

# Stress, dyadic coping, and relationship satisfaction in late adolescent couples

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## Abstract

In adult couples, stress emerging outside the relationship (extra-dyadic stress) spills over into the relationship evoking conflict between the partners (intra-dyadic stress), which itself has a negative effect on relationship satisfaction over time. This detrimental effect of stress spillover can be buffered by adequate dyadic coping (DC) skills of both partners. The current study aimed at replicating these effects in a sample of 96 Swiss adult couples and 124 Swiss late adolescent (non-cohabitating) couples, who were in a serious relationship for at least 1 year. We examined (a) whether extra-dyadic stress is associated with intra-dyadic stress and relationship satisfaction and (b) whether the potential buffering effect of DC on these associations already exists in this important developmental phase. Contrary to the adult sample, for which indirect actor and partner effects were significant, we found a marginally significantly negative indirect actor effect of extra-dyadic stress on relationship satisfaction via intra-dyadic stress in late adolescents only for participants experiencing high extra-dyadic stress and low support from the partner. DC moderated the spillover between extra-dyadic and intra-dyadic stress for late adolescents. This study highlights the importance of investigating dyadic processes in romantic relationships in late adolescence to gain an insight into these relationships and the associated developmental processes.

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## Keywords

Actor–partner interdependence model, daily hassles, dyadic coping, emerging adulthood, stress spillover, support in romantic relationships

Stress stemming from everyday experiences and daily hassles originating outside the couple relationship (henceforth referred to as extra-dyadic stress) is among the most important predictors of partners' relationship satisfaction and marital stability in adult couples (e.g., Bradbury & Karney, 2010; Randall & Bodenmann, 2009; Story & Bradbury, 2004). A plethora of empirical studies has demonstrated that extra-dyadic stress spills over into the couple relationship leading to intra-dyadic stress (i.e., conflict between partners) and impairing couples' functioning in the long run (e.g., Bodenmann, Ledermann, & Bradbury, 2007; Ledermann, Bodenmann, Rudaz, & Bradbury, 2010; Neff & Karney, 2004; Repetti, Wang, & Saxbe, 2009). Individual *and* dyadic skills to successfully cope with extra-dyadic stress have consistently been shown to buffer the detrimental spillover effects of stress on relationships (e.g., Falconier, Nussbeck, & Bodenmann, 2013).

However, research up until now has almost exclusively focused on adult couples, who are cohabitating and/or have been married for an extensive amount of time. To our knowledge, no study has investigated spillover mechanisms of stress and coping efforts among younger couples, particularly late adolescent couples who are making potentially critical relationship decisions and are developing relational patterns that may carry forward into adult relationships. Indeed, learning how to build, explore, and maintain intimate relationships are key developmental tasks in adolescence. In addition, late adolescence is a stressful period, in which youth are facing developmental changes and encountering stressors in various domains of life (Havighurst, 1948), causing stress which may impact their romantic relationships. Because intimate partners become increasingly important in late adolescence, taking over functions previously fulfilled by parents or peers (Bradbury & Karney, 2010), adolescents are likely to turn to their partner in stressful situations to seek support (Furman & Shaffer, 2003). Therefore, the current study aimed at investigating whether (a) the deleterious spillover of stress and (b) the buffering mechanisms of dyadic coping (DC) prevalent in adult couples are evident and function similarly among late adolescent couples.

## Stress and coping in intimate relationships

### *Stress in intimate relationships*

Stress has been identified as a consistent predictor of low quality and instability of close relationships in adulthood (e.g., Randall & Bodenmann, 2009; Story & Bradbury, 2004). Different types of stress can be identified considering (a) the origin of stress (i.e., *extra-dyadic* vs. *intra-dyadic*), (b) the duration of a stress (i.e., *acute* vs. *chronic*), and (c) the intensity of stress (i.e., *daily hassles* vs. *major life events* or *minor* vs. *major stress*; Karney & Bradbury, 2005; Randall & Bodenmann, 2009). Especially extra-dyadic, chronic, minor stress, such as consistent stress at work, seems to influence couple

relationships in a disadvantageous way (Falconier et al., 2013; Harper, Schaalje, & Sandberg, 2000; Story & Repetti, 2006). According to Bodenmann's stress-divorce model, extra-dyadic chronic stress reduces partners' shared time, energy, and resources and increases negative behaviors within the relationship (Bodenmann, Charvoz, et al., 2007; Randall & Bodenmann, 2009). The phenomenon, that extra-dyadic stress spills over to the dyad, evoking intra-dyadic stress has been shown in many studies (Bodenmann, Ledermann, et al., 2007; Ledermann et al., 2010; Neff & Karney, 2004; Repetti et al., 2009; Falconier et al., 2015).

### *Coping in intimate relationships*

Research on adult couples has shown that interpersonal competencies, such as adequate communication skills and the communal coping with stress, play an important role in building and maintaining intimate relationships (Gottman, 1993; Gottman, Coan, Carrere, & Swanson, 1998; O'Brien, DeLongis, Pomaki, Puterman, & Zwicker, 2009). Specifically, coping with stress in the dyad (DC) has been found not only to buffer the impact of stress on relationships (e.g., Falconier et al., 2013) but also to strengthen the feeling of we-ness between the partners, leading to a more fulfilling, satisfying, and stable relationship (Bodenmann, 1997; Cutrona, 1996). DC is defined as the effort of both partners to engage in a mutual stress management process, with the aim of creating or restoring the physical, psychological, or social homeostasis within both partners as individuals and within the couple as a unit (Bodenmann, 1997). It is based on a systemic-transactional perspective, taking into consideration "the stress signals of one partner and the coping reactions of the other partner to these signals (both verbal and nonverbal)" (Bodenmann, 1997, p. 138). Numerous studies have found substantial favorable associations between DC and relationship satisfaction (Bodenmann, Pihet, & Kayser, 2006; Herzberg, 2013; Papp & Witt, 2010), psychological and physiological well-being of both partners (Bodenmann, Meuwly, & Kayser, 2011), and reduced chronic illness (for an overview see Berg & Upchurch, 2007; Hagedoorn, Sanderman, Bolks, Tuinstra, & Coyne, 2008; Revenson, 2003). However, all of these studies focused exclusively on adult couples. Much less is known about how couples in late adolescence, who often do not yet share a common household, experience stress spillover and how they cope with it dyadically.

### **Stress and coping in late adolescent couples**

Late adolescence is a time of particularly high stress characterized by manifold demands and challenges. The vast majority of day-to-day stress reported by adolescents concerns social relationships, such as conflicts with parents, peers, close friends, or romantic partners (Seiffge-Krenke, 2006). Stress also stems from educational and career-related issues or dissatisfaction about one's development and future (Seiffge-Krenke, Aunola, & Nurmi, 2009). Comparable to adults, chronic minor everyday stressors (e.g., daily hassles) have been found to be stronger predictors of adolescents' mental and physical health than major life events (e.g., Compas, Davis, & Forsythe, 1985; Compas, Orosan, & Grant, 1993). Consequently, the individual skill of coping with stress effectively is a

critical skill at this life stage; it has been shown to increase during late adolescence and early adulthood (Seiffge-Krenke et al., 2009).

Additionally, DC becomes increasingly important for both partners in a romantic relationship during late adolescence. Romantic relationships in late adolescence change toward greater intimacy, mutual trust, attachment, and affection (Furman, 2002; Nieder & Seiffge-Krenke, 2001). Therefore, as adolescents grow older, they are more likely to *seek* support from their partner in stressful situations and are less likely to turn to the parents for support (Furman & Shaffer, 2003). Consequently, adolescents *perceive* more support in their romantic relationships than in relationships with parents or peers (Furman & Shomaker, 2008).

Previous empirical studies with adolescent samples found associations between partners' support and relationship satisfaction (Cramer, 2006; Pinguat & Fabel, 2009), as well as individual outcomes, such as better mental health (Simon & Barrett, 2010) and a higher sense of mastery during the transition to adulthood (Surjadi, Lorenz, Wickrama, & Conger, 2011). Furthermore, in their study with college couples, Papp and Witt (2010) found DC to be a stronger predictor of relationship satisfaction than individual coping. These findings suggest that DC may be of high relevance during this developmental phase and may already have a similar function as in adulthood (Furman, 2002; Nieder & Seiffge-Krenke, 2001; Seiffge-Krenke et al., 2009).

Although studies have examined the impact of romantic relationship stressors (e.g., relationship breakups) on individual well-being (e.g., Nieder & Seiffge-Krenke, 2001; Seiffge-Krenke, 2011), to our knowledge, the impact of extra-dyadic stress on intra-dyadic stress and relationship functioning in late adolescent couples has not yet been examined. In addition, we lack knowledge about the association between DC and relationship satisfaction and its potential to buffer the detrimental effects of stress on romantic relationships in late adolescent couples. Specifically, no such study has yet been performed on non-cohabitating, unmarried (and not yet engaged), late adolescent couples in committed romantic relationships.

### *Current study*

The aim of this study was to shed light on stress spillover processes in late adolescent couples and compare them to spillover processes of adult couples. Considering the overwhelming evidence of detrimental spillover effects of extra-dyadic stress on relationships and the buffering potential of DC in adult couples, we assumed similar mechanisms in late adolescent couples. Specifically, in this study, we tested an extended version of the actor-partner interdependence model (APIM; Cook & Kenny, 2005) using data from 124 adolescent and 96 adult couples. In both samples, we examined whether extra-dyadic stress is negatively associated with relationship satisfaction and whether this association is mediated by increased intra-dyadic stress (spillover effect). In addition, we tested if DC buffers the association between extra-dyadic stress and intra-dyadic stress or relationship satisfaction, respectively (buffering effect). We expected the same spillover and buffering effects for female and male adults as well as late adolescents, because no gender differences have been found in the adult stress spillover literature in most studies (e.g., Bodenmann, Ledermann et al. 2007).

## Method

### Participants and procedure

Adolescent couples were recruited by means of local newspapers, schools, recreational facilities, and social media in Switzerland. To obtain the most representative sample of Swiss adolescents living in urban areas, we made sure to include lower socioeconomic neighborhoods in our recruitment. Couples ( $N = 181$ ) interested in participation contacted the research team and were screened via telephone interview with respect to the following eligibility criteria: (a) being in a romantic relationship for a minimum of 1 year, (b) being between 16 and 22 years of age, (c) sufficient German language proficiency, (d) both partners' agreement to participate in the study, and (e) partners are not cohabitating. As 57 couples were not eligible, or decided not to participate in the study, the final sample consisted of  $n = 248$  individuals (124 heterosexual couples). Adolescents' informed consents and parents' consents for underage participants were obtained prior to the start of the study. Couples were invited to the lab, where they filled out a series of questionnaires, engaged in two brief videotaped communication sessions, and participated in a semi-structured interview. For the current study, only self-reported questionnaire data were included.

The adult couples who formed the comparison sample consisted of 96 couples, who were the parents of the adolescents participating in the adolescent study. Specifically, after an adolescent couple had completed the lab visit, we contacted the parents of both adolescent couple members via telephone to invite them to fill out a similar set of self-report questionnaires as the adolescent couples (paper-pencil or online). In total, 256 parents completed the questionnaires. Forty-eight of them were a single parent currently not in a serious relationship; the remaining 208 mothers and fathers matched up to 96 heterosexual couples<sup>1</sup> (97% married, mean relationship duration = 25.29 years [ $SD = 4.95$ ]). In 16 parental couples, one partner failed to return the questionnaires; hence, these data were not included in the current study. All participating adolescent couples received 100 Swiss Francs and all parental couples received 40 Swiss Francs (approximately US\$105/US\$42) for participation.

On average, the adolescent couples were in a romantic relationship for 2.0 years ( $SD = 1.0$ ). Adolescent females were on average 18.8 years ( $SD = 1.6$ , range = 16.2–22.8) and adolescent males 19.5 ( $SD = 1.6$ , range = 15.9–22.8) years old (females being significantly younger than their male partners),  $t(123) = 6.80, p < .001$ . Most adolescents lived with their parents (91%), few lived alone (1%), or shared an apartment with peers (8%). None of the couples cohabitated. Adolescents were attending high school (40%), studying at university (23%), involved in vocational education (23%), employed (6%), or pursuing other activities (8%), such as completing an internship or performing military service. The majority of adolescent participants were Swiss citizens; 13% of all adolescent females and 17% of all adolescent males had a migration background (e.g., German, Italian, Serbian, Spanish, Turkish, etc.).

Mothers (adult females) were on average 49.5 years ( $SD = 4.5$ , range = 39–62) and fathers (adult males) were on average 51.6 ( $SD = 4.9$ , range = 41–70) years old (females being significantly younger than their male partners),  $t(91) = 6.71, p < .001$ . All but one

couple reported living together. Fifty percent of the fathers and 33% of all mothers had a university degree. Of those parents providing information (for mothers 9% of the data and for fathers 27% of the data for employment status were missing), 91.4% of the fathers and 17.2% of the mothers were working full time and 5.7% of the fathers and 69.0% of the mothers were working part time. Three percent of the fathers and 13.8% of the mothers were not employed.

## Measures

The same measures were administered to adolescent as well as adult couples.

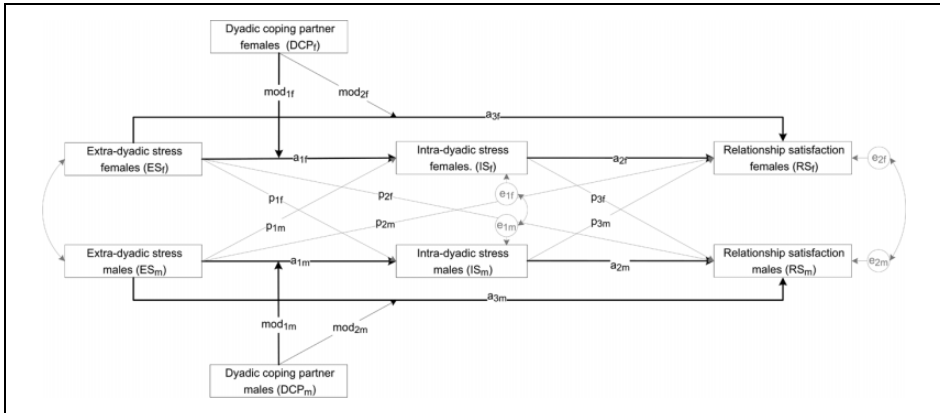
**Stress.** Stress was assessed using two single items asking participants to report their level of stress in the past 12 months experienced (a) outside the relationship (*extra-dyadic stress*; e.g., *everyday stress at work or in school, conflicts with parents, peers or close friends, stress related to the living situation or finances*) and (b) within the relationship (*intra-dyadic stress*; e.g., *arguments with the partner, disruptive or reserved behavior of the partner, or feeling neglected by the partner*). Participants rated each item on a scale ranging from 1 (*not at all*) to 4 (*a lot*). Higher values represent higher chronic stress levels.

**Dyadic coping.** DC was measured using two subscales of the *Dyadic Coping Inventory* (Bodenmann, 2008). The inventory was linguistically simplified slightly to guarantee adolescents' understanding of all items. Positive DC skills of the partner (8 items; e.g., *My partner helps me to see stressful situations in a different light*) and negative DC skills of the partner (5 items; e.g., *My partner is not taking my stress seriously*) were assessed using a 5-point Likert-type scale (1 = *never*, 5 = *very often*). The mean of all positive and reversely coded negative items indexed adolescents' perceived total DC skills of the partner (perceived dyadic coping from the partner [DCP]). The higher the DCP score, the more supported the adolescent felt by his or her partner. Internal consistencies were satisfactory with  $\alpha = .75$  for female and  $\alpha = .79$  for male adolescents, respectively. In adult couples, internal consistency was  $\alpha = .92$  for females and  $\alpha = .89$  for males, respectively.

**Relationship satisfaction.** We assessed relationship satisfaction with the German version of Hendrick's (1988) *Relationship Assessment Scale* by Sander and Böcker (1993). The 7 items were rated on a 5-point scale, ranging from 1 (*not at all*) to 5 (*completely true*). Higher scores represent higher satisfaction. Internal consistencies were acceptable for adolescent females ( $\alpha = .70$ ) and males ( $\alpha = .73$ ) and excellent for adult females ( $\alpha = .91$ ) and males ( $\alpha = .90$ ).

## Data analysis

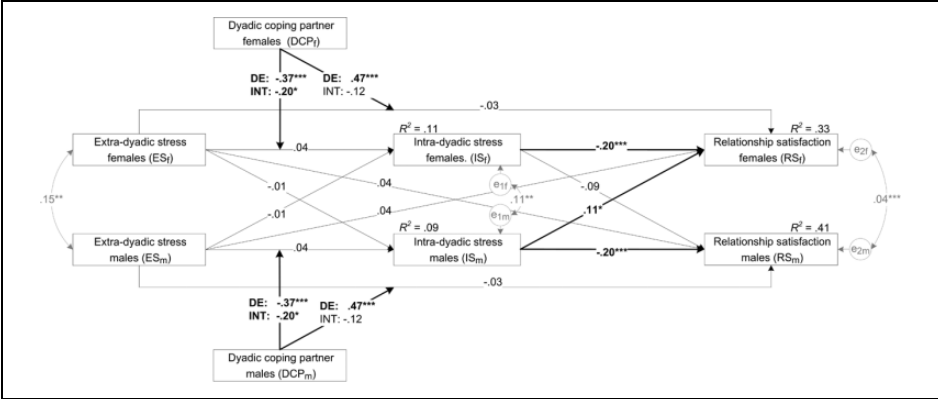
To test our hypotheses, we used an extended version of the APIM (for complete model see Figure 1) specifically suitable for the analysis of dyadic data combining mediation (e.g., Ledermann, Macho, & Kenny, 2011) and moderation (e.g., Cook & Kenny, 2005).



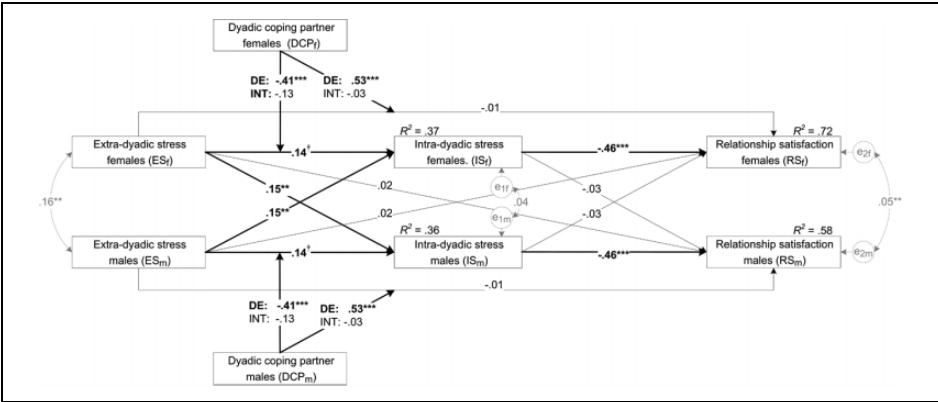
**Figure 1.** Conceptual moderated mediation actor-partner interdependence model. Extra-dyadic stress (ES) as independent variables, intra-dyadic stress (IS) as mediators, and relationship satisfaction (RS) as dependent variables and dyadic coping by the partner (DCP) as moderators.  $a$  = actor effects;  $p$  = partner effects;  $mod$  = moderating effect;  $f$  = females;  $m$  = males.

This type of model allows for simultaneously estimating effects of females' and males' predictors on both couple members' individual outcomes taking interdependencies into account. Effects of individuals' independent variables on their dependent variables (Figure 1:  $a_1$ ,  $a_2$ , and  $a_3$ ) are called *actor effects*, whereas effects on the partner's dependent variables (Figure 1:  $p_1$ ,  $p_2$ , and  $p_3$ ) are called *partner effects*. Following recommendations by Shrout and Bolger (2002), statistically significant direct effects of the predictor variables on the criterion are not taken as a necessary prerequisite for mediation. In our study, mediation is said to occur when the effect of males' or females' extra-dyadic stress on females' or males' relationship satisfaction can be explained by a significant indirect effect (IE) via one's own (e.g.,  $a_1 \times a_2$ ) or partner's intra-dyadic stress (e.g.,  $p_1 \times p_3$ ). To test the buffering hypothesis, we additionally included DCP and each partner's interaction term of Extra-Dyadic Stress  $\times$  DCP in the model to test the effects of DC on the associations between (a) extra-dyadic stress and intra-dyadic stress and between (b) extra-dyadic stress and relationship satisfaction (Figure 1:  $mod_1$  and  $mod_2$ ).

Because of the age difference between female and male adolescents and a statistically significant bivariate correlation between female adolescents' age and intra-dyadic stress ( $r = -.22$ ,  $p = .014$ ), we controlled for partners' age in all models. All predictors were centered to reduce problems associated with multicollinearity and to improve interpretability (Aiken & West, 1991). Above and beyond the direct paths linking the variables, covariation between all predictor variables was permitted (not depicted in Figures 1 to 3 for the sake of readability). Additionally, residuals of the mediators and dependent variables were correlated to indicate their shared unexplained variance (Cook & Kenny, 2005). The models were estimated with maximum likelihood bootstrap procedure (500 samples) using the structural equation modeling program Mplus (Muthén & Muthén, 1998–2012).



**Figure 2.** Results of the moderated mediation actor–partner interdependence model for adolescent couples. Unstandardized maximum likelihood estimates are presented. All independent variables are allowed to covary. For sake of clarity, not all correlations of the independent variables are depicted. The effect of both partners’ age was controlled for in the model. DE = moderator’s direct effect; INT = interaction of independent and moderator variable; f = females; m = males. † $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .



**Figure 3.** Results of the moderated mediation actor–partner interdependence model for adult couples. Unstandardized maximum likelihood estimates are presented. All independent variables are allowed to covary. For sake of clarity, not all correlations of the independent variables are depicted. The effect of both partners’ age was controlled for in the model. DE = moderator’s direct effect; INT = interaction of independent and moderator variable; f = females; m = males. † $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

### Results

#### Preliminary analyses

Means and standard deviations of the main study variables are reported in Table 1 for adolescent as well as adult participants. We found significant differences in relationship



**Table 1.** Descriptives and correlations.

Variables	Descriptives				Bivariate correlations					
	Females		Males		t	1	2	3	4	5
	M	SD	M	SD						
<b>Adolescent couples (N = 124)</b>										
1. Relationship satisfaction	4.46	0.40	4.37	0.42	2.42*	.55***	-.29**	-.07	.55***	.13
2. IS	1.86	0.52	1.87	0.57	-0.37	-.50***	.40**	.06	-.21*	-.22*
3. ES	2.41	0.80	2.21	0.79	2.32*	-.10	.04	.24**	-.17†	.13
4. DCP	4.23	0.40	4.19	0.41	0.87	.53***	-.36***	.06	.19*	.07
5. Age	18.83	1.57	19.51	1.64	-6.80***	.06	-.08	-.01	.04	.76***
<b>Adult couples (N = 96)</b>										
1. Relationship satisfaction	4.21	0.71	4.17	0.63	0.70	.71***	-.72***	-.14	.76***	-.04
2. IS	1.55	0.63	1.55	0.51	0.17	-.59***	.55***	.23*	-.52***	-.15
3. ES	2.02	0.70	1.91	0.65	1.55	-.25*	.34**	.34**	-.08	-.03
4. DCP	3.84	0.73	3.91	0.59	-1.03	.68***	-.52***	-.22*	.49***	-.15
5. Age	49.46	4.52	51.65	4.94	-6.71***	.15	-.06	.07	.09	.76***

Note. Females' correlations are above and males' correlations are under the diagonal. Correlations between female and male couple members are printed in bold. IS = intra-dyadic stress; ES = extra-dyadic stress; DCP = partner's dyadic coping  
†p < .10; \*p < .05; \*\*p < .01; \*\*\*p < .001

satisfaction and chronic extra-dyadic stress between female and male adolescents. Female adolescents reported higher relationship satisfaction,  $t(123) = 2.42, p = .017$ , and more extra-dyadic stress,  $t(121) = 2.32, p = .022$ , than male adolescents. Adolescent females and males did not differ in any of the other key variables. Adult females and males did not differ in any of the variables. Potential relational (and hence statistical) dependencies among adolescent couples and their parents did not allow us to conduct any analyses directly comparing adolescent couples with adult couples.

In addition, Table 1 shows correlations among measured variables for adolescent/adult females (above the diagonal), for adolescent/adult males (below the diagonal), and between genders (on the diagonal). Contrary to our expectations, we did not find a correlation between extra-dyadic stress and intra-dyadic stress (female adolescents:  $r = .06, p = .513$ ; male adolescents:  $r = .04, p = .650$ ) nor a correlation between extra-dyadic stress and relationship satisfaction in adolescent females ( $r = -.07, p = .427$ ) and males ( $r = -.10, p = .276$ ). These preliminary findings suggest that extra-dyadic stress is not associated with relationship satisfaction in adolescent couples, neither for females nor for males. As hypothesized, intra-dyadic stress (female adolescents:  $r = -.29, p = .001$ ; male adolescents:  $r = -.50, p < .001$ ) and DCP (female adolescents:  $r = .55, p < .001$ ; male adolescents:  $r = .53, p < .001$ ) were substantially correlated with relationship satisfaction. In other words, more perceived DC from the partner and less intra-dyadic stress were associated with higher relationship satisfaction for both, adolescent females and males. Within-dyad correlations of extra-dyadic stress ( $r = .24, p = .008$ ) and DCP ( $r = .19, p = .030$ ) were relatively low, indicating that these variables only partially shared common variance. Correlations within couples were higher with regard to intra-dyadic stress ( $r = .40, p < .001$ ). This reflects that partner's reports of how much intra-dyadic stress they perceive are more similar than how much extra-dyadic stress they experience.

In adult couples, bivariate correlations between extra-dyadic stress and intra-dyadic stress (adult females:  $r = .23, p = .002$ ; adult males:  $r = .34, p < .001$ ) and between extra-dyadic stress and relationship satisfaction (for adult males  $r = -.25, p = .015$  only) were significant. For mothers, the correlation between extra-dyadic stress and relationship satisfaction failed to reach significance ( $r = -.14, p = .176$ ). Interestingly, for adult males but not females, extra-dyadic stress was also linked to less DCP (adult males:  $r = -.22, p = .032$ , adult females:  $r = -.08, p = .434$ ) suggesting that adult males, who reported a lot of stress perceived receiving less support from their female partners. Similarly to the adolescent sample, correlations between intra-dyadic stress, DCP, and relationship satisfaction were significant. Within-dyad correlations between adult females and males ranged between .71 (relationship satisfaction) and .34 (extra-dyadic stress).

### *Spillover effects of extra-dyadic stress on relationship satisfaction via intra-dyadic stress*

First, we tested the stress spillover model as it is proposed in the context of adult relationship research (Bodenmann, Ledermann, et al., 2007; Merz, Meuwly, Randall, & Bodenmann, 2014) for adolescent and adult couples without including the moderation

effect. As we did not expect gender differences, we successively restricted females' and males' actor effects and partner effects, respectively, to be equal across genders. Each pair of path coefficients was tested independently relying on the  $\chi^2$  difference test for nested models. For the adult couples, all paths except the effects of the control variable age ( $\Delta\chi^2 = 13.612$ ,  $\Delta df = 2$ ,  $p = .001$ ) could be equalized between genders without significant declines in model fit. For the adolescent couples, all but the partner effect of partners' intra-dyadic stress on one's own relationship satisfaction ( $\Delta\chi^2 = 7.183$ ,  $\Delta df = 1$ ,  $p = .007$ ) could be equalized between genders without significant declines in model fit. Unlike adolescent females' ( $\beta = .03$ ,  $p = .556$ ), adolescent males' relationship satisfaction was significantly related to their partners' intra-dyadic stress ( $\beta = -.14$ ,  $p = .031$ ). According to model fit criteria proposed by Hu and Bentler (1999), the models fit the data well (adolescents:  $\chi^2 = 3.729$ ,  $df = 8$ ,  $p = .881$ ; root mean square error of approximation (RMSEA)  $< 0.001$ ; standardized root mean square residual [SRMR] = 0.046; comparative fit index [CFI] = 1.000; adults:  $\chi^2 = 5.790$ ,  $df = 6$ ,  $p = .447$ ; RMSEA  $< 0.001$ ; SRMR = 0.049; CFI = 1.000). As all remaining paths were constrained to be equal across gender, the reported effects below<sup>2</sup> were the same for both adolescent females and males, or adult females and males, respectively.

In line with our expectations, for adult couples, we found significant positive actor ( $\beta = .18$ ,  $p = .009$ ) and partner effects ( $\beta = .14$ ,  $p = .012$ ) between extra-dyadic stress and intra-dyadic stress, as well significant negative indirect actor ( $\beta = -.13$ ,  $p = .002$ ) and partner effects ( $\beta = -.16$ ,  $p = .002$ ) of extra-dyadic stress on relationship satisfaction.

In contrast, for adolescent couples, we neither detected a direct association between extra-dyadic and intra-dyadic stress (actor:  $\beta = .04$ ,  $p = .317$ , partner:  $\beta = .003$ ,  $p = .947$ ) nor a direct effect of extra-dyadic stress on relationship satisfaction (actor:  $\beta = -.04$ ,  $p = .246$ ; partner:  $\beta = .04$ ,  $p = .205$ ). Even though we found significant actor effects for the association between intra-dyadic stress and relationship satisfaction ( $\beta = -.27$ ,  $p < .001$ ), none of the indirect actor or partner effects of extra-dyadic stress on relationship satisfaction via intra-dyadic stress were significant. In sum, without taking moderation effects into account, extra-dyadic stress did not seem to be negatively associated with relationship relevant variables in adolescent couples.

### **Buffering effects of DC**

However, a more differentiated picture emerged when DCP was introduced into the analyses. Again, we first tested whether effects could be restricted to be equal across genders without increments in model fit. For the adolescent couples, all but the same partner effect as reported above could be equalized. For the adult couples, all paths could be equalized between genders without significant declines in model fit for this more complex model. The final models fit the data well (adolescent couples:  $\chi^2 = 8.851$ ,  $df = 12$ ,  $p = .716$ ; RMSEA  $< 0.001$ ; SRMR = 0.037; CFI = 1.000; adult couples:  $\chi^2 = 9.249$ ,  $df = 13$ ,  $p = .754$ ; RMSEA  $< 0.001$ ; SRMR = 0.029; CFI = 1.000). Unstandardized estimates of these final models (including the moderator) are presented in Figures 2 and 3 and Table 2 and will be described in detail below.

**Table 2.** Unstandardized indirect effects of extra-dyadic stress on relationship satisfaction mediated by intra-dyadic stress.

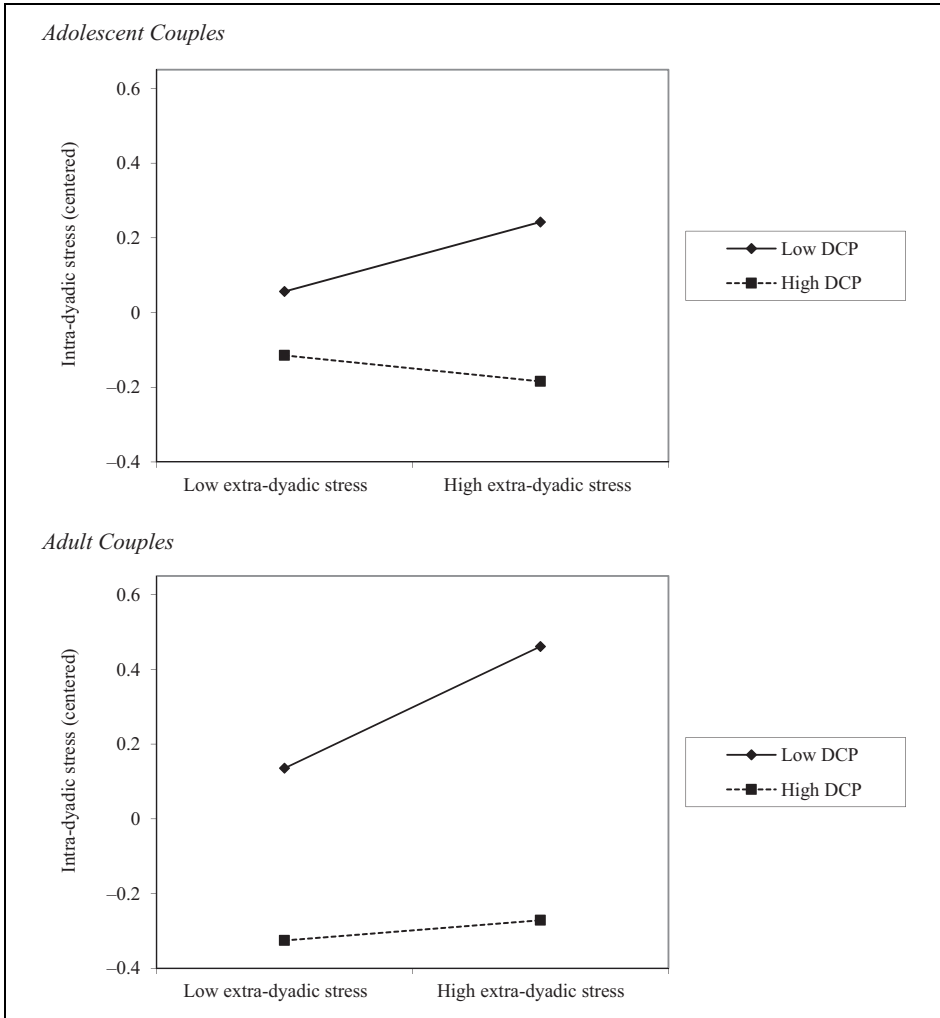
Indirect effect	Adolescent couples				Adult couples			
	IE	SE	<i>p</i>	95% CI	IE	SE	<i>p</i>	95% CI
ES <sub>f</sub> → IS <sub>f</sub> → RS <sub>f</sub>	-.007	.01	.348	[-.03, .01]	-.062	.03	.043	[-.12, -.002]
ES <sub>f</sub> → IS <sub>m</sub> → RS <sub>f</sub>	-.001	.01	.850	[-.02, .01]	-.004	.01	.778	[-.03, .02]
ES <sub>m</sub> → IS <sub>f</sub> → RS <sub>f</sub>	.002	.01	.830	[-.02, .03]	-.070	.03	.014	[-.13, -.01]
ES <sub>m</sub> → IS <sub>m</sub> → RS <sub>f</sub>	.004	.01	.447	[-.01, .02]	-.004	.01	.851	[-.03, .03]
ES <sub>m</sub> → IS <sub>m</sub> → RS <sub>m</sub>	-.007	.01	.348	[-.03, .01]	-.062	.03	.043	[-.12, -.002]
ES <sub>m</sub> → IS <sub>f</sub> → RS <sub>m</sub>	.001	.01	.850	[-.01, .02]	-.004	.01	.778	[-.03, .02]
ES <sub>f</sub> → IS <sub>m</sub> → RS <sub>m</sub>	.002	.01	.830	[-.02, .03]	-.070	.03	.014	[-.13, -.01]
ES <sub>f</sub> → IS <sub>f</sub> → RS <sub>m</sub>	-.003	.00	.457	[-.03, .01]	-.004	.01	.851	[-.03, .03]
Mediated moderation								
ES <sub>f</sub> × DCP <sub>f</sub> → IS <sub>f</sub> → RS <sub>f</sub>	.040	.02	.075	[-.004, .09]	.061	.05	.194	[-.03, .15]
ES <sub>m</sub> × DCP <sub>m</sub> → IS <sub>m</sub> → RS <sub>m</sub>	.040	.02	.075	[-.004, .09]	.061	.05	.194	[-.03, .15]
ES <sub>m</sub> × DCP <sub>m</sub> → IS <sub>m</sub> → RS <sub>f</sub>	-.022	.02	.190	[-.05, .01]	.003	.02	.847	[-.03, .04]
ES <sub>f</sub> × DCP <sub>f</sub> → IS <sub>f</sub> → RS <sub>m</sub>	.018	.02	.280	[-.01, .05]	.003	.02	.847	[-.03, .04]

Note. Unstandardized maximum likelihood estimates are presented. IE = indirect effect; ES = extra-dyadic stress; IS = intra-dyadic stress; RS = relationship satisfaction; DCP = perceived dyadic coping from the partner; f = female; m = male.

Including DCP as moderator revealed a significant moderation effect of DC for the association between extra-dyadic stress and intra-dyadic stress for female and male adolescents (actor effects:  $\beta = -.20, p = .042$ ) but not adult couples (actor effects:  $\beta = .13, p = .196$ ). This finding suggests that adolescents exposed to a lot of extra-dyadic stress while at the same time perceiving low DC from their partner reported higher levels of stress within the relationship. Along similar lines, indirect mediated moderation effects were marginally significant (actor effects:  $\beta = .04, p = .075$ ) suggesting that—given a lack of partner's support—extra-dyadic stress might also be deleterious for adolescents' relationships similar to adults' relationships (see Figure 4). However, although the difference in slopes for high and low DC was significant, simple slope analyses revealed that the respective slopes were not significantly different from zero for the observed range of values.

In contrast to our expectation, we did not find a significant moderation effect of DC for the association between extra-dyadic stress and relationship satisfaction for either adolescent ( $\beta = -.12, p = .165$ ) or adult couples ( $\beta = -.03, p = .661$ ). Accordingly, the second hypothesis that one's own perception of the DC of the partner moderates the association between extra-dyadic stress and intra-dyadic stress as well as between extra-dyadic stress and relationship satisfaction in adolescent couples was only partially supported.

Nonetheless, for adolescent as well as adult couples, direct actor effects were significant between DC and intra-dyadic stress (adolescents:  $\beta = -.37, p < .001$ ; adults:  $\beta = -.41, p < .001$ ) as well as between DC and relationship satisfaction (adolescents:  $\beta = .47, p < .001$ ; adults:  $\beta = .53, p < .001$ ), holding extra-dyadic stress and all other



**Figure 4.** Actor association of extra-dyadic stress and intra-dyadic stress moderated by dyadic coping skills of the partner. DCP = perceived dyadic coping skills of the partner; low = 1SD below average; high = 1SD above average; we controlled for partner's extra-dyadic stress, partner's intra-dyadic stress, and both partners' age.

predictors constant at an average level. Thus, higher scores in one's own perception of the DC of the partner were associated with less intra-dyadic stress and higher relationship satisfaction for all participants.

Explained variance in intra-dyadic stress for adolescent females and males was relatively low (females:  $R^2 = .11$ ; males:  $R^2 = .09$ ) compared to adult couples (females:  $R^2 = .37$ ; males:  $R^2 = .36$ ). The final model explained a substantial share of variance in relationship satisfaction in adolescent couples (females:  $R^2 = .33$ ; males:  $R^2 = .41$ ; see

Figure 2), but a greater share in the adult sample (females:  $R^2 = .72$ ; males:  $R^2 = .58$ ; see Figure 3).

## Discussion

The current study investigated whether (a) the deleterious spillover effects of extra-dyadic stress on relationship satisfaction via increased intra-dyadic stress and (b) the buffering mechanism of DC prevalent in adult couples are evident in and function similarly in late adolescent couples. In line with previous research (Gottman, 1994; Randall & Bodenmann, 2009), intra-dyadic stress was negatively associated with relationship satisfaction for both adolescent as well as adult couples. There is strong empirical evidence that a high amount of intra-dyadic stress (e.g., different goals, attitudes, needs, and desires) has a negative impact on both partners' relationship satisfaction among adults (for an overview see Randall & Bodenmann, 2009). This seems also to be true for adolescent couples. Interestingly, however, the adolescent actor effects in this study were smaller in magnitude than the adults' and those reported in most empirical studies with other adult samples (e.g., Bodenmann, Ledermann, et al., 2007; Merz et al., 2014).

In the adult sample, we replicated the expected detrimental spillover effect of extra-dyadic stress on relationship satisfaction via increased intra-dyadic stress found in various studies conducted with similar samples (Bodenmann, Ledermann, et al., 2007; Karney, Story, & Bradbury, 2005; Merz et al., 2014; Neff & Karney, 2004). However, for the adolescents, we found preliminary evidence for a negative indirect spillover effect only for a subgroup of the adolescent participants. Only adolescents who experienced higher extra-dyadic stress than the average but did not feel supported by their partners reported significantly more intra-dyadic stress and less relationship satisfaction (mediated moderation). Perceived DC skills of the partner moderated the direct effect between extra-dyadic stress and intra-dyadic stress. For most adolescents, however, extra-dyadic stress appeared to not (yet) be negatively linked to relationship satisfaction, neither directly nor indirectly. In fact, highly extra-dyadically stressed adolescents perceiving *a lot* of support from the partner reported the *lowest* intra-dyadic stress levels. With exception of one direct partner effect, which was significant in addition to the actor effect for female but not male late adolescents (male's intra-dyadic stress  $\rightarrow$  females relationship satisfaction), the reported effects did not differ between genders.

### *Spillover effects of extra-dyadic stress*

Contrary to our expectations and the effects found in the adult sample, chronic extra-dyadic stress was not directly associated with intra-dyadic stress or with relationship satisfaction in the adolescent sample. In addition, deleterious IEs of extra-dyadic stress were marginally significant only for adolescents reporting a lot of extra-dyadic stress and low DC from the partner. This result suggests that DC already plays an important role in buffering potentially harmful effects of extra-dyadic stress in adolescent couples (see next paragraph). Another likely explanation for the lack of spillover effects for most adolescent couples could be that none of the adolescent couples in our sample cohabited.

Consequently, they shared only limited—mainly deliberately chosen—parts of their daily life. Whereas adult partners might “bring their stress home” (Repetti et al., 2009), adolescents who still live with their parents, are less likely to directly encounter the partner after a stressful day. Rather than acting out their stress on their partners, adolescent couples may be better able to safeguard their romantic relationship from daily hassles and to focus on spending pleasant moments together. Future studies exploring the effects of coresidential status versus participants’ age on the stress spillover might shed light on the generalizability of our findings (e.g., would similar effects be found in non-cohabiting, dating adults?).

In addition, it is possible that different sources of stress in adolescents’ daily life have different impact on their romantic relationships. It may be that some stressful situations (e.g., stress with peers or stress at school) affect romantic relationships in adolescence in a more harmful way than others (e.g., financial stress). Future studies looking at different sources of stress separately might be better able to enhance our understanding of spillover mechanisms of stress in late adolescent couples not yet cohabitating.

### *Buffering effect of DC*

DC was strongly associated with intra-dyadic stress and relationship satisfaction for both partners, suggesting that DC might already be highly relevant for late adolescents’ intimate relationships. This result is in line with previous empirical studies highlighting the importance of DC for adolescents’ relationship satisfaction (Cramer, 2006; Papp & Witt, 2010; Pinquart & Fabel, 2009) as well as with findings on DC and relationship satisfaction in adult couples (Bodenmann et al., 2006, 2011; Herzberg, 2013; Iafrate, Bertoni, Donato, & Finkenauer, 2012; Papp & Witt, 2010). Partner’s support in times of need seems to be beneficial for couples’ satisfaction with their relationship in late adolescence, even if emotional support from friends and parents remains to be important throughout the transitioning phase from adolescents into adulthood (Connolly & Johnson, 1996). Future research directly comparing support provision in times of stress by different people in the late adolescent’s network would allow identifying effects specific to the romantic partner.

Adolescent couples who perceived *less* DC from their partners in stressful times, exhibited the well-known adult spillover patterns: For them, extra-dyadic stress was positively associated with intra-dyadic stress. A lack of partner’s support and understanding already at that stage might be seen as a lack of investment and commitment, leading to more conflict and stress within the couple. Conversely, perceiving *high* DC from the partner when experiencing high extra-dyadic stress might bring adolescent couples even closer together. Partners’ supportiveness in stressful times symbolizes an investment in the relationship and strengthens the feeling of trust and we-ness within the couple (Bodenmann et al., 2006; Cutrona, 1996). This function might be particularly important in late adolescence, when the couple is at an early relationship stage. Fostering the skill to commonly cope together as a couple and master extra-dyadic stressors successfully might be a promising avenue to prevent spillover processes from deteriorating adolescent relationships.

It was somewhat surprising that the hypothesized buffer effect of DCP for adult couples found in other studies (e.g., Falconier et al., 2013; Merz et al., 2014) could not be replicated. However, Bodenmann, Atkins, Schär, and Poffet (2010) also did not find DC to moderate the link between the partners' daily hassles and relationship functioning (e.g., sexual activity), suggesting that both the so-called main effect as well as the stress-buffering model might merit consideration in specific contexts or populations (Cohen & Wills, 1985).

### *Limitations and future research directions*

Several limitations must be considered when interpreting the results of this study: First, our data were cross-sectional, which means that the temporal or causal nature of the associations between the variables cannot be determined. Long-term studies on this topic would be needed for investigating developmental processes throughout adolescence and young adulthood. Second, the present study used self-report measures which might be subject to biases (e.g., idealization of the partner). Future research should include observational data for an unbiased perspective, for example, of both partners' DC behavior. Third, the stress measure employed may underestimate the amount of stress adolescents experience in their daily life and/or the specific characteristics of this stress and its impact on their relationship. The stress measure used was a single item developed for adult couples. Even though Elo, Leppänen, and Jahkola (2003) demonstrated the validity of a similar single-item stress measure, using a single-item measure prevents the explicit testing of the reliability of the construct. As such, a more specific instrument focusing on extra-dyadic stress most commonly experienced by adolescents and distinguishing between different sources of stress might be more apt to capture adolescence stress levels. For example, social stress (e.g., stress with parents and close friends other than the partner), educational or work stress (e.g., school-related stress), or other daily hassles emerging outside the relationship (e.g., financial stress, leisure stress) might affect adolescents relationships to different extents. Last, adolescent couples and adult couples are not independent in the current study, as the adult sample consisted of the adolescents' parents. Future research sampling independent populations of adolescents and adults would be able to statistically compare effect sizes for adolescent and adult couples (e.g., by conducting multigroup analyses), which was inappropriate in the current study due to interdependence of the data. Despite these limitations, our results indicate that the ability to deal with stress dyadically is already important in adolescent couples, even if extra-dyadic stress may not yet play the same central role as in adult relationships.

### **Conclusion**

Romantic relationships in late adolescence and young adulthood are already characterized by strong emotional bonds, serious commitment, intimacy, and support. Accordingly, these relationships are more similar to adult relationships than to romantic relationships in early and mid-adolescence (Connolly & Goldberg, 1999; Connolly & Johnson, 1996; Shulman, Davila, & Shachar-Shapira, 2011). Nevertheless, romantic



relationships in late adolescence differ from relationships in adulthood in some aspects: Late adolescent partners seldom cohabit, individuation from parents and identity development are still key topics, and investment opportunities into the relationships itself are limited. Future stress research should focus on this understudied group of couples to shed light on similarities and differences of relationship functioning in late adolescence and adulthood.

The current study draws attention to this special group and emphasizes that DC skills already appear to be important in late adolescence, even though stress spillover processes seem not yet to be as prevalent as in adult couples. If other studies replicate these findings, adapting existing skill training programs (e.g., Couples Coping Enhancement Training; Bodenmann & Shantinath, 2004) and implementing relationship education early in lifetime, possibly before couples move together, might be a promising pathway.

### Author contribution

Christina J. Breitenstein and Anne Milek contributed equally to this work.

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### Notes

1. Stepfathers or stepmothers were considered to be parents and included in the study when they had been a stable part of the family since the adolescent was at least 12 years of age.
2. For the sake of parsimony, (unstandardized) estimates of the model testing our first hypotheses are not presented in a table but in the text only. Complete results can be obtained from the corresponding author by request.

### References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Berg, C. A., & Upchurch, R. (2007). A developmental-contextual model of couples coping with chronic illness across the adult life span. *Psychological Bulletin*, *133*, 920–954. doi:<http://doi.org/10.1037/0033-2909.133.6.920>
- Bodenmann, G. (1997). Dyadic coping: A systemic-transactional view of stress and coping among couples: Theory and empirical findings. *European Review of Applied Psychology*, *47*, 137–141.
- Bodenmann, G. (2008). *Dyadisches Coping Inventar (DCI)* [Dyadic Coping Inventory (DCI)]. Bern, Switzerland: Huber.
- Bodenmann, G., Atkins, D. C., Schär, M., & Poffet, V. (2010). The association between daily stress and sexual activity. *Journal of Family Psychology*, *24*, 271–279. doi:<https://doi.org/10.1037/a0019365>
- Bodenmann, G., Charvoz, L., Bradbury, T. N., Bertoni, A., Iafrate, R., Giuliani, C., . . . Behling, J. (2007). The role of stress in divorce: A three-nation retrospective study. *Journal of Social and Personal Relationships*, *24*, 707–728. doi:<http://doi.org/10.1177/0265407507081456>

- Bodenmann, G., Ledermann, T., & Bradbury, T. N. (2007). Stress, sex, and satisfaction in marriage. *Personal Relationships, 14*, 551–569. doi:<http://doi.org/10.1111/j.1475-6811.2007.00171.x>
- Bodenmann, G., Meuwly, N., & Kayser, K. (2011). Two conceptualizations of dyadic coping and their potential for predicting relationship quality and individual well-being: A comparison. *European Psychologist, 16*, 255–266. doi:<http://doi.org/10.1027/1016-9040/a000068>
- 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. doi:<http://doi.org/10.1037/0893-3200.20.3.485>
- 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. doi:<http://doi.org/10.1111/j.0197-6664.2004.00056.x>
- Bradbury, T. N., & Karney, B. R. (2010). *Intimate relationships*. New York, NY: W.W. Norton.
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*, 310–357. doi:<https://doi.org/10.1037/0033-2909.98.2.310>
- Compas, B. E., Davis, G. E., & Forsythe, C. J. (1985). Characteristics of life events during adolescence. *American Journal of Community Psychology, 13*, 677–691.
- Compas, B. E., Orosan, P. G., & Grant, K. E. (1993). Adolescent stress and coping: Implications for psychopathology during adolescence. *Journal of Adolescence, 16*, 331–349. doi:<http://doi.org/10.1006/jado.1993.1028>
- Connolly, J. A., & Goldberg, A. (1999). Romantic relationships in adolescence: The role of friends and peers in their emergence and development. In W. Furman, B. B. Brown, & C. Feiring (Eds.), *The development of romantic relationships in adolescence* (pp. 266–290). New York, NY: Cambridge University Press.
- Connolly, J. A., & Johnson, A. M. (1996). Adolescents' romantic relationships and the structure and quality of their close interpersonal ties. *Personal Relationships, 3*, 185–195. doi:<http://doi.org/10.1111/j.1475-6811.1996.tb00111.x>
- Cook, W. L., & Kenny, D. A. (2005). The actor–partner interdependence model: A model of bidirectional effects in developmental studies. *International Journal of Behavioral Development, 29*, 101–109. doi:<http://doi.org/10.1080/01650250444000405>
- Cramer, D. (2006). How a supportive partner may increase relationship satisfaction. *British Journal of Guidance & Counselling, 34*, 117–131. doi:<http://doi.org/10.1080/03069880500483141>
- Cutrona, C. E. (1996). Social support as a determinant of marital quality. In G. R. Pierce, B. R. Sarason, & I. G. Sarason (Eds.), *Handbook of social support and the family* (pp. 173–194). New York, NY: Springer.
- Elo, A.-L., Leppänen, A., & Jahkola, A. (2003). Validity of a single-item measure of stress symptoms. *Scandinavian Journal of Work, Environment & Health, 29*, 444–451. doi:<https://doi.org/10.5271/sjweh.752>
- Falconier, M. K., Nussbeck, F. W., & 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. doi:<http://doi.org/10.1521/jscp.2013.32.8.813>
- Falconier, M. K., Nussbeck, F., Bodenmann, G., Schneider, H., & Bradbury, T. (2015). Stress from daily hassles in couples: Its effects on intradyadic stress, relationship satisfaction, and physical and psychological well-being. *Journal of Marital and Family Therapy, 41*(2), 221–235. doi:<https://doi.org/10.1111/jmft.12073>

- Furman, W. (2002). The emerging field of adolescent romantic relationships. *Current Directions in Psychological Science, 11*, 177–180. doi:http://doi.org/10.1111/1467-8721.00195
- Furman, W., & Shaffer, L. (2003). The role of romantic relationships in adolescent development. In P. Florsheim (Ed.), *Adolescent romantic relations and sexual behavior. Theory, research and practical implications* (pp. 3–22). Mahwah, NJ: Lawrence Erlbaum Associates.
- Furman, W., & Shomaker, L. B. (2008). Patterns of interaction in adolescent romantic relationships: Distinct features and links to other close relationships. *Journal of Adolescence, 31*, 771–788. doi:http://doi.org/10.1016/j.adolescence.2007.10.007
- Gottman, J. M. (1993). The roles of conflict engagement, escalation, and avoidance in marital interaction: A longitudinal view of five types of couples. *Journal of Consulting and Clinical Psychology, 61*, 6–15. doi:http://doi.org/10.1037/0022-006X.61.1.6
- Gottman, J. M. (1994). *What predicts divorce?* Hillsdale, NJ: Erlbaum.
- Gottman, J. M., Coan, J., Carrere, S., & Swanson, C. (1998). Predicting marital happiness and stability from newlywed interactions. *Journal of Marriage and Family, 60*, 5–22. doi:http://doi.org/10.2307/353438
- Hagedoorn, M., Sanderman, R., Bolks, H. N., Tuinstra, J., & Coyne, J. C. (2008). Distress in couples coping with cancer: A meta-analysis and critical review of role and gender effects. *Psychological Bulletin, 134*, 1–30. doi:http://doi.org/10.1037/0033-2909.134.1.1
- Harper, J. M., Schaalje, B. G., & Sandberg, J. G. (2000). Daily hassles, intimacy, and marital quality in later life marriages. *The American Journal of Family Therapy, 28*, 1–18. doi:http://doi.org/10.1080/019261800261770
- Havighurst, R. J. (1948). *Developmental tasks and education*. New York, NY: McKay.
- Hendrick, S. S. (1988). A generic measure of relationship satisfaction. *Journal of Marriage & Family, 50*, 93.
- Herzberg, P. Y. (2013). Coping in relationships: The interplay between individual and dyadic coping and their effects on relationship satisfaction. *Anxiety, Stress & Coping, 26*, 136–153. doi:http://doi.org/10.1080/10615806.2012.655726
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*, 1–55. doi:http://doi.org/10.1080/10705519909540118
- Iafate, R., Bertoni, A., Donato, S., & Finkenauer, C. (2012). Perceived similarity and understanding in dyadic coping among young and mature couples. *Personal Relationships, 19*, 401–419. doi:http://doi.org/10.1111/j.1475-6811.2011.01369.x
- Karney, B. R., & Bradbury, T. N. (2005). Contextual influences on marriage implications for policy and intervention. *Current Directions in Psychological Science, 14*, 171–174. doi:http://doi.org/10.1111/j.0963-7214.2005.00358.x
- Karney, B. R., Story, L. B., & Bradbury, T. N. (2005). Marriages in context: Interactions between chronic and acute stress among newlyweds. In T. A. Revenson, K. Kayser, & G. Bodenmann (Eds.), *Couples coping with stress: Emerging perspectives on dyadic coping* (pp. 13–32). Washington, DC: American Psychological Association.
- Ledermann, T., Bodenmann, G., Rudaz, M., & Bradbury, T. N. (2010). Stress, communication, and marital quality in couples. *Family Relations, 59*, 195–206. doi:http://doi.org/10.1111/j.1741-3729.2010.00595.x

- Ledermann, T., Macho, S., & Kenny, D. A. (2011). Assessing mediation in dyadic data using the actor-partner interdependence model. *Structural Equation Modeling: A Multidisciplinary Journal*, *18*, 595–612. doi:<http://doi.org/10.1080/10705511.2011.607099>
- Merz, C., Meuwly, N., Randall, A. K., & Bodenmann, G. (2014). Engaging in dyadic coping: Buffering the impact of everyday stress on prospective relationship satisfaction. *Journal of Family Science*, *5*, 30–37. doi:<http://doi.org/10.1080/19424620.2014.927385>
- Muthén, L. K., & Muthén, B. O. (1998). *Mplus user's guide* (7th ed.). Los Angeles, CA: Muthén & Muthén.
- Neff, L. A., & Karney, B. (2004). How does context affect intimate relationships? Linking external stress and cognitive processes within marriage. *Personality and Social Psychology Bulletin*, *30*, 134–148. doi:<http://doi.org/10.1177/0146167203255984>
- Nieder, T., & Seiffge-Krenke, I. (2001). Coping with stress in different phases of romantic development. *Journal of Adolescence*, *24*, 297–311. doi:<http://doi.org/10.1006/jado.2001.0407>
- O'Brien, T. B., DeLongis, A., Pomaki, G., Puterman, E., & Zwicker, A. (2009). Couples coping with stress: The role of empathic responding. *European Psychologist*, *14*, 18–28. doi:<http://doi.org/10.1027/1016-9040.14.1.18>
- Papp, L. M., & Witt, N. L. (2010). Romantic partners' individual coping strategies and dyadic coping: Implications for relationship functioning. *Journal of Family Psychology*, *24*, 551–559. doi:<http://doi.org/10.1037/a0020836>
- Pinquart, M., & Fabel, K. (2009). Social change demands, coping and intimate relationship development among German adolescents and adults. *Journal of Social and Personal Relationships*, *26*, 793–810. doi:<http://doi.org/10.1177/0265407509347933>
- Randall, A. K., & Bodenmann, G. (2009). The role of stress on close relationships and marital satisfaction. *Clinical Psychology Review*, *29*, 105–115. doi:<http://doi.org/10.1016/j.cpr.2008.10.004>
- Repetti, R. L., Wang, S., & Saxbe, D. (2009). Bring it all back home: How outside stressors shape families' everyday lives. *Current Directions in Psychological Science*, *18*, 106–111. doi:<http://doi.org/10.1111/j.1467-8721.2009.01618.x>
- Revenson, T. A. (2003). Scenes from a marriage: Examining support, coping, and gender within the context of chronic illness. In J. Suls & K. A. Wallston (Eds.), *Social psychological foundations of health and illness* (pp. 530–559). Malden, MA: Blackwell Publishing Ltd.
- Sander, J., & Böcker, S. (1993). The German version of the Relationship Assessment Scale (RAS): A short scale for measuring satisfaction in a dyadic relationship. *Diagnostica*, *39*, 55–62.
- Seiffge-Krenke, I. (2006). Coping with relationship stressors: The impact of different working models of attachment and links to adaptation. *Journal of Youth and Adolescence*, *35*, 25–39. doi:<http://doi.org/10.1007/s10964-005-9015-4>
- Seiffge-Krenke, I. (2011). Coping with relationship stressors: A decade review. *Journal of Research on Adolescence*, *21*, 196–210. doi:<http://doi.org/10.1111/j.1532-7795.2010.00723.x>
- Seiffge-Krenke, I., Aunola, K., & Nurmi, J.-E. (2009). Changes in stress perception and coping during adolescence: The role of situational and personal factors. *Child Development*, *80*, 259–279. doi:<http://doi.org/10.1111/j.1467-8624.2008.01258.x>
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, *7*, 422–445. doi:<http://doi.org/10.1037/1082-989X.7.4.422>

- Shulman, S., Davila, J., & Shachar-Shapira, L. (2011). Assessing romantic competence among older adolescents. *Journal of Adolescence, 34*, 397–406. doi:<http://doi.org/10.1016/j.adolescence.2010.08.002>
- Simon, R. W., & Barrett, A. E. (2010). Nonmarital romantic relationships and mental health in early adulthood: Does the association differ for women and men? *Journal of Health & Social Behavior, 51*, 168–182. doi:<http://doi.org/10.1177/0022146510372343>
- Story, L. B., & Bradbury, T. N. (2004). Understanding marriage and stress: Essential questions and challenges. *Clinical Psychology Review, 23*, 1139–1162. doi:<http://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. doi:<http://doi.org/10.1037/0893-3200.20.4.690>
- Surjadi, F. F., Lorenz, F. O., Wickrama, K. A. S., & Conger, R. D. (2011). Parental support, partner support, and the trajectories of mastery from adolescence to early adulthood. *Journal of Adolescence, 34*, 619–628. doi:<http://doi.org/10.1016/j.adolescence.2010.10.001>