THE GERONTOLOGICAL SOCIETY OF AMERICA®

Journals of Gerontology: Psychological Sciences
cite as: *J Gerontol B Psychol Sci Soc Sci*, 2015, Vol. 00, No. 00, 1–6
doi:10.1093/geronb/gbv070
Advance Access publication September 29, 2015

OXFORD

Brief Report

To Love is to Suffer: Older Adults' Daily Emotional Contagion to Perceived Spousal Suffering

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Received February, 3 2015; Accepted July, 5 2015

Decision Editor: Bob G. Knight, PhD

Abstract

Objectives. For older adults coping with a spouse's chronic condition, greater marital satisfaction may not be entirely protective for psychological health. We examined marital satisfaction and gender as moderators of the association between perceived spousal suffering and daily emotional contagion. Based on empathy-altruism and interdependent self-construal theories, we hypothesized that high marital satisfaction and being female would heighten daily emotional contagion, or within-person associations between perceived spouse suffering and distress to spouse suffering.

Method. Forty-five older adults who had a spouse with a musculoskeletal condition completed daily interviews. Participants reported their marital satisfaction once in the laboratory and then daily perceptions of their spouse's physical suffering and their own distress to spouse suffering via phone at home for 7 days.

Results. Consistent with hypotheses, there were significant within-person effects such that highly satisfied wives experienced heightened emotional contagion on days when they perceived higher than average spouse suffering. Unexpectedly, men who were high in marital satisfaction experienced heightened daily distress irrespective of their perceptions of level of spousal suffering.

Discussion. Marital satisfaction can increase daily emotional contagion to spousal suffering among older couples dealing with chronic conditions. Wives' distress may be more dependent on perceiving high levels of partner suffering compared with husbands' distress.

Key Words: Gender differences—Marital satisfaction—Stress—Suffering

When people feel close to one another, they are more likely to converge emotionally, or empathize, with one another (Batson, Turk, Shaw, & Klein, 1995; Block, 1981). In the case of older couples coping with a spouse's chronic condition, this may be a double-edged sword. On the one hand, according to the empathy-altruism theory, empathizing

with a spouse's negative emotions and physical health symptoms can motivate caregiving behavior (Batson, 1989; Batson et al., 1995). On the other hand, when people are unable to separate themselves from their spouse's suffering, this can lead to emotional contagion, or personal distress, which can be harmful for psychological and physical health (Hatfield & Cacioppo, 1994; Monin & Schulz, 2009).

Although past studies have shown that marital satisfaction and being female separately increase emotional contagion (Block, 1981; Hagedoorn, Sanderman, Bolks, Tuinstra, & Coyne, 2008; Stampler, Wall, Cassisi, & Davis, 1997; Tower & Kasl, 1995), little is known about how marital satisfaction and gender interact to influence emotional contagion among older married couples. There is also much to learn about how spouses of individuals with chronic pain, in particular, react to their perceptions of partner physical suffering in daily life. Most studies of emotional contagion are cross-sectional or involve one laboratory visit, approaches that do not capture potential within-person variability in emotional reactions to partner suffering in every-day life. This is important because daily stressors from one's own environment are particularly impactful for peoples' psychological and physical health (Almeida, 2005).

We conducted a 7-day daily interview study of older adults who had spouse with a musculoskeletal condition to examine whether marital satisfaction and gender would interact to moderate the within-person associations between perceived spouse suffering and self-reported distress in response to spouse suffering. Specifically, we hypothesized that women who were high in marital satisfaction would experience the greatest distress on days when they perceived more than average levels of partner suffering. This is compared with men and women low in marital satisfaction and men high in marital satisfaction. In other words, we hypothesized there would be an additive effect of being high in marital satisfaction and female on daily emotional contagion to perceived suffering. The hypothesized gender differences are based on the interdependent self-construal theory, which states that women are more likely than men to incorporate their partners' thoughts and feelings into their own identity (Kiecolt-Glaser & Newton, 2001).

Method

Participants

Participants and their spouses with a self-reported musculoskeletal condition (i.e., osteoarthritis, lower back pain) were recruited from newspaper advertisements and community bulletins in the New Haven, CT region for a larger study examining interpersonal emotion regulation processes in older couples coping with chronic pain. To be eligible, participants had to (a) be older than 50 years; (b) be married or in a marriage-like relationship living together for at least 6 months; and (c) experience less pain (from their own conditions) on average than his/her spouse with the musculoskeletal condition.

Forty-eight older adult participants who had spouses with a musculoskeletal condition agreed to participate in the daily diary portion of the present study. Three participants reported not perceiving any spouse suffering and indicated that the distress measures were not applicable, resulting in a final sample of 45 participants. The participants (21 women and 24 men) completed at least 5 days of the daily diary. The mean age of the participants was 64.89 (*SD* = 8.35, range = 37–81), and the mean marriage length was 366.43 months (*SD* = 185.74, range = 2–700). Despite careful screening procedures, two participants did not meet the age requirement of at least 50 years (one participant was 37 years old and the other was 46 years old); the rest were 50 years of age or older. Also, two participants had only been married to their spouse for 2 and 3 months, respectively. Excluding these participants from the analysis did not change the results. Forty-one were White; 1 was Black; 1 was American Indian/Alaskan native; and 2 indicated other. Twenty-three completed an Associate's degree or higher. Twenty were retired; 13 were employed part time; 4 were employed full time; 3 were homemakers; and 4 indicated being unemployed. Participants were all in heterosexual marriages. There was a wide range of household annual incomes with 9 participants indicating $29,999 or less, 21 indicating between $30,000 and $59,999, and 14 indicating greater than $60,000. Participants included in the present study did not significantly differ on demographics (age, gender, and education) and marital satisfaction from participants not included from the larger laboratory study, which consisted of 77 couples (Monin, Zhou, & Kershaw, 2014).

Procedure

The telephone daily diary study occurred after a laboratory session in which participants completed background questionnaires and a series of tasks designed to measure emotional reactions to a spouse's suffering (Monin, Zhou, et al., 2014). After the session, participants were given a paper version of the daily diary survey to take home. For the next 7 days, starting the following evening, a research assistant administered the daily diary questionnaire over the phone to participants. The interview times ranged from 6:00 p.m. to 9:00 p.m. to allow flexibility with the participants' schedules. Previous research demonstrates the effectiveness of telephone-based daily diary data collection (Almeida, 2005).

Measures

Marital Satisfaction

Marital satisfaction was assessed using the 16-item Locke and Wallace Marital Adjustment Test (Locke & Wallace,

1959). This measure assesses several aspects of relationship quality including general level of marital happiness on a scale from 1 (*very unhappy*) to 7 (*perfectly happy*), spousal agreement on issues such as handling family finances, matters of recreation, friends, sex relations, and so forth on a scale from 1 (*always disagree*) to 6 (*always agree*), spousal disagreements, and views of current partner (α = .80). The remaining items consisted of multiple choice responses, and values were assigned to each choice according to the scoring algorithm (Jiang et al., 2013). Husbands reported significantly higher marital satisfaction (M = 102.46, SD = 15.78) than wives (M = 91.50, SD = 20.38; $t(46) = 2.10$, p = .04).

Daily Perceived Spousal Physical Suffering

Perceived spousal physical suffering was assessed by one item on a scale from 1 (*did not suffer*) to 10 (*suffered terribly*) adapted from Schulz and colleagues (2010). Participants were asked the extent to which their partner was physically suffering that day. It was explained that physical suffering could include suffering because of any physical symptoms (e.g., pain, fatigue, nausea). The mean across all days and participants was 2.93 (SD = 2.17).

Daily Distress in Response to Spouse Physical Suffering

Participants rated an item indicating how stressful it was to see the partner suffering physically using a scale from 1 (*not at all stressful*) to 4 (*very stressful*; 0 = *not applicable*). The mean across all days and participants was 2.26 (SD = 1.02). The correlation between perceived spousal physical suffering and reports of distress in response to physical suffering on each of the 7 days of the daily ranged from .32 to .59 with an average daily correlation of r = .41 (SD = .14).

Analytic Strategy

To account for the hierarchical nature of the day (days nested within persons), multilevel modeling, using SPSS 17 software (IBM Inc.), was performed to examine the effects of perceived spousal physical suffering on distress and how marital satisfaction interacted with gender to influence distress. Perceived spousal physical suffering was parameterized as two variables to represent between-person differences and within-person fluctuation (Hoffman & Stawski, 2009). *Between-person (Level 2) variables* represent the average across all days of each daily predictor for each person and were mean centered. *Within-person (Level 1) variables*, daily fluctuation, represent deviations from each participant's mean on a particular day. The model was estimated using restricted maximum likelihood estimation and an first-order autoregressive error structure for the repeated measures. The random effect of daily fluctuation in perceived suffering (within-person) was not included in the model due to sample size restrictions. The model equations for Level 1 predicting end of day distress for person j at day i and Level 2 are as follows:

$$\text{Level 1: Distress}_{ij} = \beta_{0j} + \beta_{1j}\left(\text{Perceived suffering}_{ij} - \text{Perceived suffering}_{nj}\right) + \varepsilon_{ij},$$

$$\text{Level 2: } \beta_{0j} = \gamma_{00} + \gamma_{01}\left(\text{Gender}_j\right) + \gamma_{02}\left(\text{Marital satisfaction}_j\right) + \gamma_{03}\left(\text{Perceived suffering}_{nj}\right) + \gamma_{04}\left(\text{Gender}_j \times \text{Marital satisfaction}_j\right) + \upsilon_{0j}$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}\left(\text{Gender}_j\right) + \gamma_{12}\left(\text{Marital satisfaction}_j\right) + \gamma_{13}\left(\text{Perceived suffering}_{nj}\right) + \gamma_{14}\left(\text{Gender}_j \times \text{Marital satisfaction}_j\right).$$

Results

Out of a total possible 315 days of data for the 45 participants included in the sample, there were 309 days of data (observations) for perceived suffering. Thus, all participants completed at least 5 days of daily diaries out of the 7 possible days with 91% completing all 7 days. Out of a total of 309 days of reported data, distress in regards to perceived physical suffering was reported on 249 of the days (81% of the days; Supplementary Appendix).

Among both women (see Table 1) and men (γ = .20, p = .003), greater average levels (between-person) of perceived suffering across the 7 days were associated with greater distress. Similarly, daily (within-person) perceived suffering increased, so did daily distress among women (see Table 1) and men (γ = .12, p = .002). However, in line with our hypothesis, this within-person association was moderated by both gender and marital satisfaction. Simple slopes of daily perceived partner suffering on distress plotted at ±1 SD from the mean on marital satisfaction for both husbands and wives are depicted in Figure 1. Wives high in marital satisfaction were the most reactive to their daily perceptions of partner physical suffering (b = .46, $p < .001$) relative to women low in marital satisfaction (b = .16, p = .0413) and men high and low in marital satisfaction (b = .07, p = .1096; b= .16, p = .0175, respectively). In other words, whereas husbands high in marital satisfaction experienced high levels of daily distress on both days when they perceived higher than average suffering and days when they perceived lower than average suffering, wives high in marital satisfaction increased in their daily distress on days when they perceived greater than their average level of partner suffering. There were no significant differences among husbands and wives low in marital satisfaction.

Discussion

First, this study showed that in the context of older couples coping with a chronic condition, daily distress is related

Table 1. Marital Satisfaction, Gender, and Perceived Physical Suffering Predicting Distress

Fixed effects	Estimate (*SE*)	*df*	*t*	*p* Value
Intercept	2.06 (.17)	39.05	11.77	<.001
Gender	0.14 (.24)	39.02	0.590	.56
Marital satisfaction	0.01 (.01)	41.47	1.07	.29
WP perceived physical suffering	0.31 (.06)	207.99	5.17	<.001
BP perceived physical suffering	0.20 (.06)	39.10	3.15	<.01
Gender × Marital satisfaction	0.01 (.01)	40.00	0.74	.46
Gender × WP perceived physical suffering	−0.19 (.07)	207.59	−2.72	<.01
Marital satisfaction × WP perceived physical suffering	0.01 (.00)	202.79	2.76	<.01
Marital satisfaction × Gender × WP perceived physical suffering	−0.01 (.00)	195.83	−2.81	<.01
Variances/covariances	**Estimate (*SE*)**		**Wald-*z***	***p* Value**
Intercept	0.44 (.13)		3.45	<.01
Residual	0.39 (.05)		7.65	<.001
AR(1)	0.27 (.10)		2.66	<.01

Note. AR(1) = first-order autoregressive; *N* = 45 persons, 309 observations; WP = within-person, BP = between-person. Gender coded as women = 0 and men= 1.

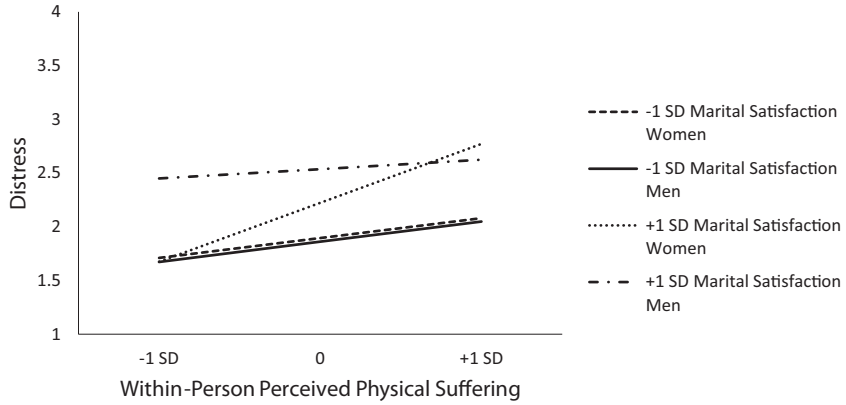

Figure 1. The effect of daily perceived physical suffering on distress moderated by gender and marital satisfaction on distress.

to perceptions of spouse suffering. Previous research has been limited to cross-sectional surveys (Schulz et al., 2009) and laboratory experiments (Monin et al., 2010). To our knowledge, this is the first longitudinal daily diary study examining the interpersonal effects of suffering, and the results highlight a unique mechanism through which spouses' psychological health can be impacted by spousal caregiving that is not directly related to the burden of providing care (Freedman, Cornman, & Carr, 2014).

Importantly, the results of this study also showed that marital satisfaction was associated with greater daily distress in response to greater perceived spousal suffering and less daily distress in response to less perceived spousal suffering. This is consistent with the empathy-altruism hypothesis and past research showing that older adults who are high in marital satisfaction are particularly likely to experience empathy or emotional contagion when exposed to their partner's pain (Stampler et al., 1997). The results also suggest that people who are high in marital satisfaction experience relief when they perceive that their partner is not suffering. Thus, marital satisfaction may be an important factor in accounting for the within-person variability in response to spouses' suffering in daily life.

The study findings also suggest that there are gender differences in how marital satisfaction relates to reactions to spouses' suffering. Consistent with the past research showing that women report greater empathy and experience greater emotional contagion (Hagedoorn et al., 2008), wives' distress was particularly contingent on their perceptions of their spouse's physical suffering. However, in line with our hypothesis, this was only for wives who reported high levels of marital satisfaction. Interestingly, husbands who were high in marital satisfaction experienced high levels of distress in response to partner suffering regardless of the perceived level of spousal suffering. It may be that husbands who are high in marital satisfaction are particularly protective of wives who have a chronic pain condition (Hilton, Crawford, & Tarko, 2000). They may view both high and low levels of suffering as equally threatening to the partner.

There are a few limitations to this study including the small sample size which may have limited the power to

detect significant effects and also that this was a mainly White and entirely heterosexual sample. Future research is needed to replicate these findings with larger, more representative samples of older couples. Also, although chronic distress is an important indicator of mental health, it will be important to examine whether this distress places spouses at greater risk for psychological and physical health conditions.

The present findings have clinical implications for older couples coping with chronic conditions. Although an important goal for interventions for couples coping with chronic conditions is to enhance communication, understanding, and closeness (Kowal, Johnson, & Lee, 2003), it may also be important to target couples who are extremely close and help them process their partners' suffering in ways that allow for compassion but minimize personal distress (Monin, Schulz, & Feeney, 2014). For example, Problem Solving Therapy that helps spouses to determine when they can effectively provide support to their partner to relieve suffering and when to take a psychological break to attend to one's own needs may be particularly effective in reducing burnout (D'Zurilla & Chang, 1995; Monin & Schulz, 2009). It may also be useful to tailor interventions differently for husbands and wives, as wives' distress may stem more from perceptions of spouse suffering, whereas husbands' distress may stem from other factors in the context of a chronic illness (e.g., wanting to protect the partner). It will be important for research to further examine these different sources of distress for men and women in late-life marriage in which couples are dealing with a spouse's suffering.

Supplementary Material

Supplementary material can be found at: http://psychsocgerontology.oxfordjournals.org/

Funding

This work was supported by career development awards to J. K. Monin from the National Institute on Aging (K01 AG042450) and the Claude D. Pepper Older Americans Independence Center at Yale (P30 AG21342) and a NIA award (R01 AG032284) to B. Levy.

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