger, 2005). Although the aging literature is increasingly recognizing the importance of complementing research on inter-individual differences in marriage-wellbeing associations with an examination of the spousal dynamics as they unfold in daily life (Berg & Upchurch, 2007),

very few studies have actually implemented such designs using samples of older couples (see Berg et al., 2011; Yorgason, Roper, Sandberg, & Berg, 2012 for an exception).

This study extends previous evidence on NA co-variation among spouses coping with prostate cancer (Berg et al., 2011). Specifically, we link older adult perceptions of support that is available to them from their spouse across a variety of different situations with momentary PA, NA, and aches using simultaneous momentary assessments from community-dwelling older married couples. We expect that perceived spousal support overall relates to more PA, less NA, and fewer aches, but that the benefits of perceived spousal support may be undercut if they go along with an increased vulnerability to NA co-variation in particular.

Following dyadic literature terminology (Cook & Kenny, 2005), the term ‘actor’ refers to associations between an individual’s characteristics with his or her own score on a variable (i.e. intraspouse effect), while the term ‘partner’ is used to refer to an individual’s partner’s score on a variable (i.e., interspouse effects).

Chapter 2: Method

2.1 Participants

This study involved 49 older married couples from the Atlanta, Georgia metropolitan area. Couples were recruited through television and newspaper advertisements, community organizations, and reaching out to participants who had been in previous studies. Eligibility requirements were met if both partners agreed to participate in all study components at the same time, were aged 60 years or more, could read newspaper-sized print, and had tactile capability to write and hold a small stylus.

Participants were predominantly Caucasian (91.8%; African-American = 8.2%) and highly educated (82.5 % with at least some college). Self-rated health was good ($M = 3.51$, $SD = 0.99$; 5-point scale). Presence of an arthritis condition (i.e. either osteoarthritis or rheumatoid arthritis) was reported by 33.7% of participants. The sample was cognitively fit (M Advanced Vocabulary = 21.63, $SD = 6.51$; M Letter Sets = 16.43, $SD = 4.90$; Ekstrom, French, Harman, & Dermen, 1976) and reported high marital satisfaction ($M = 4.45$ on a 5-point scale, $SD = 0.54$; Hendrick, 1988). Eight couples were excluded due to low cognitive status (less than 5 on Vocabulary and/or Letter Sets tests) or other problems adhering to the protocol (e.g. device switches, technical problems). Each spouse was reimbursed US\$70.

2.2 Procedure

Participating spouses initially completed a mail-out package consisting of individual difference measures and couple characteristics. They then started a time sampling phase during which each spouse completed 3 simultaneous momentary assessments, approximately every 5 hours, over a period of 9 days. Hence, couples could complete up to a total of up to 27 assessment points. Pocket computers (Palm Tungsten 5) were used to implement momentary

assessments (see Hoppmann & Blanchard-Fields, 2011 for more details regarding sample and study design).

2.3 Measures

Spousal Support. Seven items comprising the relationship-specific support subscale of the Quality of Relationship Inventory (QRI) were used to measure the extent to which each participant perceived available support from their spouse (Pierce, 1994). Support items, as applied to the spouse, tap into a variety of different sources of support, such as the extent to which one feels one can count on the spouse to listen when one is angry, distract one from one's worries, or provide advice about problems (Pierce, 1994). The QRI was developed to capture relatively stable perceptions of relationship quality (Pierce, 1994), and so spouses were asked to reflect upon the past weeks and months. Participants responded on a 5-point scale ranging from 1 (not at all) to 5 (very much). Mean spousal support was 4.32 ($SD = .60$), and Cronbach's alpha was .84.

Momentary Affect. Participants reported their current positive (happy, excited, content, calm) and negative (sad, irritated, frustrated, tired) affect at each assessment using a 5-point scale ranging from 1 (not at all) to 5 (very much). Items were selected to cover high and low arousal positive and negative affective states (Tsai, Knutson, & Fung, 2006). Mean positive affect across the time-sampling phase was 3.50 ($SD = .45$), and mean negative affect was 1.81 ($SD = .52$).

Momentary Aches. At each assessment, participants responded to a single item that asked them to rate the extent to which they were currently experiencing aches (e.g. backaches, headaches, muscle soreness; Brown & Moskowitz, 1997), on a scale ranging from 1 (not at all) to 5 (very much). Most participants (93.7%) reported at least some aches during the study, and mean ache ratings were 2.06 ($SD = .90$).

Control Variables. To provide a meaningful interpretation of our central hypotheses, we also considered the influence of age ($M = 72$ years (60-83)), gender (50% female), number of children ($M = 2.74$; $SD = 1.46$), marriage duration ($M = 42.4$; $SD = 14.8$), marital satisfaction ($M = 4.45$, $SD = 0.54$; 5-point scale; Hendrick, 1988), and presence of an arthritis condition (33.7%) in our analyses.

2.4 Statistical Analysis

The three-level hierarchically nested data structure (measurement occasions nested within spouses nested within couples) was accounted for through Hierarchical Linear Modeling (HLM; Raudenbush, Bryk, Cheong, & Congdon, 2000). We used models with three levels of nesting: the first level regarded momentary fluctuations in affect and aches, the second level individual characteristics (age, gender, number of children, marital satisfaction, presence of an arthritis condition, perceptions of spousal support), and the third level couple characteristics (marriage duration). Day was not included as an additional level of analysis due to limited statistical power. To examine associations between covariates and mean levels as well as spousal co-variations in momentary PA, partner PA was added as a situation-level predictor, resulting in the following Level 1 model:

$$\text{Actor PA } s_{ijk} = \beta_{0jk} + \beta_{1jk} (\text{partner PA}) + r_{ij}$$

A similar model was used for NA and aches. Gender, number of children, and relationship satisfaction were added as person-level covariates to model the Level 1 intercept, resulting in the following Level 2 models:

$$\begin{aligned} \beta_{0jk} &= \gamma_{00k} + \gamma_{01k} (\text{gender}) + \gamma_{02k} (\text{number of children}) + \gamma_{03k} (\text{age}) + \gamma_{04k} (\text{relationship satisfaction}) \\ &\quad + u_{0j} \\ \beta_{1jk} &= \gamma_{05k} + u_{1j} \end{aligned}$$

Marriage duration was added as a couple-level covariate, resulting in the following Level 3 model:

$$\gamma_{00k} = \delta_{000} + \delta_{001} (\text{marriage duration}) + \nu_{00k} \quad \gamma_{01k} = \delta_{010} \quad \gamma_{02k} = \delta_{020} \quad \gamma_{03k} = \delta_{030} \quad \gamma_{04k} = \delta_{040} \quad \gamma_{05k} = \delta_{050}$$

All covariates in levels 2 and 3 were grand-mean centered, except for gender. Level 1 predictors were uncentered. For reasons of parsimony, Level 3 slopes were treated as fixed (Campbell & Kashy, 2002).

Associations between perceived spousal support and mean levels as well as co-variations in momentary PA, NA, and aches were then modeled. Partner PA remained as a situation-level predictor, resulting in the following Level 1 model:

$$\text{Actor PA } s_{ijk} = \beta_{0jk} + \beta_{1jk} (\text{partner PA}) + r_{ij}$$

A similar model was again used for NA and aches. Gender, number of children, and relationship satisfaction were again included as person-level covariates to model the Level 1 intercept. In addition, spousal support as reported by the individual (spousal support, actor) as well as spousal support as reported by their spouse (spousal support, partner) were added as predictors of levels and slopes, resulting in the following Level 2 models:

$$\beta_{0jk} = \gamma_{00k} + \gamma_{01k} (\text{gender}) + \gamma_{02k} (\text{number of children}) + \gamma_{03k} (\text{age}) + \gamma_{04k} (\text{relationship satisfaction})$$

$$+ \gamma_{05k} (\text{spousal support, actor}) + \gamma_{06k} (\text{spousal support, partner}) + u_{0j}$$

$$\beta_{1jk} = \gamma_{10k} + \gamma_{11} (\text{spousal support, actor}) + \gamma_{12k} (\text{spousal support, partner}) + u_{1j}$$

Marriage duration was again included as a couple-level covariate, resulting in the following Level 3 model:

$$\gamma_{00k} = \delta_{000} + \delta_{001} (\text{marriage duration}) + \nu_{00k} \quad \gamma_{01k} = \delta_{010} \quad \gamma_{02k} = \delta_{020} \quad \gamma_{03k} = \delta_{030} \quad \gamma_{04k} = \delta_{040} \quad \gamma_{05k} = \delta_{050}$$

$$\gamma_{06k} = \delta_{060} \quad \gamma_{07k} = \delta_{070} \quad \gamma_{08k} = \delta_{080} \quad \gamma_{10k} = \delta_{100} \quad \gamma_{11k} = \delta_{110} \quad \gamma_{12k} = \delta_{120} \quad \gamma_{13k} = \delta_{130} \quad \gamma_{13k} = \delta_{130}$$

Again, all covariates in Levels 2 and 3 were grand-mean centered, except for gender. Level 1 predictors were uncentered. For reasons of parsimony. Level 3 slopes were treated as fixed (Campbell & Kashy, 2002).

Chapter 3: Results

Table 1 displays the means, standard deviations, and intercorrelations of the central study variables and control variables. Overall, there were few gender differences, except that husbands were older and more satisfied with their marriages than wives. Older age was related to more children, longer marriages, and higher NA. Perceived spousal support and marital satisfaction were correlated, and both associated with more PA and less NA. More pronounced NA was related to less PA and more severe ache ratings. Presence of an arthritis condition was associated with more aches.

3.1 Associations of Covariates with Mean and Co-Variations in Momentary Affect and Aches

Associations between our covariates and mean PA, NA, and aches as well as spousal co-variations in PA, NA, and aches (*Table 2*, A models) were first examined. Results indicate that wives reported overall lower PA than husbands. Furthermore, older spouses reported more NA than younger spouses. Spouses who reported higher marital satisfaction also reported more PA and less NA than those who reported lower marital satisfaction. Spouses with an arthritis condition expectedly reported more aches. Importantly, we found support for the predicted spousal co-variation in PA and NA. No similar association was found for aches.

3.2 Associations of Perceived Spousal Support with Mean and Co-Variations in Momentary Affect and Aches

Associations between perceived spousal support and mean levels as well as co-variations in momentary PA, NA, and aches (*Table 2*, B models) were then modelled. Results indicate that an individual's own ('actor') and his or her partner's ('partner') spousal support perceptions were associated with lower overall NA. No similar associations were observed for positive

affect. Importantly, actor and partner support ratings also predicted co-variations in NA, as illustrated in *Figure 1*. This implies that spouses who report being able to rely on their partner for support fare better in terms of overall reduced NA, but they also are more likely to feel low when their partner is feeling low. No similar main effects or co-variations were observed for PA or aches.

3.3 Effect Size

A fully unconditional model for positive affect revealed that 61% of variance originated at the situation level, 32% at the person level, and 7% at the couple level. For negative affect, 60% of variance originated at the situation level, 29% at the person level, and 12% at the couple level. Finally, for aches, 54% of variance originated at the situation level, 36% originated at the person level, and 9% originated at the couple level. Using the Pseudo R^2 approach (Snijders & Bosker, 1999), reductions in variance were calculated for each model between specified and unconditional models: PA (*Pseudo* $\Delta R^2 = 0.00$), NA (*Pseudo* $\Delta R^2 = 0.18$), and aches (*Pseudo* $\Delta R^2 = 0.15$). The reduction in deviance was also calculated for each model: PA ($\chi^2 = 193.13$, $df = 13$, $p < .01$), NA ($\chi^2 = 263.50$, $df = 13$, $p < .01$), and aches ($\chi^2 = 297.00$, $df = 13$, $p < .01$).

Chapter 4: Conclusion

Taking the viewpoint of both spouses into account, actor and partner perceptions of spousal support were both independently associated with lower overall NA in the present sample. Corroborating previous findings from a younger couple sample (Saxbe & Repetti, 2010), we also found spousal co-variations in NA and PA among spouses. No similar associations were detected regarding aches. NA was concurrently associated between spouses when spousal support perceptions were high, thus extending previous research on affect transmission in couples (Berg et al., 2011; Bolger, DeLongis, Kessler, & Wethington, 1989; Larson & Almeida, 1999). Importantly, age, gender, number of children, marital satisfaction, presence of an arthritis condition, and marriage duration were included as control variables, and were not found to change the observed associations. These findings are discussed in the context of the social relationship and health literature and suggest further steps to substantiate our findings.

4.1 Perceptions of Spousal Support and Negative Affect

Actor and partner spousal support perceptions were associated with lower overall NA. This finding suggests that one's own perceptions of spousal support, as well as one's spouse's perceptions of spousal support, statistically predict overall negative affective experiences independently of one another. What matters to one partner may also impact the other, and these investigations of actor-partner effects are well-facilitated by time-sampling studies that obtain data from both partners. The current findings attest to the beneficial role of spousal support for affective experiences (Feldman, Downey, & Schaffer-Neitz, 1999), but also must be viewed in concurrence with our findings that actor and partner perceptions of support were not similarly associated with overall levels of positive affect. While overall levels of negative affect may be more likely to be minimized in marital partnerships higher in perceived support, the same does

not appear to be true for reports of positive affect in the present data. This discrepancy may possibly be explained by a congruency effect, in that negative affect may be more likely to occur during negative experiences, during which perceptions of available spousal support may be higher because support is needed, whereas positive affect may be more responsive to positive interactions and uplifts, in which case support is less likely to be required.

4.2 Perceived Spousal Support and Co-Variations in Affect and Aches

Furthermore, spouses co-varied in their PA and NA, but not aches. These findings can be interpreted in light of previous reports that pain experiences in one partner do not necessarily manifest in a similar way in the other partner (Martire, Keefe, Schulz, Stephens, & Mogle, 2013), whereas affective experiences of individuals tend to be related between spouses (Bookwala & Schulz, 1996; Goodman & Shippy, 2002). However, considering links between pain and affect, and potentially increased spousal dependency in old age, it is reasonable to hypothesize that in a sample of older married couples where both partners experience chronic health conditions, perceptions of may be associated with co-variations in aches and affect. Especially in light of previous findings that suggest increased dependency goes along with the onset of chronic illness (Wolff, Boulton, Boyd, & Anderson, 2005), it is possible these couples may be especially prone to the effects of perceived support levels as they become more reliant on each other to cope, and hence may be positioned in such a way that they are more vulnerable to each other's experiences of negative affect and pain.

While we did not observe an association between perceived spousal support and co-variations in PA, we did find the expected effect for NA. It is possible that spousal support is facilitated by a recognition of spousal NA – in order to help, it may be necessary to detect and empathize with the negative affect in one's spouse, consequently becoming more susceptible to

sharing in that experience of negative affect as well (Monin & Schulz, 2009). Indeed, older adults tend to be higher in emotional empathy relative to cognitive empathy (O'Brien, Konrath, Grühn, & Hagen, 2013), which may point to a potential vulnerability to such NA experiences of their spouse particularly in older age.

We note that while previous investigations identified NA transmission only in wives but not husbands (Berg et al., 2011), our gender interactions were non-significant. However, it is possible that limited statistical power prevented detection of significant gender differences. Such differences may also be less easily detected in community-dwelling samples, considering that we did not sample spouses to differ on central characteristics (e.g. being a patient versus being a support provider), in contrast with the sample included in the prostate cancer study by Berg and colleagues (2011). Future investigations should examine whether gender moderates NA co-variation in spousal support, for example, when coping with chronic pain. Alternatively, non-significant gender interactions may also be considered in the light of decreasingly rigid gender roles in aging married couples, which may place husbands and wives in increasingly similar positions in their relationship and minimize gender differences that may have existed earlier in life (Miller, Hemesath, & Nelson, 1997).

4.3 Limitations and Future Directions

These findings must be seen in light of several limitations. First, the observations presented here are exclusively based on self-reported affective and physical experiences. While this strategy offers some insight into the daily experiences of older adult married couples from their own unique perspectives, it would be informative to collect additional objective daily life assessments that tap into physiological responses (Saxbe & Repetti, 2010).

Additionally, findings are based on one-shot assessments of spousal support. For example, it would be interesting to investigate whether days on which spousal support was perceived as high would predict affect co-variations, compared to days on which spousal support was perceived as low. Future extensions may involve time-varying spousal support measures and day-level variables, such as stressor versus non-stressor days (Hahn, Cichy, Small, & Almeida, 2014). Including perceived spousal support as a time-varying construct in the time-sampling phase would especially clarify the findings presented here, as well as provide a means to examine the temporal order of perceptions of spousal support and affective and ache experiences in older adult marriages. Our understanding of the mechanisms underlying these observations would tremendously benefit from investigating the phenomenon in controlled laboratory settings.

It also must be recognized that our findings capture a 7-day snapshot within older adult daily lives. While these findings are placed within high-resolution, dense time points that are well-suited to detect affective and physical fluctuations in daily life, our understanding of longer-term outcomes of co-variation within older adult married couples would be expanded by follow-up assessments. For instance, it would be interesting to examine how current NA in one's spouse might be linked to the likelihood of adverse health outcomes in the other spouse later on (Schulz, Beach, Herbert, Martire, Monin, Tompkins, & Albert, 2009), and further, whether more pronounced current NA co-variation between spouses may be associated with specific health consequences further down the road.

Finally, this sample of older adult spouses was purposefully recruited for relatively good health and high cognitive functioning, as there was very limited existing research informing the feasibility of pocket-computer use in older age at the time of data collection (in 2006). In community-dwelling couples, there might be a good balance between the overall positive effects

of perceived spousal support and the rather negative effects of co-variation in NA, but this co-variation has the potential to become a greater burden if one partner is experiencing a serious health issue. As a consequence, both partners could become more vulnerable to the negative affect associated with experiencing a serious health issue as well as the NA associated with taking care of a loved one who is sick and/or incapacitated (Zarit, Todd, & Zarit, 1986). In such a scenario, the permeability of negative affect between spouses could outweigh the benefits of perceiving a great deal of support within one's marriage, and perhaps become more maladaptive for the health and well-being of both partners over time. As a next step, it would be interesting to consider how spousal support moderates the way physical symptoms experienced by one's partner might undermine one's own affect quality, in order to further our understanding of how couples may be best positioned to keep each other well-functioning into older age.

4.4 Closing Remarks

Taken together, it seems that perceptions of spousal support can be a double-edged sword. Greater perceptions of spousal support have been associated with lower overall negative affect levels, but concurrently, these perceptions can also be associated with more vulnerability to negative affect between spouses. There are clear benefits associated with higher levels of spousal support, as we and others have shown, but it is important to recognize that there may be drawbacks as well. We would expect that it depends upon a variety of different circumstances in terms of when and how it is ultimately beneficial or detrimental for couples to be in sync with each other in older age. Though generally regarded as a positive relationship characteristic, it is necessary to explore all sides of perceived spousal support in order to arrive at a more comprehensive understanding of the health and well-being implications of spousal support and affect co-variations.

Table 1*Means and Standard Deviations of the Central Study Variables for Wives and Husbands, and Variable Intercorrelations (N = 98)*

		M (SD)											
		Wives	Husbands	2	3	4	5	6	7	8	9	10	
1	Age	70.98 (5.11)*	73.33 (4.06)*	.229*	.284**	.026	-.249*	.004	.001	.204*	.078	-.119	
2	Number of Children	2.80 (1.43)	2.69 (1.50)		.250*	.013	.035	.081	-.045	-.021	.096	-.099	
3	Marriage Duration	42.41 (14.9)	42.41 (14.9)			.068	.000	.108	.173	-.079	-.014	-.003	
4	Relationship Satisfaction	4.34 (0.60)*	4.56 (0.45)*				-.202*	-.020	.362**	-.288**	-.128	.605**	
5	Gender	0.00 (0.00)*	1.00 (0.00)*					.194	-.179	.081	.052	-.103	
6	Arthritis Condition	0.43 (0.50)	0.24 (0.43)						.015	.044	.407**	-.020	
7	Positive Affect	3.41 (0.48)	3.57 (0.40)							-.532**	-.175	.318**	
8	Negative Affect	1.85 (0.50)	1.77 (0.53)								.388**	-.250*	
9	Aches	2.10 (0.95)	2.01 (0.85)									-.062	
10	Spousal Support	4.26 (0.67)	4.38 (0.51)										

Note. * $p < .05$, ** $p < .01$. ANOVAS tested mean differences between wives and husbands; correlations are based on means that were aggregated across wives and husbands unless indicated otherwise.

Table 2

Hierarchical Linear Models Predicting Momentary Affect and Physical Symptoms from Actor and Partner Spousal Support Using Full Maximum Likelihood Estimation in HLM (N = 98)

Fixed effects	Positive Affect		Negative Affect		Aches	
	Model A	Model B	Model A	Model B	Model A	Model B
Intercept	3.07**	3.08**	1.54**	1.51**	1.69**	1.73**
Marriage Duration	0.00	0.00	-0.00	-0.00	-0.01	-0.01
Gender	-0.16	-0.16	0.10	0.11	-0.04	-0.07
Number of Children	-0.02	-0.01	-0.02	-0.03	0.08	0.09
Age	-0.01	-0.00	0.03*	0.02*	0.01	0.02
Arthritis Condition	0.06	0.03	0.06	0.09	0.77**	0.71**
Relationship Satisfaction	0.25**	0.17	-0.23*	-0.12	-0.12	-0.20
Support, Actor		0.05		-0.30**		0.06
Support, Partner		-0.10		-0.29**		0.27
Positive Affect	0.14**	0.14**				
Negative Affect			0.11**	0.13**		
Aches					0.05	0.05
Positive Affect/ Negative Affect/Aches						
X Support, Actor		0.01		0.11**		-0.03
Positive Affect/ Negative Affect/Aches						
X Support, Partner		0.05		0.13**		-0.02

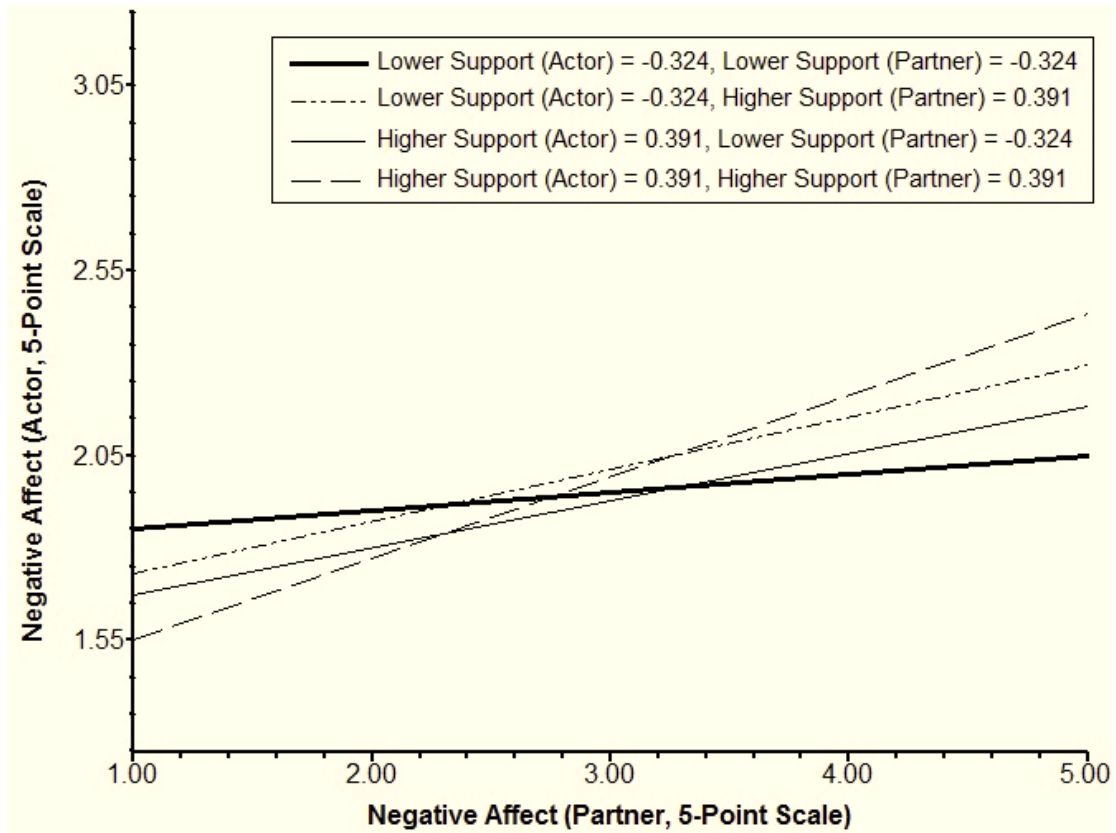
Random Effects

Residual	0.29	0.29	0.35	0.35	0.88	0.88
Intercept Level 1	0.19**	0.20**	0.20**	0.15**	0.54**	0.51**
Intercept Level 2	0.01**	0.01**	0.01	0.00	0.03**	0.03**

Note. * $p < .05$; ** $p < .01$; Unstandardized coefficients; we also tested whether perception of spousal support interacts with gender to predict co-variation in affect and aches. Our findings were not significant. We suspect that the absence of gender-specific associations in our findings may at least in part be due to power

Figure 1

Negative affect of the actor as a function of negative affect of the partner, separately for different levels of spousal support. Higher individual (actor) and spousal (partner) support ratings are those that reach above the 75th percentile, while lower support ratings are those that fall below the 25th percentile. Higher and lower spousal support are depicted for illustrative purposes only, as spousal support was considered a continuous variable. The figure illustrates that more spousal support relates to increased co-variation between partners in negative affect.



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