

Couples Coping With Stress: Between-Person Differences and Within-Person Processes

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In intimate relationships, spousal support (or dyadic coping) can directly benefit relationships (i.e., have a direct effect) and protect the relationship against the negative spillover effects of stress (i.e., have a buffer effect). As stress-coping theories suggest, both processes can vary between persons as well as within persons. However, empirically, this distinction is not always made explicit, resulting in potentially misleading conclusions about dyadic stress-coping processes. In the current study, we investigated stress and coping processes in couples at both between- and within-person levels. Participants were 84 Chinese dual-earning couples ($N = 168$ individuals) participated in a 7-day diary study. Between persons, our multilevel analyses replicated well-established buffering effects: The link between average stress and relationship outcomes was reduced if the partner provided more support on average. Within persons, results implied a significant buffer effect only in women; their relationship satisfaction was highest on days when they experienced higher levels of stress and higher levels of partner support. The present findings demonstrate how distinguishing between- and within-person effects can provide a better conceptual understanding of dyadic processes in intimate relationships while examining stress-coping associations in an understudied group.

Keywords: stress-coping, multilevel modeling, interpersonal processes, relationships, direct and buffer effect

People who experience more stress on average report greater levels of relationship dissatisfaction with their partners than people who are less stressed (e.g., [Story & Bradbury, 2004](#)). Such trait-like differences between persons support emerging theoretical

frameworks that link stress to relationships (e.g., [Bodenmann, 1995](#); [Karney & Bradbury, 1995](#)), yet they are conceptually distinct from processes occurring within persons over time ([Hamaker, 2012](#)). In contrast to between-person associations, psychological processes rely upon covariations within a person over time, and thus capture differential reactions of a given individual to different situations. Failing to make this distinction may result in an imprecise understanding of how stress and dyadic-coping behavior affect couples. For example, a person's relationship satisfaction may depend more on whether the partner provides more dyadic coping¹ on stressful days when support is needed than on how a partner's average dyadic-coping behavior compares to that of others. In the current study, we examined associations between stress, dyadic coping, and relationship satisfaction at between- and within-person levels, with particular emphasis on the moderating role of dyadic coping in these associations.

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¹ In the current paper, we focus on one aspect of dyadic coping, namely partner's emotion-focused supportive dyadic-coping behavior in times of stress. The model we propose applies to theories and findings using the terminology of social support and dyadic coping.

Stress and Dyadic Coping in Intimate Relationships

Stress outside of the relationship is common (e.g., work stress) and can affect relationship outcomes negatively (Bolger, DeLongis, Kessler, & Wethington, 1989). According to Bolger and colleagues, stress spillover theory explains this mechanism by predicting that people's days are often filled with stressful experiences (e.g., work, child care). If stress experiences are not fully regulated during the day, stress can spill over into the relationship when partners meet again and thus shape how they interact with each other. Stress is associated with more negative behavior (Schulz, Cowan, Pape Cowan, & Brennan, 2004), which in turn predicts relationship outcomes (Buck & Neff, 2012).

When stress spills over into dyadic relationships, partners actively engage in stress regulation using individual and dyadic coping strategies. Dyadic coping subsumes behaviors such as emotion-focused dyadic coping (i.e., expressing understanding), problem-focused dyadic coping (i.e., giving advice), and delegated dyadic coping (i.e., taking on the partner's chores; Bodenmann, 2000). Dyadic coping has a beneficial direct effect, which emerges when one partner's dyadic-coping behavior evokes feelings of being cared for and understood in the stressed partner. A second mechanism is defined as the buffer effect, when a partner's dyadic-coping behavior buffers (or protects) the stressed person from the negative impacts of stress (Cohen & Wills, 1985; Falconier, Nussbeck, & Bodenmann, 2013; Merz, Meuwly, Randall, & Bodenmann, 2014).

Current theoretical models imply that the associations of stress and dyadic-coping behavior in couples occur both between persons and within persons. The systemic-transactional model (STM; Bodenmann, 1995), makes some assumptions about processes on the within-person level, the vulnerability–stress–adaptation model (VSA; Karney & Bradbury, 1995) focuses on between-person differences, and the stress-spillover theory (Bolger et al., 1989) predicts within-person processes for stress. Between-person associations are based on trait-like components. Trait-like components do not change over a short period of time and allow us to make comparisons between individuals, such as whether individuals with higher average stress levels are less satisfied with their relationships than individuals with lower average stress levels. In contrast, within-person associations are based on state-like components and vary over time within an individual. State-like components allow us to compare whether an individual is more satisfied with the relationship on days when he or she receives more support from his or her spouse than on usual days. In sum, associations on the between-person and within-person level capture conceptually different aspects of the stress-coping process in couples.

Not distinguishing processes, theoretically as well as statistically, on the between- and within-person levels is associated with a variety of problems. First, even though statistical methods have been introduced to disentangle effects on both levels (Raudenbush & Bryk, 2002), they are not yet commonly applied, undermining our ability to theoretically attribute an effect to the within- or between-person level (Curran & Bauer, 2011). Second, between-person differences are often misinterpreted as within-person processes (Brose, Voelke, Lövdén, Lindenberger, & Schmiedek, 2015) and mistakenly used to justify intervening at the within-person and within-couple level. Third, most stress-coping studies

focus on between-person components and only some studies examine within-person processes. Several of the within-person papers focus solely on stress (Buck & Neff, 2012; Neff & Karney, 2009; Saxbe & Repetti, 2010) or support (Belcher et al., 2011; Gleason, Iida, Shrout, & Bolger, 2008) and three studies have analyzed the linkage between stress and support (Gleason et al., 2008; Iida et al., 2010; Neff & Karney, 2005). Only three studies have included stress, support, and a relational outcome variable. These three studies provide evidence that days of less support result in higher levels of negative affect (DeLongis, Capreol, Holtzman, O'Brien, & Campbell, 2004), that daily support is associated with more relationship closeness (Gleason et al., 2008), and that daily support affects mood but only up to a certain threshold (Bar-Kalifa & Rafaeli, 2015). More precise conceptualization of stress and coping on both levels could lead to new research questions. It is known that received support buffers the negative link between stress and relationship satisfaction on the between-person level (Cohen & Wills, 1985) but support is mainly needed on stressful days (within-person buffer). Thus, we argue that studying the possibility of a buffer effect on the within-person level captures a conceptually crucial aspect of the stress-coping process in couples.

Current Study

One reason so few studies have examined stress-coping processes on both the between- and within-person levels might be because influential theories are not explicit in comparing the processes simultaneously on both levels. Therefore, we conceptualized our hypotheses for the stress-coping process in couples in a way that enables the direct contrast between the processes on the two levels.

Between Persons

Hypothesis (H) 1a: Individuals with higher average stress levels tend to be less satisfied with their relationships than individuals with lower average stress levels. *H1b:* Individuals who receive more support tend to be more satisfied with their relationships than individuals who receive less support, on average (i.e., direct effect). *H1c:* The link between average stress and relationship satisfaction tends to be weaker for those individuals who, on average, receive more support from their partners (i.e., buffer effect).

Within Persons

H2a: Individuals tend to be less satisfied with their relationships on days when they experience more stress. *H2b:* Individuals tend to be more satisfied with their relationships on days when they receive more support from their spouses (i.e., direct effect). *H2c:* The link between daily stress and relationship satisfaction tends to be weaker on days when individuals receive more support from their partners than usual (i.e., buffer effect).

Daily diary data are ideal for disaggregating effects on the between- and within-person level. In the current study, we asked couples who are known to have elevated levels of stress (dual-earner couples with children; Mui-Teng Quek & Knudson-Martin, 2006) to complete a daily diary about same-day stress experiences,

partner's support provision, and their level of satisfaction with the relationship.

AQ: 1 We collected data from a unique cultural context—parents living in mainland China. Although focusing on this unique demographic sample does not affect the main purpose of the current paper, our findings on both levels may be specific to the Chinese culture. Individuals from collectivistic cultures (such as China), tend to construe themselves as interdependent and emphasize the maintenance of relational harmony (Kim & Markus, 1999; Oyserman, Coon, & Kemmelmeier, 2002), whereas people from individualistic cultures (such as the United States), tend to view themselves as independent and are more likely to prioritize their personal needs (Fiske, Kitayama, Markus, & Nisbett, 1998). Although support seems to be a universal remedy for dealing with stress, evidence indicates that cultural differences affect the stress-coping process in couples. Asians are less likely to seek support (Kim, Sherman, & Taylor, 2008; Taylor et al., 2004), tend to display more negative behavior in social support interactions (Williamson et al., 2012), show less dyadic coping toward their partners (Xu, Hilpert, Randall, Li, & Bodenmann, 2016), and benefit less from explicit support than do Westerners (Taylor, Welch, Kim, & Sherman, 2007). The main reason for this phenomenon is that individuals from collectivistic cultures believe that activating support can disturb the relational harmony (i.e., lose face), which reduces the likelihood of them seeking support. This is in contrast to those from individualistic cultures, who prioritize meeting their own personal needs through self-assertion and are therefore more likely to benefit from the active leveraging of support behaviors (Taylor et al., 2004). To illustrate processes on the between-person and within-person levels, we chose, mainly as a proof of concept, to focus on a single aspect of dyadic coping: emotion-focused supportive behavior.

Method

Participants

Heterosexual couples were recruited in four metropolitan cities in China, Beijing, Shanghai, Guangzhou, and Shenzhen, by distributing flyers at parents' meetings in schools and to administrative managers of different enterprises (e.g., civil institutions, companies, schools, and hospitals). Approximately 100 couples expressed interest in the study and were screened by research assistants to determine if they met the following inclusion criteria: being married, living together, having at least one child, and both partners working full-time. All participants were notified that their data would be anonymized and kept confidential and that they could discontinue the study at any time. The 84 couples ($N = 168$) comprising the final sample gave written consent and were paid ¥100 (~\$17 in 2014) upon completion of the study. The Institutional Review Board at the University of Zurich approved all the study procedures.

AQ: 2 Women averaged 31.2 years of age (range = 24–45, $SD = 3.4$) and 14 years of education ($SD = 2.3$); men averaged 33.3 years of age (range = 27–49, $SD = 3.5$) and 16 years of education ($SD = 3.1$). All participants worked full time, as is common in China (Ling & Powell, 2011). Sixty-four percent of women reported that they worked in state-owned institutions (e.g., schools, hospitals, governments), 33% reported that they worked in private compa-

nies, and 3% were self-employed; comparable figures for men were 60%, 31%, and 9%. The average monthly salaries for women and for men ranged from ¥6,000–10,000 (\$~1,000–1,700). Couples averaged 6.3 years of marriage ($SD = 4.0$) and 1.3 children ($SD = 0.51$).

Procedure

Initially, all participants were asked to complete a survey to assess sociodemographic characteristics. Once we had received the surveys, couples could choose from the following two options: using a paper-pencil diary or an electronic diary (sent by daily email) for 7 days. Sixty couples chose the paper-pencil diary and received seven diaries, seven envelopes, and seven prepaid envelopes for each participant. They were instructed to start on a Monday and fill out a diary before going to sleep. To avoid backfilling of diaries, participants were asked to send the diary back to the research assistants the next day with a prepaid envelope. Twenty-four couples chose the electronic diary. Starting on a Monday, these couples received an email every day with the attached diary and returned the diary the same evening. Couples with hand-written diaries and electronic diaries did not differ in dyadic coping, $t(1173) = -0.12, p = .906$ and relationship satisfaction, $t(1174) = -1.64, p = .102$, but did so in their stress levels, $t(1159) = -3.01, p > .001$.

Daily Diary Measures

Daily relationship satisfaction. We adapted two items from the Chinese version of the Relationship Assessment Scale (Wong, 2011) to assess current day's level of relationship satisfaction: "How satisfied are you with your relationship today?" and "How contented are you with your relationship today?" Couples responded to the two items on 7-point Likert-type scales (1 = *totally unsatisfied* to 7 = *extremely satisfied*). A summed composite score was created for each spouse daily. Across the seven (K) fixed (F) days (Cranford et al., 2006), reliability across relationship-satisfaction items was high within participants (men: $R_C = .81$; women: $R_C = .81$) and between AQ: 3 participants (men: $R_{KF} = .94$; women: $R_{KF} = .94$). AQ: 4

Daily stressful life episodes. To assess daily stress, we adapted items from the external stress subscale of the Multidimensional Stress Questionnaire for couples (Bodenmann et al., 2007). Whereas the original MSQ-C measures the frequency of acute stress over a week (and chronic stress over 1 year), the current daily measure was adapted to assess the intensity of today's stress. This was on the grounds that most stressors do not occur more than once during the day and therefore assessing intensity is more meaningful than assessing frequency across a day. We followed back-translation-procedure recommendations by Sireci and colleagues for the MSQ-C (Sireci, Wang, Harter, & Ehrlich, 2006). Every evening, spouses were asked to report their daily stress levels in five domains: (a) Social Contacts (e.g., conflicts with colleagues, siblings); (b) Children (e.g., child care, upbringing); (c) Finances (e.g., housing loan, unexpected consumption); (d) Daily Hassles (e.g., losing, waiting lines, traffic jams); and (e) Jobs (e.g., workload, career opportunities). For each domain, they were instructed to rate current day stress intensity on a 7-point scale (1 = *not at all* to 7 = *extremely*). A composite score was computed for each spouse each day by summing the five items. Internal consistency cannot necessarily be assumed across different domains of AQ: 5

stress. Accordingly, the reliability of the different stress items was low within (men: $R_C = .34$; women: $R_C = .35$) and between participants (men: $R_{KF} = .58$; women: $R_{KF} = .55$) across the 7 fixed days (Cranford et al., 2006).

Daily received emotion-focused supportive dyadic coping (SDC). We used two items from the validated Chinese version of the Dyadic Coping Inventory (DCI; Xu et al., 2016) to assess perceptions of the partners' daily emotion-focused SDC behaviors: Participants were asked questions such as, "What did your partner do today, when you were stressed?" and prompted to evaluate the responses, "My partner showed empathy and understanding towards me today" and "My partner listened to me and gave me an opportunity to communicate what really bothers me today." Each participant rated their partners' support behavior on 7-point Likert-type scales (1 = *not at all* to 7 = *extremely*). Reliability across dyadic coping items was moderate within (men: $R_C = .69$; women: $R_C = .63$) and high between participants (men: $R_{KF} = .81$; women: $R_{KF} = .81$) across the 7 fixed days (Cranford et al., 2006).

Data-Analysis Strategy

The main goal of the current study was to disentangle the dyadic coping processes of stress among couples on both the between-person and within-person levels. We used multilevel modeling to analyze the nested dyadic daily diary data (Bolger & Laurenceau, 2013; Raudenbush & Bryk, 2002). To distinguish between the within-person and between-person variability, we separated stress and dyadic coping into between-person and within-person components. To obtain the between-person component, a weekly average level of stress ($stress_{between}$) and dyadic coping ($DC_{between}$) per person was computed by aggregating all responses of an individual across the 7-day period and subtracting the overall grand-mean from the person's average score (i.e., grand-mean centering). To obtain the within-person component, the uncentered person's individual average score was then subtracted from the individual's daily values of stress ($stress_{within}$) and dyadic coping (DC_{within}), respectively (i.e., person-mean centering). We further controlled for different indicators of time (i.e., day; weekend/weekday) for each gender in the model, but because none of them was a significant predictor, we simply retained time (days) in the final model. A double intercept model (Bolger & Laurenceau, 2013) was used to account for interdependencies within couples, enabling us to simultaneously compute effects for husbands and wives. However, this required an analytical strategy that involved a dummy code for each gender and the use of interaction terms with these codes to determine the respective effects. We used R version 3.3.2 (R Core Team, Vienna Austria) and the psych package (Revelle, 2015) for descriptive statistics, ggplot2 for graphs (Wickham, 2009), and lme4 (Bates, Mächler, Bolker, & Walker, 2015) and lmerTest (Kuznetsova, Brockhoff, & Christensen, 2016) for multilevel modeling. The equation for Model 1 focuses on main effects and is shown below.

AQ: 6

$$\begin{aligned} \text{Relationship satisfaction}_{it} = & (\text{male})_i[\gamma_{00}(\text{time}) \\ & + \gamma_{01}(\text{stress}_{between}) + \gamma_{02}(\text{DC}_{between}) \\ & + \gamma_{10}(\text{stress}_{within}) + \gamma_{20}(\text{DC}_{within}) \\ & + u_{m0i} + u_{m1i}(\text{stress}_{within}) \\ & + u_{m2i}(\text{DC}_{within})] \end{aligned}$$

$$\begin{aligned} & + (\text{female})_i[\gamma_{03}(\text{time}) \\ & + \gamma_{04}(\text{stress}_{between}) \\ & + \gamma_{05}(\text{DC}_{between}) \\ & + \gamma_{30}(\text{stress}_{within}) + \gamma_{40}(\text{DC}_{within}) \\ & + u_{f0i} + u_{f1i}(\text{stress}_{within}) \\ & + u_{f2i}(\text{DC}_{within})] + \epsilon_{it} \end{aligned}$$

In this double intercept model, i indexes individuals and t indexes day; $male_i$ and $female_i$ represent each gender's intercept, and γ_{00} and γ_{03} indicate the effect of time for husbands and wives. On the between-person level, γ_{01} and γ_{04} capture stress and γ_{02} and γ_{05} represent dyadic coping for men and women, respectively. On the within-person level, γ_{10} and γ_{30} capture stress and γ_{20} and γ_{40} represent dyadic coping. U_{m0i} and u_{f0i} represent the random intercepts, u_{m1i} and u_{f1i} indicate the random slopes for stress, u_{m2i} and u_{f2i} stand for the random slopes of dyadic coping, and ϵ_{it} represents the regression residual for person i on day t . In addition, in Model 2 we included between-person ($Stress_{between} \times DC_{between}$) and within-person interactions ($Stress_{within} \times DC_{within}$) for men and women, respectively, to test the buffer effects.

Results

Preliminary Analyses

As we collected information from 84 couples, our data set resulted in 1,176 observations given that each individual in the couple was assessed over 7 days. Response rate was high (missing data <0.5%). Table 1 presents descriptive statistics and between-person and within-person correlations for men and women. Stress levels and dyadic coping provision for men and women were medium to high (stress: $M_{men} = 3.05$; $M_{women} = 3.05$, range = 1–7; emotion-focused SDC: $M_{men} = 3.95$; $M_{women} = 3.89$, range = 1–7) and reports of relationship satisfaction were high ($M_{men} = 4.85$; $M_{women} = 4.66$, range = 1–7). At the between-person level, bivariate correlations showed reliable associations among all three variables in expected directions. At the within-person level, correlations were lower, and links between stress and relationship satisfaction were not significant.

T1

Fn2

Stress and Dyadic Coping: Between-Person Differences

Models 1 and 2 allowed us to examine hypothesized between-person effects (see Table 2). First, we confirmed in Model 1 that a higher average stress level is associated with lower relationship satisfaction ($\gamma_{men} = -.27$, $p < .004$; $\gamma_{women} = -.24$, $p = .001$) thereby replicating prior findings that stress has a detrimental impact on couples.² Second, we found that people who receive higher average emotion-focused SDC tend to be more satisfied with their relationships, even after controlling for stress ($\gamma_{men} = .28$, $p < .001$; $\gamma_{women} = .36$, $p < .001$) which also reconfirmed prior results. Third, we tested in Model 2 whether average received emotion-focused SDC would offset the negative effects of average stress on relationship satisfaction. Results showed a buffer effect

² In addition, we tested for gender differences. Results show that effects are not different between husbands and wives.

Table 1
Descriptive Statistics and Within-Person and Between-Person Correlations Among Study Variables Across 7 Days

Variable	Men		Women		Between person (n = 84)			Within person (n = 588)			Between-person ICC	
	M	SD	M	SD	1	2	3	1	2	3	Men	Women
1. Stress	3.05	1.23	3.05	1.27		.11	-.17		.10	.03	.34	.29
2. Dyadic coping	3.95	1.76	3.89	1.72	.33		.32	.14		.15	.45	.47
3. Relationship satisfaction	4.85	1.28	4.66	1.30	-.14	.11		-.05	.08		.47	.48

Note. ICC = intraclass correlation. All variables' values ranged from 1–7. M and SD are based on averaging seven diary reports. Correlations above the diagonal are for women and under the diagonal are for men; significant correlations are in bold ($p < .05$; two-tailed).

for both men and women ($\gamma_{men} = .13, p = .038; \gamma_{women} = .12, p = .040$). Computing the regions of significance ($region_{men/lower_bound} = 3.77, region_{women/lower_bound} = 3.86$ on a scale from 1–7) indicated that emotion-focused SDC buffered stress only for those people whose partners provided more support on average than other partners from the sample (top 20.2% of men; top 30.9% of women; see Figure 1).

F1

Stress and Dyadic Coping: Within-Person Processes

First, on the within-person level, results from Model 1 revealed that men tend to be less satisfied with their relationships on the days they experienced more stress ($\gamma_{men} = -.11, p = .049$,

whereas for women, higher or lower stress levels than on usual days were not associated with relationship satisfaction ($\gamma_{women} = -.01, p = .889$). Second, we hypothesized that received emotion-focused SDC would covary with relationship satisfaction, even after controlling for stress. As hypothesized, received support predicted relationship satisfaction ($\gamma_{men} = .10, p = .027; \gamma_{women} = .22, p < .001$) for men and women: On days when they received more emotion-focused SDC than usual, they also reported being more satisfied with their relationships. Third, we tested the buffer effect of emotion-focused SDC on the within-person level in Model 2. Results showed no buffer effect for men. But, although we found a statistically significant effect for women

Table 2
Parameter Estimates for Multilevel Model of Relationship Satisfaction as a Function of Stress and Dyadic Coping Including Interaction Terms

Fixed effects (intercepts, slopes)	Model 1: Main effects						Model 2: Including interactions					
	Est	SE	t	p	95% LL	CI UL	Est	SE	t	p	95% LL	CI UL
Intercept_M	4.74	.15	31.77	<.001	4.43	5.02	4.70	.15	32.27	<.001	4.41	4.98
Intercept_W	4.51	.13	33.86	<.001	4.23	4.81	4.53	.13	38.19	<.001	4.27	4.79
Time_M	-.02	.02	-.98	.327	-.05	.02	-.02	.02	-.82	.411	-.05	.02
Time_W	.01	.02	.42	.673	-.03	.04	.01	.02	.45	.652	-.03	.05
Level 1 (within-person)												
Stress_M	-.11	.06	-1.98	.049	-.24	-.01	-.14	.06	-2.33	.021	-.26	-.02
Stress_W	-.01	.07	-.14	.889	-.11	.14	-.01	.07	-.15	.884	-.15	.12
DC_M	.10	.04	2.28	.027	.01	.18	.11	.04	2.53	.015	.06	.25
DC_W	.22	.04	5.14	<.001	.13	.31	.21	.04	4.91	<.001	.13	.31
Stress × DC_M	—	—	—	—	—	—	.08	.05	1.57	.118	-.02	.18
Stress × DC_W	—	—	—	—	—	—	.13	.06	2.00	.046	.01	.25
Level 2 (between-person)												
Stress_M	-.27	.09	-2.91	.004	-.47	-.08	-.25	.09	-2.78	.007	-.43	-.07
Stress_W	-.24	.07	-3.36	.001	-.38	-.10	-.21	.07	-2.79	.007	-.35	-.06
DC_M	.28	.08	3.59	<.001	.11	.44	.42	.11	3.97	<.001	.21	.63
DC_W	.36	.07	5.48	<.001	.23	.49	.51	.09	5.34	<.001	.32	.69
Stress × DC_M	—	—	—	—	—	—	.13	.06	2.10	.038	.01	.25
Stress × DC_W	—	—	—	—	—	—	.12	.06	2.09	.040	.01	.23
Random effects ([co]variances)												
Level 1 (within-person)												
Residual	.78	.88	—	—	.83	.92	.77	.88	—	—	.83	.91
Level 2 (between-person)												
Intercept_M	.73	.85	—	—	.70	.99	.67	.82	—	—	.62	.89
Intercept_W	.60	.78	—	—	.63	.92	.57	.76	—	—	.27	.70
Stress_M	.03	.17	—	—	.10	.37	.04	.18	—	—	.08	.43
Stress_W	.03	.17	—	—	.09	.39	.04	.20	—	—	.09	.39
DC_M	.05	.22	—	—	.13	.31	.05	.22	—	—	.13	.33
DC_W	.04	.19	—	—	.10	.29	.04	.20	—	—	.10	.29

Note. M = men; W = women; DC = dyadic coping; Est = unstandardized estimates; SE = standard error; CI = confidence interval; LL = lower limit; UL = upper limit; SD = standard deviation; significant coefficients are in bold ($p < .05$, two-tailed).

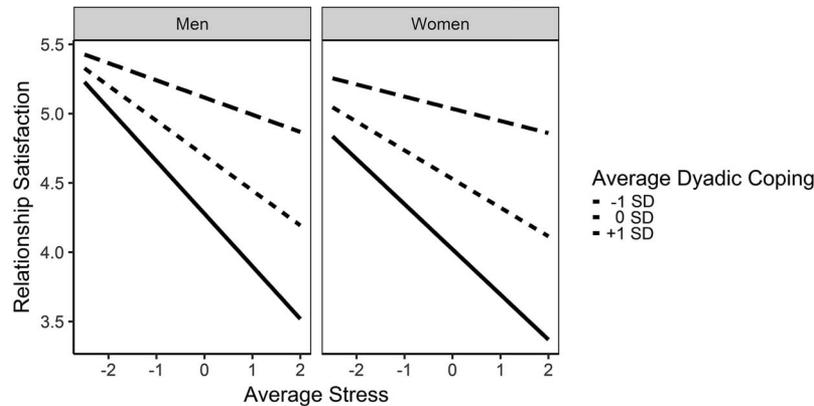


Figure 1. On the between-person level, perceptions of dyadic coping moderate the effects of stress on relationship satisfaction, for men and women.

($\gamma_{\text{women}} = .13, p = .046$), it cannot directly be interpreted as a buffer effect. An analyses of the region of significance ($\text{region}_{\text{lower_bound}} = -6.76$; $\text{region}_{\text{upper_bound}} = 3.79$) implied that stress was significantly associated with relationship satisfaction only for within-person centered values of emotion-focused SDC that were smaller than -6.76 (negative association) or greater than 3.79 (positive association). However, in the current sample, within-person emotion-focused SDC values only ranged from -2.36 to 2.07 . Hence, in addition to the finding that the main effect of stress was not significant (Model 1), we conclude that stress simply seemed to have no effect on relationship satisfaction for the Chinese women in this sample.

Discussion

Theoretical models have suggested that the stress-coping process in couples can occur both between- and within-persons. However, current models do not clearly contrast processes on both levels; empirically, this distinction is not always made explicit, resulting in potentially misleading conclusions. This paper aimed to address these issues and contribute better understanding of stress, coping, and the buffer hypothesis by conceptualizing and testing these mechanisms explicitly on both levels. For example, our results demonstrate that support received “today” has additional benefits for the relationship that go beyond the average level of received support. This detailed specification of the stress-coping process strongly suggests that the protective effect of support on the relationship is more meaningfully conceptualized as a within-person process than, as previous research has tended to emphasize, how a partner’s average dyadic-coping behavior compares with that of others.

Stress and Dyadic Coping: Between-Person Differences

In recent decades, stress-coping research on couples focused overwhelmingly on covariation between trait-like variables across a group of individuals (Hamaker, 2012). Our results from analyzing a sample of Chinese couples replicate several earlier findings on the between-person level. Higher average stress was negatively associated with relationship satisfaction, indicating that stress spills over in Chinese couples similarly to Western couples (Hil-

pert, Bodenmann, Nussbeck, & Bradbury, 2013; Story & Bradbury, 2004). Furthermore, individuals who receive, on average, more emotion-focused SDC from their partners tend to be more satisfied with their relationships, which replicates earlier findings obtained with samples across the globe (Falconier et al., 2015; Hilpert et al., 2016). Although Chinese couples seek less support, on average, than their Western counterparts (Kim et al., 2008), the association between dyadic coping and relationship satisfaction is similar to previous results based on Western samples, suggesting that stress-coping processes in couples across cultures may share some core features (Falconier et al., 2016). Last, our study revealed a buffer effect. In contrast to prior findings (e.g., Brock & Lawrence, 2008; DeLongis et al., 2004), our results indicate that not all people benefit equally from the buffer effect of emotion-focused SDC. Stress seems to have no effect on relationship satisfaction for those participants who received more support, on average, than other people in the sample (i.e., the top 20–30%). Unfortunately, it is unclear thus far whether this effect is specific to Chinese culture or whether the effect is universal, but has not been reported because prior studies have not reported the region of significance of the interaction.

Stress and Dyadic Coping: Within-Person Processes

Stress. For men, our results revealed a within-person stress-spillover process in that men were less satisfied with their relationship on days with more stress, even after controlling for their average level of stress. This indicates that when stress exceeds the average level on specific days, an additional negative effect on the relationship occurs that is above the effect of the average stress level. This occurrence is in line with our assumptions and prior findings (e.g., Beggs et al., 2016; Buck & Neff, 2012). For women, however, experiencing more stress on specific days was unrelated to relationship satisfaction. Post hoc, we found that for 50% of women, days with more stress were, as expected, negatively associated with relationship satisfaction, whereas for the other 50% of women, days with more stress were positively associated with relationship satisfaction.

Received dyadic coping. As expected, men and women were more satisfied with their relationships on days when they received more emotion-focused SDC from their partners, even after con-

trolling for the average received support. Thus, receiving more support might lead directly to positive effects, such as feeling closer to or more connected with the partner (Cutrona, 1996), resulting in an increase in relationship satisfaction on that day. This finding aligns with earlier studies of Western samples, which show that individuals feel more intimate, close, and less negative on days when they receive more support (Bar-Kalifa & Rafaeli, 2015; Belcher et al., 2011). It is important to note that these relationships between emotion-focused SDC and relationship satisfactions are controlled for the effects of one's own and partner's average and today's stress levels. Thus, these results indicate that today's support has additional benefits for the relationship that go beyond the average level of received support.

Buffer effect of dyadic coping. For decades, studies have provided evidence for a buffer effect of support at the between-person level. However, we argue that a buffer effect at the within-person level captures what the effect of support should be, that is, partner support is helpful on days of higher stress experience. This is based on STM assumptions, insofar as stress offers couples an opportunity to engage in mutual self-disclosure, and despite its potential to trigger personal issues between partners, it can also allow them to recognize their partners as reliable sources of support when needed. Surprisingly, and contrary to our expectations, no buffer effect was found for men, which contradicts the implicit assumption of STM and challenges prior findings that women provide better support when men experience greater stress (Neff & Karney, 2005). At the very least it suggests that the support Chinese women provide does not buffer the negative effect of stress in Chinese men. Although emotion-focused dyadic coping did not moderate daily linkage between stress and relationship satisfaction, it is possible that other types of dyadic coping offered by wives—such as problem-solving—may be more beneficial for men in buffering the spillover of stress onto the relationship. Although this may differ in Western couples, it nevertheless raises the issue of whether relationship-education programs could assist women in providing more effective support on days when their partners are highly stressed.

We found a significant buffer effect for women, but it seems to be a spurious finding, as the interaction occurred outside the range of observed values. Therefore, the simplest explanation is that women's daily stress experience was not directly related to their relationship satisfaction. This might be a cultural effect based on the unique context of our sample. Prior studies show that Asian couples use less support in general (Xu et al., 2016) and less emotion-focused support in particular (Chen, Kim, Mojaverian, & Morling, 2012) and, therefore, it is possible that this explains why there is no buffer effect on the within-person level. We might also speculate on cultural reasons we could not find an association between stress and relationship satisfaction for women in our sample, which is in contrast to earlier findings (Ilies et al., 2007; Story & Repetti, 2006): Chinese women might evaluate their relationships on a given day without letting daily stress experiences affect this evaluation. A more controversial interpretation would be that this is the first indication that there is no buffer effect on the within-person level, which would be a challenge for current stress-coping theories, as even relationship-education programs teach couples to support each other, especially on stressful days (Bodenmann, Hilpert, Nussbeck, & Bradbury, 2014). Therefore,

future research is needed to clarify the impact of the current findings.

Strengths and Limitations

Several factors increase our confidence in our results. First, our sample was based on dual-earning couples with at least one child below 5 years of age. As these couples experience stress on a daily basis, they provide a valuable opportunity to study dyadic-coping processes on a within-person level. Second, our specific analyses of within-person processes were controlled for individuals' average level of stress and received support which enabled us to distinguish changes at more subtle levels.

Despite these strengths, several limitations should be mentioned. First, our sample is based on well-educated, middle-class heterosexual Chinese couples, which limits the generalizability of our results. Second, and although couples were recruited from different major cities in China, the sample is small in comparison with such a large and diverse population as that of China. Third, at this point, we are unable to confirm whether our findings are universal or specific to the Chinese culture. Fourth, the data is based on self-report measures. Fifth, couples were assessed with two different methods of diary entry (paper pencil and e-version sent via email). Couples using the e-version reported significantly higher levels of stress in comparison with couples using the paper-pencil version. Sixth, it is possible that results may be differed if we would have used different aspects of dyadic coping such as problem-focused coping and invisible support. Thus, future research is needed to test other aspects of dyadic-coping behavior both on the within-person level as well as across different culture. Finally, this study is based on correlational data and causal conclusions cannot be drawn.

Theoretical Implications and Future Directions

Prevailing stress-coping theories for couples have inspired many between-person analyses but there has been less work examining within-person processes. The goal of the current study was to examine whether it is important to define and test stress-coping processes in couples on both levels. Our findings demonstrate that the disaggregation of processes on both levels matter, expanding the notion that stress and coping processes on the within-person level is important for individuals (Lazarus, 2000; Tennen, Affleck, Armeli, & Carney, 2000). We hope that future research routinely test processes on both levels.

Conceptualizing mechanisms on both levels simultaneously will allow future research also to go beyond the current study and examine processes between the two levels (i.e., cross-level interactions). This means, for instance, conceptualizing and testing whether the link between stress and relationship satisfaction on a day-to-day level depends on a person's received average stress or average support level. Extending this line of research would enable us to form a better understanding of complex processes between both levels, which can then be incorporated into stress-prevention programs for couples. In general, educational programs (e.g., Bodenmann et al., 2014) teach couples to be more aware of the partner's stress and to invest in dyadic coping, which is a within-level recommendation. Future research could benefit further from conceptualizing stress-coping processes with reference to how

couples differ from one another and the way in which their everyday life varies.

References

- Bar-Kalifa, E., & Rafaeli, E. (2015). Above and below baselines: The nonmonotonic effects of dyadic emotional support in daily life. *Journal of Social and Personal Relationships*, *32*, 161–179. <http://dx.doi.org/10.1177/0265407514525888>
- Bates, D., Mächler, M., Bolker, B., & Walker, S. (2015). Fitting linear mixed-effects models using lme4. *Journal of Statistical Software*, *67*, 1–48. <http://dx.doi.org/10.18637/jss.v067.i01>
- Beggs, R. T., Holtzman, S., & DeLongis, A. (2016). Predicting daily satisfaction with spouse responses among people with rheumatoid arthritis. *Annals of Behavioral Medicine*, *50*, 24–33. <http://dx.doi.org/10.1007/s12160-015-9728-x>
- Belcher, A. J., Laurenceau, J.-P., Graber, E. C., Cohen, L. H., Dasch, K. B., & Siegel, S. D. (2011). Daily support in couples coping with early stage breast cancer: Maintaining intimacy during adversity. *Health Psychology*, *30*, 665–673. <http://dx.doi.org/10.1037/a0024705>
- Bodenmann, G. (1995). A systemic-transactional conceptualization of stress and coping in couples. *Swiss Journal of Psychology*, *54*, 34–49.
- Bodenmann, G. (2000). *Stress und Coping bei Paaren*. Bern, Switzerland: Hogrefe.
- Bodenmann, G., Hilpert, P., Nussbeck, F. W., & Bradbury, T. N. (2014). Enhancement of couples' communication and dyadic coping by a self-directed approach: A randomized controlled trial. *Journal of Consulting and Clinical Psychology*, *82*, 580–591. <http://dx.doi.org/10.1037/a0036356>
- Bodenmann, G., Ledermann, T., & Bradbury, T. N. (2007). Stress, sex, and satisfaction in marriage. *Personal Relationships*, *14*, 551–569. <http://dx.doi.org/10.1111/j.1475-6811.2007.00171.x>
- AQ: 7 Bodenmann, G., Pihet, S., & Kayser, K. (2006). The relationship between dyadic coping and marital quality: A 2-year longitudinal study. *Journal of Family Psychology*, *20*, 485–493. <http://dx.doi.org/10.1037/0893-3200.20.3.485>
- AQ: 8 Bodenmann, G., & Shantinath, S. D. (2004). The Couples Coping Enhancement Training (CCET): A new approach to prevention of marital distress based upon stress and coping. *Family Relations*, *53*, 477–484. <http://dx.doi.org/10.1111/j.0197-6664.2004.00056.x>
- Bolger, N., DeLongis, A., Kessler, R. C., & Wethington, E. (1989a). The contagion of stress across multiple roles. *Journal of Marriage and the Family*, *51*, 175–183. <http://dx.doi.org/10.2307/352378>
- Bolger, N., & Laurenceau, J.-P. (2013). *Intensive longitudinal methods: An introduction to diary and experience sampling research*. New York, NY: Guilford.
- Brock, R. L., & Lawrence, E. (2008). A longitudinal investigation of stress spillover in marriage: Does spousal support adequacy buffer the effects? *Journal of Family Psychology*, *22*, 11–20. <http://dx.doi.org/10.1037/0893-3200.22.1.11>
- Brose, A., Voelkle, M. C., Lövdén, M., Lindenberger, U., & Schmiedek, F. (2015). Differences in the between-person and within-person structures of affect are a matter of degree: Affect within and between individuals. *European Journal of Personality*, *29*, 55–71. <http://dx.doi.org/10.1002/per.1961>
- Buck, A. A., & Neff, L. A. (2012). Stress spillover in early marriage: The role of self-regulatory depletion. *Journal of Family Psychology*, *26*, 698–708. <http://dx.doi.org/10.1037/a0029260>
- Chen, J. M., Kim, H. S., Mojaverian, T., & Morling, B. (2012). Culture and social support provision: Who gives what and why. *Personality and Social Psychology Bulletin*, *38*, 3–13. <http://dx.doi.org/10.1177/0146167211427309>
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, *98*, 310–357. <http://dx.doi.org/10.1037/0033-2909.98.2.310>
- Cranford, J. A., Shrout, P. E., Iida, M., Rafaeli, E., Yip, T., & Bolger, N. (2006). A procedure for evaluating sensitivity to within-person change: Can mood measures in diary studies detect change reliably? *Personality and Social Psychology Bulletin*, *32*, 917–929. <http://dx.doi.org/10.1177/0146167206287721>
- Curran, P. J., & Bauer, D. J. (2011). The disaggregation of within-person and between-person effects in longitudinal models of change. *Annual Review of Psychology*, *62*, 583–619. <http://dx.doi.org/10.1146/annurev.psych.093008.100356>
- Cutrona, C. E. (1996). *Social support in couples: Marriage as a Resource in times of stress*. Thousand Oaks, CA: Sage. <http://dx.doi.org/10.4135/9781483327563>
- DeLongis, A., Capreol, M., Holtzman, S., O'Brien, T., & Campbell, J. (2004). Social support and social strain among husbands and wives: A multilevel analysis. *Journal of Family Psychology*, *18*, 470–479. <http://dx.doi.org/10.1037/0893-3200.18.3.470>
- Falconier, M. K., Jackson, J. B., Hilpert, P., & Bodenmann, G. (2015). Dyadic coping and relationship satisfaction: A meta-analysis. *Clinical Psychology Review*, *42*, 28–46. <http://dx.doi.org/10.1016/j.cpr.2015.07.002>
- Falconier, M. K., Nussbeck, F., & Bodenmann, G. (2013). Immigration stress and relationship satisfaction in Latino couples: The Role of Dyadic Coping. *Journal of Social and Clinical Psychology*, *32*, 813–843. <http://dx.doi.org/10.1521/jscp.2013.32.8.813>
- Falconier, M. K., Randall, A. K., & Bodenmann, G. (2016). *Couples coping with stress: A cross-cultural perspective*. New York, NY: Routledge.
- Gleason, M. E. J., Iida, M., Shrout, P. E., & Bolger, N. (2008). Receiving support as a mixed blessing: Evidence for dual effects of support on psychological outcomes. *Journal of Personality and Social Psychology*, *94*, 824–838. <http://dx.doi.org/10.1037/0022-3514.94.5.824>
- Hamaker, E. L. (2012). Why researchers should think “within-person:” A paradigmatic rationale. In M. R. Mehl, & T. S. Conner (Eds.), *Handbook of methods for studying daily life* (pp. 43–61). New York, NY: Guilford.
- Hilpert, P., Bodenmann, G., Nussbeck, F. W., & Bradbury, T. N. (2013). Predicting relationship satisfaction in distressed and non-distressed couples based on a stratified sample: A matter of conflict, positivity, or support? *Family Science*, *4*, 110–120. <http://dx.doi.org/10.1080/19424620.2013.830633>
- Hilpert, P., Randall, A. K., Sorokowski, P., Atkins, D. C., Sorokowska, A., Ahmadi, K., . . . Yoo, G. (2016). The associations of dyadic coping and relationship satisfaction vary between and within nations: A 35-nation study. *Frontiers in Psychology*, *7*, Article 1106. <http://dx.doi.org/10.3389/fpsyg.2016.01106>
- Iida, M., Parris Stephens, M. A., Rook, K. S., Franks, M. M., & Salem, J. K. (2010). When the going gets tough, does support get going? Determinants of spousal support provision to type 2 diabetic patients. *Personality and Social Psychology Bulletin*, *36*, 780–791. <http://dx.doi.org/10.1177/0146167210369897>
- Ilies, R., Schwind, K. M., Wagner, D. T., Johnson, M. D., DeRue, D. S., & Ilgen, D. R. (2007). When can employees have a family life? The effects of daily workload and affect on work–family conflict and social behaviors at home. *Journal of Applied Psychology*, *92*, 1368–1379. <http://dx.doi.org/10.1037/0021-9010.92.5.1368>
- Karney, B. R., & Bradbury, T. N. (1995). The longitudinal course of marital quality and stability: A review of theory, method, and research. *Psychological Bulletin*, *118*, 3–34. <http://dx.doi.org/10.1037/0033-2909.118.1.3>
- Kim, H., & Markus, H. R. (1999). Deviance or uniqueness, harmony or conformity? A cultural analysis. *Journal of Personality and Social Psychology*, *77*, 785–800. <http://dx.doi.org/10.1037/0022-3514.77.4.785>

- Kim, H. S., Sherman, D. K., & Taylor, S. E. (2008). Culture and social support. *American Psychologist*, *63*, 518–526. [http://dx.doi.org/10.1037/0003-066X](http://dx.doi.org/10.1037/0003-066X.1037/0003-066X)
- Lazarus, R. S. (2000). Toward better research on stress and coping. *American Psychologist*, *55*, 665–673. <http://dx.doi.org/10.1037/0003-066X.55.6.665>
- Merz, C. A., Meuwly, N., Randall, A. K., & Bodenmann, G. (2014). Engaging in dyadic coping: Buffering the impact of everyday stress on prospective relationship satisfaction. *Family Science*, *5*, 30–37. <http://dx.doi.org/10.1080/19424620.2014.927385>
- Mui-Teng Quek, K., & Knudson-Martin, C. (2006). A push toward equality: Processes among dual-career newlywed couples in collectivist culture. *Journal of Marriage and Family*, *68*, 56–69. <http://dx.doi.org/10.1111/j.1741-3737.2006.00233.x>
- Neff, L. A., & Karney, B. R. (2005). Gender differences in social support: A question of skill or responsiveness? *Journal of Personality and Social Psychology*, *88*, 79–90. <http://dx.doi.org/10.1037/0022-3514.88.1.79>
- Neff, L. A., & Karney, B. R. (2009). Stress and reactivity to daily relationship experiences: How stress hinders adaptive processes in marriage. *Journal of Personality and Social Psychology*, *97*, 435–450. <http://dx.doi.org/10.1037/a0015663>
- Oyserman, D., Coon, H. M., & Kemmelmeier, M. (2002). Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analyses. *Psychological Bulletin*, *128*, 3–72. <http://dx.doi.org/10.1037/0033-2909.128.1.3>
- AQ: 9 Randall, A. K., & Bodenmann, G. (2009). The role of stress on close relationships and marital satisfaction. *Clinical Psychology Review*, *29*, 105–115. <http://dx.doi.org/10.1016/j.cpr.2008.10.004>
- Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2nd ed.). Thousand Oaks: Sage.
- AQ: 10 Repetti, R. L. (1989). Effects of daily workload on subsequent behavior during marital interaction: The roles of social withdrawal and spouse support. *Journal of Personality and Social Psychology*, *57*, 651–659. <http://dx.doi.org/10.1037/0022-3514.57.4.651>
- Revelle, W. (2015). *Procedures for psychological, psychometric, and personality research*. Evanston, IL. Retrieved from <http://CRAN.R-project.org/package=psych>
- Saxbe, D. E., & Repetti, R. (2010). No place like home: Home tours correlate with daily patterns of mood and cortisol. *Personality and Social Psychology Bulletin*, *36*, 71–81. <http://dx.doi.org/10.1177/0146167209352864>
- Schulz, M. S., Cowan, P. A., Pape Cowan, C., & Brennan, R. T. (2004). Coming home upset: Gender, marital satisfaction, and the daily spillover of workday experience into couple interactions. *Journal of Family Psychology*, *18*, 250–263. <http://dx.doi.org/10.1037/0893-3200.18.1.250>
- Story, L. B., & Bradbury, T. N. (2004). Understanding marriage and stress: Essential questions and challenges. *Clinical Psychology Review*, *23*, 1139–1162. <http://dx.doi.org/10.1016/j.cpr.2003.10.002>
- Story, L. B., & Repetti, R. (2006). Daily occupational stressors and marital behavior. *Journal of Family Psychology*, *20*, 690–700. <http://dx.doi.org/10.1037/0893-3200.20.4.690>
- Taylor, S. E., Sherman, D. K., Kim, H. S., Jarcho, J., Takagi, K., & Dunagan, M. S. (2004). Culture and social support: Who seeks it and why? *Journal of Personality and Social Psychology*, *87*, 354–362. <http://dx.doi.org/10.1037/0022-3514.87.3.354>
- Taylor, S. E., Welch, W. T., Kim, H. S., & Sherman, D. K. (2007). Cultural differences in the impact of social support on psychological and biological stress responses. *Psychological Science*, *18*, 831–837. <http://dx.doi.org/10.1111/j.1467-9280.2007.01987.x>
- Tennen, H., Affleck, G., Armeli, S., & Carney, M. A. (2000). A daily process approach to coping. Linking theory, research, and practice. *American Psychologist*, *55*, 626–636. <http://dx.doi.org/10.1037/0003-066X.55.6.626>
- Westman, M. (2001). Stress and strain crossover. *Human Relations*, *54*, 717–751. <http://dx.doi.org/10.1177/0018726701546002>
- Wickham, H. (2009). *ggplot2: Elegant graphics for data analysis*. New York, NY: Springer.
- Williamson, H. C., Hanna, M. A., Lavner, J. A., Bradbury, T. N., & Karney, B. R. (2013). Discussion topic and observed behavior in couples' problem-solving conversations: Do problem severity and topic choice matter? *Journal of Family Psychology*, *27*, 330–335. <http://dx.doi.org/10.1037/a0031534>
- Williamson, H. C., Ju, X., Bradbury, T. N., Karney, B. R., Fang, X., & Liu, X. (2012). Communication behavior and relationship satisfaction among American and Chinese newlywed couples. *Journal of Family Psychology*, *26*, 308–315. <http://dx.doi.org/10.1037/a0027752>
- Xu, F., Hilpert, P., Randall, A. K., Li, Q., & Bodenmann, G. (2016). Validation of the Dyadic Coping Inventory with Chinese couples: Factorial structure, measurement invariance, and construct validity. *Psychological Assessment*, *28*, e127–e140. <http://dx.doi.org/10.1037/pas0000329>

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