JSPR

Article

Journal of Social and
Personal Relationships
2019, Vol. 36(11-12) 3711–3732

DOI: 10.1177/0265407519832671
journals.sagepub.com/home/spr
SAGE

I am a rock; I am an island: Implications of avoidant attachment for communal coping in adults with type 2 diabetes

Meredith Van Vleet
Vicki S. Helgeson
Carnegie Mellon University, USA

Abstract

Accumulating evidence indicates that communal coping is beneficial for individuals with chronic illness. The current investigation examined attachment as a moderator of the effects of communal coping in a sample of persons with type 2 diabetes. We hypothesized that patient communal coping would be associated with higher relationship quality, lower distress, and better diabetes outcomes for patients low in avoidant attachment, but it would not be beneficial for patients high in avoidant attachment. Patient communal coping was coded from videotaped interactions in which 86 heterosexual couples discussed difficulties managing diabetes. The results indicated that patient communal coping was beneficial when avoidant attachment was low. When avoidant attachment was high, patient communal coping was related to lower relationship quality and higher distress and was unrelated to diabetes outcomes. This work sheds light on potential boundary conditions of communal coping's benefits, which will be important to consider in future communal coping interventions.

Keywords

Attachment, chronic illness, close relationships, communal coping, diabetes

Corresponding author:
Meredith Van Vleet, Department of Psychology, Carnegie Mellon University, Pittsburgh, PA 15213, USA.
Emails: mvanvlee@andrew.cmu.edu; vh2e@andrew.cmu.edu

I am shielded in my armor
Hiding in my room, safe within my womb
I touch no one and no one touches me
I am a rock; I am an island

—Simon (1966)

Coping with a chronic illness can be daunting and requires substantial emotion regulation, problem-solving, effort, and resources. Although the research in this area has traditionally focused on how individuals cope independently with chronic illness (Lazarus & Folkman, 1984), accumulating attention has been drawn to the interpersonal context in which coping occurs (e.g., Afifi, Hutchinson, & Krouse, 2006; Badr & Acitelli, 2017; Lyons, Mickelson, Sullivan, & Coyne, 1998). Collectively, this work suggests that the involvement of close relationship partners in the coping process may help alleviate this burden and improve well-being.

Many forms of interpersonal coping have been identified in the chronic illness literature (e.g., Berg et al., 2008; Bodenmann, 2005; Coyne & Smith, 1994). Communal coping, the focus of this work, is one form of interpersonal coping that is especially well suited for managing chronic illness. The definition of communal coping adopted in this work is presented in a recent theory (Helgeson, Jakubiak, Van Vleet, & Zajdel, 2017) and consists of two elements: (a) a shared illness appraisal and (b) collaboration in managing the illness and its demands. A shared illness appraisal is the perception that the management of the illness is the joint responsibility of the partner who has the illness (referred to as the "patient") as well as the healthy partner (referred to as the "spouse"). Collaboration consists of behavior indicative of joint input, mutual effort, and a team approach to illness management. This definition of collaboration is consistent with other researchers' concept of collaborative coping (Berg, Schindler, & Maharajh, 2008; Berg, Schindler, Smith, Skinner, & Beveridge, 2011). Collaboration can take many forms including discussing illness-related issues; combining efforts, skills, and knowledge to engage in joint problem-solving; and negotiating responsibilities (Berg et al., 2008; Hoppman & Gerstorf, 2013). The common thread of these behaviors is that they involve joint efforts or involvement of both partners in addressing illness-related issues. When partners collaborate, their roles as patient and spouse are de-emphasized, and they are more equally involved. Collaboration is distinguished from traditional definitions of social support, which typically involve one person providing resources (e.g., information) to assist a second person with his/her problem. Communal coping occurs when individuals hold a shared appraisal of the illness and also collaborate in illness management.

In recent work (Helgeson, Jakuiak, Van Vleet et al., 2017), we elaborated on the construct of communal coping and identified several of its likely benefits—including enhanced relationship quality, reduced distress, increased self-efficacy, and improved self-care. Communal coping should improve relationship quality because it communicates several positive messages to both couple-members—including commitment to (Mickelson, Lyons, Sullivan, Coyne, & Sarason, 2001) and mutual care and respect for one another. Feeling like teammates should also bring partners closer together. Communal coping should reduce patient distress by lessening the pressure of having to face

the illness alone. It should also bolster self-efficacy because it equips patients with greater resources (i.e., the spouse's skills/efforts) to handle illness-related problems. These benefits should, ultimately, translate into better self-care (Helgeson, Jakuiak, Van Vleet et al., 2017).

Initial work on communal coping and related constructs (e.g., we-talk, collaborative coping) substantiates these claims (for a review, see Helgeson, Jakubiak, Van Vleet et al., 2017). However, there are likely conditions under which communal coping may be more or less beneficial for persons with chronic illness. We outlined several individual difference variables that may moderate the links from patient communal coping to outcomes in recent theoretical work (Helgeson, Jakubiak, Van Vleet et al., 2017). One such likely moderator—and the focus of this paper—is patient attachment. Individual differences in attachment develop from early experiences with primary caregivers and continue to be shaped by one's closest relationships across the life span. They are organized beliefs that reflect the extent to which the self is worthy of love and attention and that others will be available and responsive to one's needs (Bowlby, 1982 [1969], 1973; Collins, Guichard, Ford, & Feeney, 2004). Attachment is represented by the two dimensions of avoidance (discomfort with intimacy) and anxiety (fear of abandonment and rejection), with low scores on both dimensions reflecting secure attachment (Brennan, Clark, & Shaver, 1998). Avoidant attachment, which is thought to evolve in response to a history of caregivers being unresponsive to one's needs, is characterized by a strong desire for self-reliance and the belief that others cannot be relied upon when needed. Anxious attachment is thought to arise when caregivers are inconsistently or contingently responsive to needs and is characterized by a strong need for intimacy coupled with the fear of rejection and abandonment by close others.

No research has examined the influence of patient attachment on communal coping or its intended benefits. However, literature on attachment differences in support-seeking and receipt suggests that highly avoidant patients may be less likely to benefit from communal coping than more secure patients. Compared with secure individuals, who report turning to close loved ones when distressed as their primary coping method, avoidant individuals tend to use distancing coping strategies (e.g., Florian, Mikulincer, & Bucholtz, 1995; Mikulincer & Florian, 1995; Mikulincer, Florian, & Weller, 1993; Ognibene & Collins, 1998). They also seek less support from close others when they are distressed (Carnelley, Pietromonaco, & Jaffe, 1996; Collins & Feeney, 2000, 2004; Florian et al., 1995; Simpson, Winterheld, Rholes, & Oriña, 2007), seek support less effectively (i.e., more indirect support-seeking rather than direct support-seeking; Collins & Feeney, 2000), perceive available support more negatively (Florian et al., 1995), and tend to interpret partners' ambiguous support attempts more negatively than secure individuals (Collins & Feeney, 2004).

Thus, patients who are high in avoidant attachment may benefit less from communal coping for several reasons. First, avoidant patients may be less likely to acknowledge and disclose illness problems to their partner, limiting the ability of the couple to appraise the illness as a shared issue and to engage in collaboration. Second, avoidant individuals may perceive their partners' attempts to cope communally as intrusive because they desire self-reliance. Therefore, avoidant patients may be unlikely to reciprocate communal coping bids.

It is less clear whether patient attachment anxiety would moderate links from patient communal coping to its proposed benefits. The literature provides several reasons why highly anxious patients would desire to communally cope with their chronic illness. First, anxious individuals tend to appraise stressful events as more threatening than less anxious individuals (Mikulincer & Shaver, 2005; Ognibene & Collins, 1998). Therefore, they may perceive a greater need for partner involvement in their illness management. However, research is unclear whether they actually seek more support when distressed. Some research indicates that they seek more support than avoidant but not secure individuals (Mikulincer & Florian, 1995; Ognibene & Collins, 1998), and other work found no differences (Florian et al., 1995; Mikulincer, Florian, & Weller, 1993). Second, anxious individuals prefer to remain in close proximity to their partners and tend to be overly dependent in their relationships (Hazan & Shaver, 1987; Mikulincer & Shaver, 2003). Thus, they may want to include their partners in illness management with the goal of remaining close to them. Relatedly, highly anxious individuals prefer to include their partner in their exploration (e.g., new activities or hobbies; Martin, Paetzold, & Rholes, 2010) and tend to include themselves in (i.e., intrude on) their partner's independent goal pursuits (Feeney & Thrush, 2010). Taken together, these findings suggest that anxious individuals may prefer for even traditionally independent endeavors to be shared with their partners. Therefore, anxious patients may prefer to cope with their illness communally, rather than individually.

However, it is unclear whether anxious patients would benefit similarly from communal coping as more secure patients. In observational work, anxious individuals tended to express negativity toward their partners when seeking support from them (Feeney, Cassidy, & Ramos-Marcuse, 2008). This pattern suggests that anxious individuals may desire support but hold negative expectations about the support their partners would provide. Similar to avoidant individuals, anxious individuals interpret their partners' ambiguous support attempts in a negative light (Collins & Feeney, 2004). This may reflect anxious individuals' "hyperactivating strategies" to manage negative emotions when distressed, which include both extreme proximity-seeking, but also hypervigilance to cues of rejection or abandonment (Mikulincer & Shaver, 2007). It is also unclear whether anxious patients would initiate communal coping. They may be cautious in initiating such interactions, given their fear of rejection. In all, this mixed literature hints that anxious patients may desire to communally cope, but may not express this desire effectively and may be unreceptive to their partner's communal coping efforts.

Thus, the primary goal of this study was to investigate whether patient attachment moderated the links of patient communal coping to relationship and health outcomes. We hypothesized that highly avoidant patients would engage in less communal coping and benefit less from communal coping than more secure patients. We also examined whether patient anxious attachment was related to patient communal coping and the extent to which patients benefited from communal coping, but viewed these analyses as exploratory as we did not have a clear directional prediction. Also on an exploratory basis, we examined the interaction between anxious and avoidant attachment with communal coping to determine whether there is a subgroup of individuals who are particularly receptive or unreceptive to communal coping benefits. We examined these hypotheses in a sample of patients diagnosed with type 2 diabetes.

Method

Recruitment and procedure

All study procedures were approved by the Carnegie Mellon University Institutional Review Board. Participants were recruited from the community via mass transit advertisements, community health fairs, and placement of flyers and brochures in physician offices. Interested persons contacted the study director and were screened for eligibility. We enrolled 206 persons diagnosed with type 2 diabetes in the past 5 years and the person to whom they were married or with whom they were living in a marital-type relationship (totaling 412 participants). Couples completed study procedures in their homes, unless they preferred to come to the university. Interviews were structured and consisted of the administration of patient relationship well-being, distress, self-efficacy, and self-care measures, as well as other measures as part of a larger investigation. Patients also were asked to provide a sample of blood to assess glycemic control via a finger prick. Afterward, patients completed a questionnaire created for study purposes, in which they rated the difficulty of 12 diabetes issues, reflecting the standard domains of diabetes self-care (e.g., diet, exercise). This questionnaire was used as a prompt for a subsequent videotaped discussion.

The research assistant then instructed the couple to discuss the patient's most difficult diabetes issue for 8 min, with the goal of finding ways to resolve the problem. To provide couples with privacy, the research assistant left the room after beginning the recording. He/she returned 8 min later to end the recording and administer questionnaires.

To retain patients for a potential 5-year follow-up, we contacted patients 18 months later and administered a brief questionnaire by phone. In this interview, we assessed patient attachment. These interviews were completed on only a portion of the sample ($n = 86$). We acknowledge that assessing attachment after communal coping is not ideal, but also note that attachment is expected to be generally stable over time (albeit not unchangeable; Collins & Read, 1994), especially in relationships of longer duration (Kirkpatrick & Hazan, 1994) such as those characteristics of the present sample.

Study sample

Demographics for the final sample of this investigation are shown in Supplemental Materials Table 1. There was a fairly even distribution of male and female patients. The majority of patients were White (62%), and most of the remaining patients were Black. Seventy-percent were married, and 30% were cohabiting. Average relationship duration was 18.08 years ($SD = 14.43$ years). The sample had a wide age and educational distribution.

We compared the 86 participants in this study to the full sample on demographic variables. Compared with the full sample, participants in this study were more likely to be White (61% vs. 47%), $\chi^2(1) = 4.26$, $p < .05$; were slightly older ($M = 55.43$ vs. 51.57), $t(205) = 2.90$, $p < .005$; had better glycemic control ($M = 6.75\%$ vs. 7.51%), $t(205) = 3.06$, $p < .005$; and were less likely to be on insulin (15% vs. 33%), $\chi^2(3) = 16.65$, $p < .001$. There were no group differences in sex, marital status, or education. We compared the two groups on relationship quality and communal coping and found no

group differences in relationship quality, but the present sample exhibited more communal coping than the full sample ($M = 2.48$ vs. 1.86, $p < .001$).

Patient communal coping

Observed patient communal coping was measured with a well-validated coding system and followed procedures outlined by Feeney and colleagues (e.g., Collins & Feeney, 2000; Feeney & Thrush, 2010). Two trained research assistants coded patient communal coping for each videotape. Because participants were racially diverse, we ensured that research assistants varied in race/ethnicity and gender; coders were Black, White, Asian, and both male and female. Coders viewed the entire video once to become familiar with the interaction and then reviewed the video, focusing on the patient and stopping the video a minimum of every 2 min to take notes on behaviors reflecting the communal coping code. Coders were instructed to watch the video as many times as needed until satisfied with their notes and code, but a minimum of three times. A single interaction typically took 30–60 min to code.

Patient communal coping was defined as the extent to which the current situation seemed to be a joint problem, from the patient's point of view. The patient talked about the problem in a way that indicated he/she viewed diabetes as a shared problem they managed together. "We-statements" could be indicative of communal coping (e.g., "We watch what we eat," "We exercise," "We take that class"), but it depended on the content of those statements (i.e., "We don't have anything to talk about" would not reflect communal coping). Thus, coders took into consideration the we-language the patient used, but also the content of those statements as to whether they reflected joint problem-solving or collaboration. A low score indicated that the problem was currently perceived as the patient's individual problem or a behavior in which the patient engaged in on his/her own. Examples of behaviors that reflect the communal coping code are shown in a previous work involving this sample (Van Vleet, Helgeson, Seltman, Korytkowski, & Hausmann, 2018a). This observational measure was designed to capture the shared appraisal and collaboration elements of communal coping.

Research assistants rated the extent to which patient communal coping behavior occurred on a 5-point scale, following Feeney and colleagues' procedures (e.g., Collins & Feeney, 2000; Feeney & Thrush, 2010), which took into consideration both frequency and magnitude: 1 = *Not at all*, 2 = *Rare or low quality*, 3 = *Occasional or moderate quality*, 4 = *Often or high quality*, and 5 = *Consistent and highest quality*. When two coders' ratings differed by 1 point, the average was computed. When differences exceeded 1 point, or one of the coders selected "Not at all" and the other coder provided any other rating, the issue was resolved via a third-party arbitrated discussion. Coders explained their rationale for their ratings with detailed notes. The third party made the final decision. Inter-rater reliability for observed patient communal coping was good (intraclass correlation coefficient = .80). This measure was moderately correlated with more traditional measures of patient communal coping in the current sample, including patient self-reported communal coping ($r = .36$, $p < .001$) and patient we-language during a brief diabetes coping interview ($r = .40$, $p < .001$) in which patients were asked to reflect on how they typically handle diabetes issues. We focused on this

observed measure of communal coping because we view it as the most representative of communal coping behavior that occurs in patients' homes.

Instruments

With the exception of patient attachment, all instruments were measured at the same time that communal coping was assessed.

Patient attachment. A 12-item version of the Experiences in Close Relationships Questionnaire (Brennan et al., 1998) assessed individual differences in attachment. Items were worded to reflect how patients generally feel in important relationships in their lives. They were asked to "think about your past and present relationships with people who had been especially important to you, such as spouses, partners, and close friends." Six items measured avoidance (e.g., "I am very uncomfortable being close to people," $\alpha = .90$), and 6 items measured anxiety (e.g., "I worry a fair amount about losing close relationships," $\alpha = .84$). Patients indicated how much they agreed with each item on a 7-point scale (1 = *Strongly disagree*; 7 = *Strongly agree*). In a previous sample of 460 college students, these 6-item avoidance and anxiety subscales were strongly correlated with the full avoidance and anxiety subscales ($r = .94$ for avoidance and .96 for anxiety).

Relationship quality. Two instruments captured patients' relationship quality: the 5-item Quality of Marriage Index (QMI; Norton, 1983; $\alpha = .94$) captured relationship satisfaction and the 6-item emotional intimacy subscale from the Personal Assessment of Intimate Relationships scale (PAIR; Schaefer & Olson, 1981; $\alpha = .84$) assessed intimacy. We adapted both measures for use with cohabiting couples by replacing the word "marriage" with "relationship" and replacing the word "spouse" with "partner" in each item (e.g., for the QMI, "We have a good relationship"; e.g., for the PAIR, "My partner really understands my hurts and joys"). Patients responded on a 7-point scale from *Very strong disagreement* to *Very strong agreement* for both scales. Because the two scales were strongly correlated ($r = .77$, $p < .001$), we used the average as a relationship quality index.

Psychological distress. Patients completed three measures: (1) the Center for Epidemiological Studies Depression Scale (e.g., "During the past week I felt depressed"; Radloff, 1977; $\alpha = .91$); (2) the Life Satisfaction Scale (e.g., "I am satisfied with my life"; Diener & Larsen, 1984; $\alpha = .86$); and (3) the 4-item abbreviated Perceived Stress Scale (e.g., "How often have you felt difficulties were piling up so high that you could not overcome them?"; Cohen, Kamarck, & Mermelstein, 1983; $\alpha = .79$). Because the three scales were highly correlated (rs ranged from .62 to .71, all ps $< .001$), we reverse-scored the life satisfaction scale, standardized the scales, and used the average as a psychological distress index.

Diabetes distress. The 17-item Diabetes Distress Scale was administered to measure patients' experience of diabetes-related problems in several domains, including emotional burdens (e.g., "Feeling that diabetes is taking up too much of my mental and

physical energy every day"), physician distress (e.g., "Feeling that my doctor doesn't know enough about diabetes and diabetes care"), regimen distress (e.g., "Feeling that I am not testing my blood sugars frequently enough"), and interpersonal distress (e.g., "Feeling that friends or family don't understand how difficult living with diabetes can be"; Polonsky et al., 2005; $\alpha = .93$). Responses were made on a 6-point scale, ranging from $1 =$ *Not a problem* to $6 =$ *A serious problem*.

Self-efficacy. Patients completed the self-efficacy subscale of the Multidimensional Diabetes Questionnaire (Talbot, Nouwen, Gingras, Gosselin, & Audet, 1997; $\alpha = .86$). This scale consisted of 7 items, reflecting confidence in executing various aspects of diabetes self-care (e.g., "How confident are you in your ability to follow your diet?"). Ratings were made on a scale from 0% to 100%.

Self-care. Self-care was measured with the Summary of Diabetes Self-Care Activities (Toobert & Glasgow, 1994), which measures dietary intake (e.g., "What percentage of the time do you successfully limit your calories as recommended in healthy eating for diabetes control?"), exercise/energy expenditure (e.g., "On how many of the last 7 days did you participate in at least 20 min of physical exercise?"), and medication adherence (e.g., "How many of your recommended pills to control diabetes did you take in the last 7 days that you were supposed to?"). Subscales were standardized and combined into a self-care index ($\alpha = .86$), with higher scores reflecting better self-care. Among the patients taking diabetes medication (85% of the sample), we also measured medication adherence with the 4-item Medication Adherence Index (e.g., "Do you ever forget to take your medication?" [reverse-coded]; Morisky, Green, & Levine, 1986; $\alpha = .75$). Higher scores reflect greater adherence.

Glycemic control. We measured hemoglobin A1c (HbA1c) with a Siemens DCA Vantage Analyzer, which provides an indication of average blood glucose control over the past 1–2 months. HbA1c values ranged from 5.00 to 14.00, with lower scores reflecting better glycemic control. The majority of participants (77%) had values that were equal to or less than 7.00%, the glycemic control target set by the American Diabetes Association (2018). This is not surprising, as patients were recruited when they were newly diagnosed with type 2 diabetes.

Overview of the analysis

First, we used correlational analyses, independent *t*-tests, and analyses of covariance to determine whether any demographic or illness background variable was related to patient avoidant or anxious attachment. Variables that were linked to attachment were controlled in all subsequent analyses. Next, we examined links between patient attachment and patient communal coping with correlational analyses. Finally, we examined whether attachment moderated the relation of patient communal coping to patient outcomes with regression analyses. We tested the interaction of avoidant attachment with communal coping and the interaction of anxious attachment with communal coping in separate analyses. We entered covariates and the main effects of

attachment and communal coping on the first step of the equation and then entered the interaction between the attachment variable and communal coping on the second step. We interpreted significant interactions by plotting the outcomes for low (−1 *SD* from the mean), medium (the mean), and high (+1 *SD* from the mean) levels of attachment avoidance or anxiety. A post hoc power analysis indicated that for $n = 86$ patients, standardized regression coefficients $\geq .09$ could be detected at $\alpha < .05$ (two-tailed) with 80% power. On an exploratory basis, we also examined the three-way Avoidance × Anxiety × Communal Coping interaction.

Results

Background analyses

First, we examined whether demographic or illness-related variables were related to patient attachment. Neither patient avoidance nor anxiety was related to patient sex, age, education, marital status (cohabiting vs. married), length of diabetes, or medical regimen. We examined race as a dichotomous variable (White vs. Non-White) because there were so few mixed race individuals. There was a marginally significant race difference in patient avoidance, $t(84) = 1.69$, $p = .09$, and a significant race difference in patient anxiety, $t(84) = 2.35$, $p < .05$. Non-White patients scored higher than White patients on avoidance ($M_{\text{Non-White}} = 3.04$, $SD = 1.53$; $M_{\text{White}} = 2.48$, $SD = 1.47$) and anxiety ($M_{\text{Non-White}} = 3.41$, $SD = 1.53$; $M_{\text{White}} = 2.67$, $SD = 1.35$). Thus, we controlled for patient race (White vs. Non-White) in all analyses.

Both higher avoidance and higher anxiety were associated with less communal coping ($r_{\text{avoidance}} = -.44$, $p < .001$; $r_{\text{anxiety}} = -.40$, $p < .001$). Because patient avoidance and anxiety were positively correlated ($r = .66$, $p < .001$), we examined whether each was independently related to patient communal coping with regression analysis. When both patient avoidance and anxiety were entered into a regression analysis simultaneously, only avoidance was linked to communal coping ($\beta = -.31$, $p < .05$).[1]

Patient avoidance as a moderator of communal coping

The results of regression analyses are shown in Table 1.

Relationship quality. There was a marginal main effect of avoidance that was qualified by an interaction with communal coping in the prediction of relationship satisfaction. As shown in Figure 1, communal coping was related to higher relationship satisfaction for those low on avoidance, but was related to lower relationship quality for those with average or high avoidance. A similar, but marginal pattern was revealed for intimacy.

Psychological distress. For psychological distress, there was no main effect of communal coping, but there was a main effect of avoidance and a communal coping by avoidance interaction. As shown in Figure 2, communal coping was related to less distress for patients who scored low on avoidance, but higher distress for patients who scored high on avoidance. Similarly, there was a main effect of avoidance that was qualified by

Table 1. Regression analyses: avoidance and communal coping.

	Relationship quality	Psychological distress	Diabetes distress	Self-efficacy	Self-care	Medication adherence	HbA1c
Race	−0.45^{+} (−0.96, 0.07)	0.44* (0.10, 0.78)	−0.19 (−0.61, 0.24)	−5.90 (−14.66, 2.85)	−0.35** (−0.60, −0.10)	−0.44** (−0.70, −0.18)	1.03** (0.28, 1.78)
Avoidance	−0.22* (−0.43, −0.02)	0.27*** (0.14, 0.41)	0.24** (0.07, 0.41)	−2.31 (−5.85, 1.24)	−0.05 (−0.14, 0.03)	−0.05 (−0.16, 0.05)	0.06 (−0.32, 0.20)
Communal coping	−0.03 (−0.27, 0.21)	0.01 (−0.15, 0.17)	−0.04 (−0.24, 0.16)	2.94 (−1.10, 6.98)	0.07 (−0.04, 0.18)	−0.01 (−0.12, 0.11)	−0.13 (−0.46, 0.20)
Avoidance × Communal Coping	−0.18* (−0.35, −0.02)	0.12* (0.02, 0.23)	0.16* (0.02, 0.29)	−2.47+ (−5.21, 0.27)	−0.06 (−0.14, 0.02)	−0.08+ (−0.16, 0.01)	0.09 (−0.15, 0.33)

Note. Values represent unstandardized coefficients; numbers in parentheses represent 95% confidence intervals.
$+p \leq .10$; $*p \leq .05$; $**p \leq .01$; $***p \leq .001$.

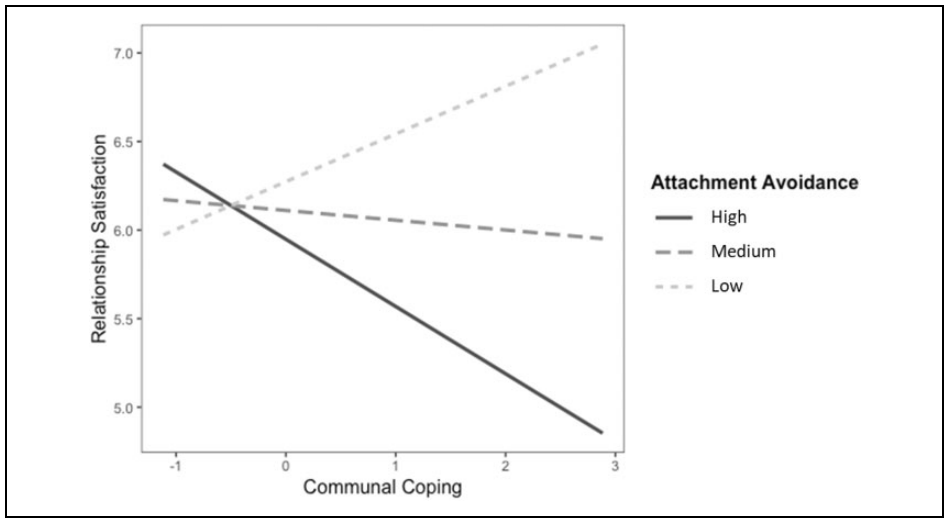

Figure 1. Patient Avoidance × Communal Coping predicting relationship satisfaction. Communal coping was centered before plotting.

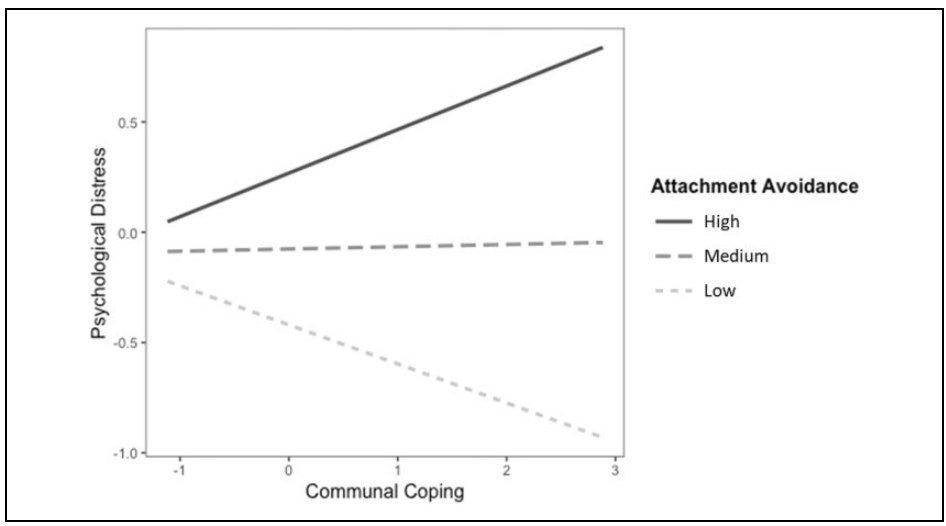

Figure 2. Patient Avoidance × Communal Coping predicting psychological distress. Communal coping was centered before plotting.

communal coping to predict diabetes distress. The pattern of this interaction was similar to that shown in Figure 2.

Diabetes outcomes. There was a marginal interaction between avoidance and communal coping for self-efficacy, showing that communal coping was related to higher levels of

self-efficacy for patients who scored low, but not high on avoidance. There were no effects of communal coping or avoidance on self-care. The Communal Coping × Avoidance interaction was marginal for medication adherence. Communal coping was related to higher levels of adherence for those who scored low on avoidance but was unrelated to adherence for those who scored average or high on avoidance. Neither communal coping, nor avoidance, nor the interaction between the two were linked to glycemic control.

Patient anxiety as a moderator of communal coping

The interaction between anxiety and communal coping did not predict any outcomes. However, there were several main effects for anxiety (see Table 2). Anxiety was a significant predictor of greater psychological distress ($\beta = .35$, $p < .001$) and greater diabetes distress ($\beta = .42$, $p < .001$) and was associated with marginally poorer self-care ($\beta = -.21$, $p = .06$). Anxiety did not predict relationship quality, self-efficacy, medication adherence, or glycemic control.

Ancillary analyses

We also examined whether the interaction between avoidance and anxiety predicted outcomes, as well as whether the Avoidance × Anxiety × Communal Coping interaction predicted outcomes. Neither interaction was significant for any outcome.[2]

Discussion

A growing literature indicates that communal coping is generally beneficial for individuals who have a chronic illness. However, some individuals may benefit more or less than others. The current investigation examined patient attachment as a potential moderator in the link from patient communal coping to its benefits. We hypothesized that highly avoidant patients would communally cope less and benefit less from communal coping than more secure patients. We also explored patient anxious attachment as a moderator in the links from communal coping to outcomes, but we had no clear directional predictions. For patient avoidance, the results were largely consistent with predictions. More avoidant patients engaged in less communal coping, and communal coping was related to its expected benefits when patients were low in avoidance. When patients were high in avoidance, communal coping was either unrelated to outcomes or associated with poorer outcomes. Patient anxious attachment was not independently related to patient communal coping, nor did it moderate links from patient communal coping to outcomes. Taken together, these findings suggest that communal coping is not equally beneficial for everyone.

Communal coping may not be beneficial for highly avoidant patients for a variety of reasons. Avoidant individuals tend to have a heightened need for self-reliance. Existing literature suggests that this self-reliance translates into poor support interactions. When distressed, highly avoidant individuals tend to suppress their negative emotions, withdraw from their partners, and reject their support attempts as a method of managing their

Table 2. Regression analyses: anxiety and communal coping.

	Relationship quality	Psychological distress	Diabetes distress	Self-efficacy	Self-care	Medication adherence	HbA1c
Race	−0.57* (−1.13, −0.01)	0.45* (0.10, 0.79)	−0.20 (−0.61, 0.21)	−6.55 (−15.34, 2.25)	−0.32* (−0.57, −.008)	−0.47*** (−0.73, −0.20)	1.04** (0.28, 1.80)
Anxiety	−0.10 (−0.29, 0.10)	0.20*** (0.08, 0.32)	0.28*** (0.13, 0.42)	−1.65 (−4.71, 1.41)	−0.08+ (−0.17, 0.01)	−0.03 (−0.12, 0.07)	−0.03 (−0.29, 0.23)
Communal coping	0.10 (−0.14, 0.33)	−0.07 (−0.21, 0.08)	−0.07 (−0.25, 0.10)	3.83* (0.13, 7.53)	0.06 (−0.04, 0.17)	0.02 (−0.10, 0.13)	−0.11 (−0.43, 0.21)

Note. Values represent unstandardized coefficients; numbers in parentheses represent 95% confidence intervals.
$+p \leq .10$; $^{*}p \leq .05$; $^{**}p \leq .01$; $^{***}p \leq .001$.

own distress (e.g., Carnelley et al., 1996; Collins & Feeney, 2000; Simpson, Rholes, & Nelligan, 1992; Simpson et al., 2007). Thus, the participatory, collaborative nature of communal coping may interfere with avoidant patients' need for self-reliance and give rise to negative relational and emotional consequences.

Because communal coping blurs the lines between patient and spouse (Helgeson, Jakubiak, Van Vleet et al., 2017), communal coping interactions may occasionally require patients to attend to and be responsive to the spouse's needs (e.g., help him/her manage negative emotions). This may provide another opportunity for communal coping to go awry for highly avoidant patients. Highly avoidant individuals tend to find other's distress aversive (Rholes, Simpson, & Oriña, 1999), which may interfere with their abilities to provide support and may spur problematic interactions. Problematic interactions may communicate to the spouse that their involvement is not welcomed or appreciated and incite conflict and distress.

Communal coping may also convey an equal distribution of power within the relationship because couple-members work together as teammates in illness management. This may not be perceived positively by highly avoidant patients. Some researchers have suggested that, when distressed, highly avoidant individuals may reduce their partner's power in the relationship as a means of regulating their own distress (Overall & Lemay, 2015). Maintaining higher power in the relationship may restore avoidant individuals' sense of security and control within the relationship, while reducing the partner's power limits the partner's ability to reject him/her. Therefore, communal coping may remind highly avoidant patients of their vulnerability within their relationship, which may come at an emotional cost.

Highly avoidant patients may only engage in communal coping when they are struggling with illness management. Avoidant individuals tend to engage in distancing strategies to manage stress and prefer to be self-reliant (Rholes et al., 1999; Simpson et al., 1992; Simpson, Rholes, Oriña, & Grich, 2002), both of which are antithetical to communal coping. Perhaps only those who have exhausted their typical methods of independent coping would venture into more interpersonal forms of coping. Given the cross-sectional and correlational nature of the present study, this alternative explanation cannot be discounted. Future research should examine specific patient–spouse coping interactions and capture both partners' construal of the interaction to elucidate why avoidant patients may not benefit from communal coping.

This work begs the question of whether communal coping should be abandoned as a coping strategy for highly avoidant patients or whether there are circumstances under which communal coping may yet be beneficial for them. Experimental work points to one potentially beneficial condition: attachment security primes. Attachment security primes (e.g., supraliminal or subliminal presentation of security-related words) have been found to improve relationship expectations and to increase empathy and compassion (for a review, see Mikulincer & Shaver, 2015). One study found that individuals who were exposed to an attachment security prime were more supportive and responsive to their partner when discussing their problems compared with controls (Mikulincer, Shaver, Sahdra, & Bar-On, 2013). Another study found repeated exposure to attachment security primes predicted improved self-perceptions and perceptions of one's relationship 2 days later (Carnelley & Rowe, 2007). Moreover, insecure individuals do not

appear resistant to security primes (e.g., Mikulincer & Shaver, 2001). Thus, security primes may be an effective method of mitigating or possibly optimizing the immediate effects of communal coping for avoidant patients in the laboratory.

Alternatively, more indirect methods of communal coping may be more palatable to avoidant patients. Some research shows that support provision that is not recognized by the recipient or is conveyed in a subtle or an indirect manner is more beneficial than overt support (Bolger, Zuckerman, & Kessler, 2000; Shrout, Herman, & Bolger, 2006). Particularly relevant to this work, Overall, Girme, and Simpson (2016) found that highly avoidant individuals benefited more from partner support when they were not aware of its occurrence. Other work has found avoidant individuals responded more positively in conflict discussions when their partners used "soft strategies" (e.g., minimized direct requests for change; Farrell, Simpson, Overall, & Shallcross, 2016). Thus, subtle, indirect ways of communal coping may improve management and well-being without undermining self-efficacy or perceived independence for avoidant patients.

Although communal coping was related to poorer relationship and psychological outcomes for avoidant individuals, there was a slightly different pattern for diabetes outcomes. For diabetes self-efficacy and medication adherence, communal coping was related to good outcomes for those low in avoidance but was unrelated to outcomes for those high in avoidance. Both findings were marginal. We draw readers' attention to these trends because of the important role that self-efficacy and adherence play in health. One potential explanation for this discrepancy across the two sets of outcomes is that communal coping more clearly interferes with avoidant individuals' relational and emotional needs than it interferes with their diabetes management. Because these findings are marginal, we do not want to overstate their importance, but instead urge future research to replicate these findings. It is also noteworthy that no significant links to glycemic control were revealed. We suspect this was due to a floor effect, as our newly diagnosed sample showed good glycemic control and little variability in the outcome. Future researchers should examine such links in patients who have had diabetes for a longer period of time.

Unlike avoidant patients, patients high in anxiety did not differ from those low in anxiety in terms of how much they benefited from communal coping. This was unsurprising, given the mixed literature on anxious individuals and support. Perhaps anxious patients benefit from communal coping because it involves more participation on the part of the spouse than more traditional forms of support.

There are several important directions for future research worth highlighting. A critical next step is to examine the influence of spouse attachment on patient communal coping and its outcomes. Unfortunately, we did not have these data available in the present study. Patients may be especially likely to benefit from spouses with secure attachments. Attachment theory postulates that the attachment behavioral system and caregiving system are interconnected and that the more pressing and vital needs of the attachment behavioral system take priority over those of the caregiving system (Bowlby, 1982 [1969]). Thus, the attachment needs of insecure spouses (whose attachment behavioral systems are chronically activated) may interfere with their ability to respond to the needs of their partners. Indeed, the support literature has found securely attached caregivers to be more sensitive and responsive to other's needs (e.g., Carnelley et al.,

1996; Feeney & Collins, 2001; Kane et al., 2007; Kunce & Shaver, 1994), while insecure support providers tend to provide less effective support (e.g., Mikulincer & Florian, 1995; Mikulincer, Florian, & Weller, 1993; Florian et al., 1995; Ognibene & Collins, 1998). Secure spouses may be more effective communal coping partners because they are not distracted by their own (unmet) attachment needs and, thus, have greater cognitive and emotional resources to devote to their partners' needs.

It is also important for future researchers to consider the interplay of both couple-member's attachment orientations on communal coping, as attachment relationships are inherently dyadic (Pietromonaco, Uchino, & Dunkel Schetter, 2013). There may be particular pairings of attachment orientations that are prone to adaptive or maladaptive ways of coping with chronic illness. To the best of our knowledge, no work has examined the influence of both partners' attachment on health outcomes within a chronic illness context. However, work involving healthy samples provides useful insights. Highly anxious partners tend to be more intrusive, compulsive caregivers (Feeney & Collins, 2001; Kunce & Shaver, 1994), which may be particularly problematic when they are paired with an avoidant patient who is likely to desire independence in managing his/her illness.

This work has several strengths worth noting. This is the first study to examine the relation between communal coping and individual differences in attachment. Research has consistently linked insecure attachment to poor health behaviors and outcomes (for a review, see Pietromonaco, DeVito, Ge, & Lembke, 2015). However, no previous work investigated the extent to which attachment and communal coping influence one another within a health context. This is also the second study to examine a potential moderator of communal coping's benefits—an important step in the eventual design of tailored communal coping interventions (Helgeson, Jakubiak, Van Vleet et al., 2017). Another strength of this work is the observational measure of communal coping, which provided a rich assessment and captured both the shared appraisal and collaboration components of communal coping. This objective measure is more likely to reflect how couples typically handle diabetes issues in their homes than self-reports. Couples included in this study were also diverse in age, ethnicity, income, and education, increasing the generalizability of our findings.

Such findings should be interpreted within the context of the study's limitations. The current work was cross-sectional; thus, causation cannot be inferred. We also recognize that we measured attachment in a follow-up to initial data collection. Although research has generally found attachment to be stable over time, some research has found attachment to change in response to relationship dissolution, chronic stress, and vulnerability factors (e.g., Davila, Burge, & Hammen, 1997; Davila & Cobb, 2003; Davila, Karney, & Bradbury, 1999; Scharfe & Bartholomew, 1994). Thus, it is possible that changes in relationships or diabetes health predicted changes in attachment. In the current study, only four couples separated during the 18-month period, and the results remained the same with and without their inclusion.[3] We do not have data on the stability of diabetes over this period of time. However, it is unlikely that patients experienced severe changes in diabetes, given that they were newly diagnosed, and it typically takes years, if not decades, for complications to arise in type 2 diabetes. It is also possible that low attachment avoidance is a precursor to communal coping, rather than a moderator of

communal coping. We cannot rule out this possibility. Future research should employ experimental and longitudinal methods to better address these issues.

Because the literature on communal coping is a relatively small, but growing body of research, investigators have largely focused on establishing links from communal coping to its proposed benefits. The current investigation is one of the first to explore possible conditions under which communal coping may not have its intended effects. Before communal coping interventions are pursued, greater attention needs to be devoted to understanding *for whom* and *under what conditions* communal coping may have positive effects. This work challenges relationship and health researchers to consider how communal coping manifests itself and is construed by people with personality characteristics that vary in the extent to which they desire social network involvement in their stressors. Only by answering these questions will we be able to develop and implement communal coping interventions that have a broad impact.

Authors' note

Five other publications involve data described in this work (Helgeson, Mascatelli, Seltman, Korytkowski, & Hausmann, 2016; Helgeson, Jakubiak, Seltman, Hausmann, & Korytkowski, 2017; Helgeson, Seltman, Korytkowski, & Hausmann, 2017; Van Vleet, Helgeson, Seltman, Korytkowski, & Hausmann, 2018a, 2018b; Zajdel, Helgeson, Seltman, Korytkowski, & Hausmann, 2018), which had different hypotheses and aims from the current work. Initial findings of this article were presented at the International Association for Relationship Research (IARR) conference at Fort Collins, 2018.

Acknowledgements

We are grateful to Pamela Snyder, Tiona Jones, Gianna Davis, Katilyn Mascatelli, and Shaquille Charles for their assistance in conducting this study and Brooke Feeney for providing feedback on an earlier draft of the manuscript. We acknowledge that we received recruiting assistance from the Pittsburgh Clinical and Translational Science Institute, which is supported by the National Institutes of Health Grant UL1TR000005.

Funding

The authors disclosed receipt of the grant for the research, authorship, and/or publication of this article: Financial support for this work was received from R01 DK095780.

ORCID iD


Meredith Van Vleet https://orcid.org/0000-0002-6296-8979

Open research statement

As part of IARR's encouragement of open research practices, the authors have provided the following information. The research was not pre-registered. The data used in the research are not available. The materials used in the research are available. The materials can be obtained by emailing: vh2e@andrew.cmu.edu.

Supplemental material

Supplemental material for this article is available online.

Notes

1. When avoidance and anxiety were removed from regression models, communal coping was associated with higher relationship quality, less distress, higher self-efficacy, and better self-care.
2. We also assessed observed spouse communal coping in this sample and examined the extent to which the interaction between spouse communal coping and patient attachment predicted outcomes. One significant interactive effect was found for Spouse Communal Coping × Patient Avoidance predicting patient relationship quality: Spouse communal coping was associated with higher relationship quality when avoidance was low but was related to poorer relationship quality when avoidance was high. All other interactions were nonsignificant.
3. Patients who dissolved their relationships reported lower baseline intimacy ($M = 4.04$, $SD = 2.05$) than those whose relationships remained intact ($M = 5.61$, $SD = 1.27$).

References

Afif, T. D, Hutchinso, S, & Krous, S. (2006). Toward a theoretical model of communal coping in postdivorce families and other naturally occurring groups. *Communication Theory*, *16*, 378–409.

American Diabetes Association. (2018). Lifestyle management: Standards of medical care in diabetes. *Diabetes Care*, *41*, S38–S50.

Badr, H., & Acitelli, L. K. (2017). Re-thinking dyadic coping in the context of chronic illness. *Current Opinion in Psychology*, *13*, 44–48.

Berg, C. A., Schindler, I., & Maharajh, S. (2008). Adolescents' and mothers' perceptions of the cognitive and relational functions of collaboration and adjustment in dealing with type 1 diabetes. *Journal of Family Psychology*, *22*, 865–874.

Berg, C. A., Schindler, I., Smith, T. W., Skinner, M., & Beveridge, R. M. (2011). Perceptions of the cognitive compensation and interpersonal enjoyment functions of collaboration among middle-aged and older married couples. *Psychology and Aging*, *26*, 167–171.

Berg, C. A., Wiebe, D. J., Butner, J., Bloor, L., Bradstreet, C., Upchurch, R., … Patton, G. (2008). Collaborative coping and daily mood in couples dealing with prostate cancer. *Psychology and Aging*, *23*, 505–519.

Bodenmann, G. (2005). Dyadic coping and its significance for marital functioning. In T. A. Revenson, K. Kayser, & G. Bodenmann (Eds.), *Couples coping with stress: Emerging perspectives on dyadic coping* (pp. 33–49). Washington, DC: American Psychological Association.

Bolger, N., Zuckerman, A., & Kessler, R. C. (2000). Invisible support and adjustment to stress. *Journal of Personality and Social Psychology*, *79*, 953–961.

Bowlby, J. (1982 [1969]). *Attachment and loss: Vol.1. Attachment*. New York, NY: Basic Books.

Bowlby, J. (1973). *Attachment and loss: Separation, anxiety and anger*. New York, NY: Basic Books.

Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46–76). New York, NY: Guilford Press.

Carnelley, K. B., Pietromonaco, P. R., & Jaffe, K. (1996). Attachment, caregiving, and relationship functioning in couples: Effects of self and partner. *Personal Relationships*, *3*, 257–278.

Carnelley, K. B., & Rowe, A. C. (2007). Repeated priming of attachment security influences immediate and later views of self and relationships. *Personal Relationships*, *14*, 307–320.

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavioral*, *24*, 385–396.

Collins, N. L., & Feeney, B. C. (2000). A safe haven: An attachment theory perspective on support-seeking and caregiving in adult romantic relationships. *Journal of Personality and Social Psychology*, *78*, 1053–1073.

Collins, N. L., & Feeney, B. C. (2004). Working models of attachment shape perceptions of social support: Evidence from experimental and observational studies. *Journal of Personality and Social Psychology*, *87*, 363–383.

Collins, N. L., Guichard, A. C., Ford, M. B., & Feeney, B. C. (2004). Working models of attchment: New developments and emerging themes. In W. S. Rholes & J. A. Simpson (Eds.), *Adult attachment: Theory, research, and clinical implications* (pp. 196–239). New York, NY: Guilford Press.

Collins, N. L., & Read, S. J. (1994). Cognitive representations of adult attachment: The structure and function of working models. In K. Bartholomew & D. Perlman (Eds.), *Advances in personal relationships, Vol. 5: Attachment processes in adulthood* (pp. 53–90). London, UK: Jessica Kingsley.

Coyne, J. C., & Smith, D. F. (1994). Couples coping with a myocardial infarction: Contextual perspective on patient self-efficacy. *Journal of Family Psychology*, *8*, 43–54.

Davila, J., Burge, D., & Hammen, C. (1997). Why does attachment style change? *Journal of Personality and Social Psychology*, *73*, 826–838.

Davila, J., & Cobb, R. J. (2003). Predicting change in self-reported and interviewer-assessed adult attachment: Tests of the individual difference and life stress models of attachment change. *Personality and Social Psychology Bulletin*, *29*, 859–870.

Davila, J., Karney, B. R., & Bradbury, T. N. (1999). Attachment change processes in the early years of marriage. *Journal of Personality and Social Psychology*, *76*, 783–802.

Diener, E., & Larsen, R. J. (1984). Temporal stability and cross-situational consistency of affective, behavioral, and cognitive responses. *Journal of Personality and Social Psychology*, *47*, 871–883.

Farrell, A. K., Simpson, J. A., Overall, N. C., & Shallcross, S. L. (2016). Buffering the responses of avoidantly attached romantic partners in strain test situations. *Journal of Family Psychology*, *30*, 580–591.

Feeney, B. C., & Collins, N. L. (2001). Predictors of caregiving in adult intimate relationships: An attachment theoretical perspective. *Journal of Personality and Social Psychology*, *80*, 972–994.

Feeney, B. C., & Thrush, R. L. (2010). Relationship influences on exploration in adulthood: The characteristics and function of a secure base. *Journal of Personality and Social Psychology*, *98*, 57–76.

Feeney, B. C., Cassidy, J., & Ramos-Marcuse, F. (2008). The generalization of attachment representations to new social situations: Predicting behavior during initial interactions with strangers. *Journal of Personality and Social Psychology*, *95*, 1481–1498.

Florian, V., Mikulincer, M., & Bucholtz, I. (1995). Effects of adult attachment style on the perception and search for social support. *The Journal of Psychology*, *129*, 665–676.

Hazan, C., & Shaver, P. R. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, *52*, 511–524.

Helgeson, V. S., Jakubiak, B., Seltman, H. J., & Hausmann, L. R. M. (2017). Implicit and explicit communal coping in couples with recently diagnosed type 2 diabetes. *Journal of Social and Personal Relationships*, *34*, 1099–1121.

Helgeson, V. S., Jakubiak, B., Van Vleet, M., & Zajdel, M. (2017). Communal coping and adjustment to chronic illness: Theory update and evidence. *Personality and Social Psychology Review*, *22*, 170–195.

Helgeson, V. S., Mascatelli, K., Seltman, H. J., Korytkowski, M. T., & Hausmann, L. R. M. (2016). Implications of supportive and unsupportive behavior for couples with newly diagnosed diabetes. *Health Psychology*, *35*, 1047–1058.

Helgeson, V. S., Seltman, H. J., Korytkowski, M. T., & Hausmann, L. R. M. (2017). Partner unmitigated communion moderates communal coping benefits in type 2 diabetes. *Journal of Health Psychology*. doi:10.1177/1359105317729561.

Hoppman, C. A., & Gerstorf, D. (2013). Spousal goals, affect quality, and collaborative problem solving: Evidence from a time-sampling study with older couples. *Research in Human Development*, *10*, 70–87.

Kane, H. S., Jaremka, L. M., Guichard, A. C., Ford, M. B., Collins, N. L., & Feeney, B. C. (2007). Feeling supported and feeling satisfied: How one partner's attachment style predicts the other partner's relationship experiences. *Journal of Social and Personal Relationships*, *24*, 535–555.

Kirkpatrick, L. A., & Hazan, C. (1994). Attachment styles and close relationships: A four-year prospective study. *Personal Relationships*, *1*, 123–142.

Kunce, L. J., & Shaver, P. R. (1994). An attachment-theoretical approach to caregiving in romantic relationships. In K. Bartholomew & D. Perlman (Eds.), *Advances in personal relationships* (Vol. 5, pp. 205–237). London, UK: Jessica Kingsley.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, NY: Springer.

Lyons, R. F., Mickelson, K. D., Sullivan, M. L., & Coyne, J. C. (1998). Coping as a communal process. *Journal of Social and Personal Relationships*, *15*, 579–605.

Martin, A. M., Paetzold, R. L., & Rholes, W. S. (2010). Adult attachment and exploration: Linking attachment style to motivation and perceptions of support in adult exploration. *Basic and Applied Social Psychology*, *32*, 196–205.

Mickelson, K. D., Lyons, R. F., Sullivan, M. L., Coyne, J. C., & Sarason, B. R. (2001). Yours, mine, ours: The relational context of communal coping. In S. Duck (Ed.), *Personal relationships: Implications for clinical and community psychology: Implications for clinical and community psychology* (pp. 181–200). New York, NY: John Wiley & Sons.

Mikulincer, M., & Florian, V. (1995). Appraisal of and coping with a real-life stressful situation: The contribution of attachment styles. *Personality and Social Psychology Bulletin*, *21*, 406–414.

Mikulincer, M., Florian, V., & Weller, A. (1993). Attachment styles, coping strategies, and posttraumatic psychological distress: The impact of the gulf war in Israel. *Journal of Personality and Social Psychology*, *64*, 817–826.

Mikulincer, M., & Shaver, P. R. (2001). Attachment theory and intergroup bias: Evidence that priming the secure base schema attenuates negative reactions to out-groups. *Journal of Personality and Social Psychology*, *81*, 97–115.

Mikulincer, M., & Shaver, P. R. (2003). The attachment behavioral system in adulthood: Activation, psychodynamics, and interpersonal processes. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 35, pp. 56–152). San Diego, CA: Elsevier Academic Press.

Mikulincer, M., & Shaver, P. R. (2005). The attachment behavioral system in adulthood: Activation, psychodynamics, and interpersonal processes. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 35, pp. 53–152). San Diego, CA: Academic Press.

Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood: Structure, dynamics, and change*. New York, NY: Guilford Press.

Mikulincer, M., & Shaver, P. R. (2015). Boosting attachment security in adulthood: The "broaden-and-build" effects of security-enhancing mental representations and interpersonal contexts. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and research: New directions and emerging themes* (pp. 124–144). New York, NY: The Guilford Press.

Mikulincer, M., Shaver, P. R., Sahdra, B. K., & Bar-On, N. (2013). Can security-enhancing interventions overcome psychological barriers to responsiveness in couple relationships? *Attachment and Human Development*, *15*, 246–260.

Morisky, D. E., Green, L. W., & Levine, D. M. (1986). Concurrent and predictive validity of a self-reported measure of medication adherence. *Medical Care*, *24*, 67–74.

Norton, R. (1983). Measuring marital quality: A critical look at the dependent variable. *Journal of Marriage and the Family*, *45*, 141–151.

Ognibene, T. C., & Collins, N. L. (1998). Adult attachment styles, perceived social support, and coping strategies. *Journal of Social and Personal Relationship*, *15*, 323–345.

Overall, N. C., Girme, Y. U., & Simpson, J. A. (2016). The power of diagnostic situations: How support and conflict can foster growth and security. In C. R. Knee & H. T. Reis (Eds.), *Positive approaches to optimal development* (pp. 148–170). Cambridge, UK: Cambridge University Press.

Overall, N. C., & Lemay, E. P. (2015). Attachment and dyadic regulation processes. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and research: New directions and emerging themes* (pp. 145–169). New York, NY: The Guilford Press.

Pietromonaco, P. R., DeVito, C. C., Ge, F., & Lembke, J. (2015). Health and attachment processes. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and research: New directions and emerging themes* (pp. 287–318). New York, NY: The Guilford Press.

Pietromonaco, P. R., Uchino, B., & Dunkel Schetter, C. (2013). Close relationship processes and health: Implications of attachment theory for health and disease. *Health Psychology*, *32*, 499–513.

Polonsky, W. H., Fisher, L., Earles, J., Dudl, R. J., Lees, J., Mullan, J., & Jackson, R. A. (2005). Assessing psychosocial distress in diabetes. *Diabetes Care*, *28*, 626–631.

Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, *1*, 385–401.

Rholes, W. S., Simpson, J. A., & Oriña, M. M. (1999). Attachment and anger in an anxiety-provoking situation. *Journal of Personality and Social Psychology*, *76*, 940–957.

Schaefer, M. T., & Olson, D. H. (1981). Assessing intimacy: The PAIR Inventory*. *Journal of Marital and Family Therapy*, *7*, 47–60.

Scharfe, E., & Bartholomew, K. (1994). Reliability and stability of adult attachment patterns. *Personal Relationships*, *1*, 23–43.

Shrout, P. E., Herman, C. M., & Bolger, N. (2006). The costs and benefits of practical and emotional support on adjustment: A daily diary study of couples experiencing acute stress. *Personal Relationships*, *13*, 115–134.

Simon, P. (1966). *I am a rock [Recorded by P. Simon and A. Garfunkel]. On Sounds of silence* [Vinyl]. New York, NY: Columbia.

Simpson, J. A., Rholes, W. S., & Nelligan, J. S. (1992). Support seeking and support giving within couples in an anxiety-provoking situation: The role of attachment styles. *Journal of Personality and Social Psychology*, *62*, 434–446.

Simpson, J. A., Rholes, W. S., Oriña, M. M., & Grich, J. (2002). Working models of attachment, support giving, and support seeking in a stressful situation. *Personality and Social Psychology Bulletin*, *28*, 598–608.

Simpson, J. A., Winterheld, H. A., Rholes, W. S., & Oriña, M. M. (2007). Working models of attachment and reactions to different forms of caregiving from romantic partners. *Journal of Personality and Social Psychology*, *93*, 466–477.

Talbot, F., Nouwen, A., Gingras, J., Gosselin, M., & Audet, J. (1997). The assessment of diabetes-related cognitive and social factors: The multidimensional diabetes questionnaire. *Journal of Behavioral Medicine*, *20*, 291–312.

Toobert, D. J., & Glasgow, R. E. (1994). Assessing diabetes self-management: The summary of diabetes self-care activities questionnaire. In C. Bradley (Ed.), *Handbook of psychology and diabetes: A guide to psychological measurement in diabetes research and practice* (pp. 351–375). Langhorne, PA: Harwood Academic Publishers/Gordon.

Van Vleet, M., Helgeson, V. S., Seltman, H. J., Korytkowski, M. T., & Hausmann, L. R. M. (2018a). Communally coping with diabetes: An observational investigation using the actor-partner interdependence model. *Journal of Family Psychology*, *32*, 654–663.

Van Vleet, M., Helgeson, V. S., Seltman, H. J., Korytkowski, M. T., & Hausmann, L. R. M. (2018b). An examination of the communal coping process in recently diagnosed diabetes. *Journal of Social and Personal Relationships*. Advance online publication. doi:10.1177/0265407518761226.

Zajdel, M., Helgeson, V. S., Seltman, H. J., Korytkowski, M. T., & Hausmann, L. R. M. (2018). Daily communal coping in couples with type 2 diabetes: Links to mood and self-care. *Annals of Behavioral Medicine*, *52*, 228–238.