Full Research Report

JSPR

Journal of Social and Personal Relationships
2021, Vol. 0(0) 1–20

DOI: 10.1177/02654075211052633
journals.sagepub.com/home/spr
SAGE

Communal Coping Manifested in Daily Life: A Focus on Gender

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Abstract

Communal coping consists of a shared appraisal of a stressor and collaborative efforts to manage it. There has been a wealth of literature linking communal coping to relationship and health outcomes, but there is little research on the context in which communal coping occurs or how communal coping is manifested in daily life. The first and second study goals were to examine the implications of gender for the components of communal coping (shared appraisal, collaboration) and for potential manifestations of communal coping in daily life (e.g., shared meals). Our third study goal was to examine whether shared appraisal and collaboration in the context of diabetes generalized to another domain—household chore distribution—and whether these relations were moderated by gender. As an exploratory goal, we examined intersections of gender with race. Participants were 203 couples in which one person had been recently diagnosed with type 2 diabetes. Shared appraisal and collaboration were assessed with multiple methods. Results showed greater shared appraisal and collaboration when patients were male than when they were female. This finding extended to some, but not all, of the daily life behaviors. Actor–partner interdependence models showed that the relations of actor and partner shared appraisal to household labor depended on both role (patient, spouse) and gender; relations of actor and partner collaboration depended only on role. Findings were not moderated by race. These results highlight the need to consider gender in the context of communal coping.

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Keywords
Communal coping, dyadic coping, collaboration, gender, race, relationships and health, diabetes

Over the last decade, research on interpersonal coping has burgeoned, as researchers have realized the substantial impact of a person's social network on how they cope with stress (Gallant, 2003). A number of prominent interpersonal coping theories have been developed, including the systemic-transactional model of coping (Bodenmann, 1997), the developmental contextual model of coping (Berg & Upchurch, 2007), and communal coping (Helgeson et al., 2018; Lyons et al., 1998). Here we focus on communal coping because it is the only theory that consists of both a shared appraisal of a stressor (i.e., "our problem" instead of "my problem" or "your problem") and collaborative action to manage the stressor (Afifi et al., 2020; Helgeson et al., 2018; Lyons et al., 1998). Empirical work has established strong links of communal coping to relationship and health outcomes, but this research has rarely considered gender—a context that might impact individuals' propensity to communal cope (Helgeson et al., 2018; Rentscher, 2019). Researchers also have not clarified how communal coping is enacted in daily life or whether communal coping with a stressor translates into communal coping more generally.

Thus, the current study had three goals. The first goal was to examine gender as a contextual predictor of communal coping in the context of romantic couples in which one person had been recently diagnosed with type 2 diabetes. The second goal was to examine gender as a contextual predictor of potential manifestations of communal coping in daily life that are relevant to disease management, such as eating and exercising together as well as talking about diabetes. The final goal was to examine whether communal coping with diabetes extended to another shared activity that could be impacted by diabetes—specifically, household labor—and whether gender moderated those relations. In recognition of the importance of intersectionality, we examined race as a predictor variable and examined whether all gender effects were moderated by race as an exploratory goal.

Communal Coping

Communal coping has been linked to positive outcomes in the context of community stressors, such as coping in a Palestinian refugee camp (Afifi et al., 2019) and with natural disasters (Wlodarczyk et al., 2016) as well as among couples in which one person faces a chronic illness, such as prostate cancer (Berg et al., 2008) or diabetes (Zajdel et al., 2018). In the context of a collective stressor that directly affects multiple individuals, it makes sense that a shared view of the stressor and collaboration would be beneficial. However, in the context of only one person in a dyad objectively facing a stressor, such as chronic illness, it is less obvious that viewing the stressor as shared and collaborating with the partner (i.e., communal coping) would be beneficial. Thus, we examine communal coping in this unique context.

Communal coping has been examined in terms of its two components—shared appraisal and collaboration—as well as in terms of measures that combine the two. A great deal of research has examined the collaboration component of communal coping and found links to good relationship and health outcomes. For example, daily collaboration between patients and spouses was linked to more positive emotions and greater marital satisfaction among men with prostate cancer and their wives (Berg et al., 2008). Common dyadic coping, which largely focuses on collaboration, has been linked to higher relationship satisfaction (Falconier et al., 2015) and better diet and exercise adherence among persons with type 2 diabetes (Johnson et al., 2013). The shared appraisal aspect of communal coping has received somewhat less attention and is the component of communal coping that distinguishes it from other interpersonal coping theories. Although there has been less research on shared appraisal, some studies have connected shared appraisal via self-report (Helgeson et al., 2019) or inferred shared appraisal from "we-language" to good relationship and health outcomes (Karan et al., 2019). Communal coping as an overall construct also has been linked to better mood and self-care behavior on a daily basis (Zajdel et al., 2018) and reduced distress and greater progress in solving diabetes problems (Van Vleet et al., 2018).

More recently, however, researchers have recognized that the shared appraisal and collaboration components of communal coping, although related, can be empirically distinguished. A previous report on the current sample took advantage of the study's multi-method approach to communal coping and empirically distinguished shared appraisal from collaboration, while also showing that each was independently related to good relationship and health outcomes (Zajdel & Helgeson, 2020).

Gender as a Contextual Predictor of Communal Coping

One contextual factor that likely influences communal coping is gender. Women are more likely to have an interdependent self-construal (Cross & Madson, 1997) and are more focused on relationships (Acitelli & Badr, 2005) than men. Compared to men, women also have been shown to engage in more positive dyadic coping, which includes supportive behavior and collaboration with a partner (Falconier et al., 2015). Thus, communal coping might be particularly important to women. However, the extent to which women engage in communal coping might be dependent on whether the problem belongs to themselves or to a network member. Because women are more likely than men to be caretakers (Revenson et al., 2016), women may be more likely to engage in communal coping when their romantic partner has the problem, but less likely to engage in communal coping when the problem belongs to the self, due to concerns about burdening others. Thus, the first study goal was to examine the implications of gender for communal coping. We hypothesized that women would engage in more communal coping than men when the problem belongs to their partner but less communal coping than men when the problem belongs to the self.

Because gender is not independent of other social categories, we adopt an intersectional approach to this work and examine gender in conjunction with race (Crenshaw, 1989; Cole, 2009). Sample diversity, which includes race, ethnicity, gender identity, and

socioeconomic factors, is not only a neglected issue in relationship research but has been shown to alter the conclusions that can be drawn from theoretical frameworks, such as the demand-withdraw pattern (Karney, 2021). Race has been neglected from research on communal coping and interpersonal coping more generally, despite the fact that race affects the links of social support to health (Lincoln et al., 2017). We took advantage of the fact that we have a sample composed of nearly half White and half Black individuals and explored gender, race, and gender by race effects on our outcomes. Because we did not have specific predictions, we viewed the extent to which gender effects are moderated by race as exploratory.

Gender as a Contextual Predictor of Communal Coping Manifested in Daily Life

Communal coping and its components of appraisal and collaboration have been measured in a variety of ways, with most measures reflecting an individual's general perceptions of coping. However, none of these measures explicitly address how communal coping is enacted concretely in daily life. In the context of a chronic illness such as diabetes, couples who engage in communal coping are expected to manage diabetes together. Because diet and exercise are critical diabetes management behaviors (Venditti, 2016), communal coping in daily life might manifest itself as shared meals and shared exercise. Past research has linked shared meals to positive outcomes such as reduced diabetes distress (Franks et al., 2012) and spousal support has been linked to greater patient exercise (Khan et al., 2013). Communal coping also should lead to collaboration on diabetes problems that arise during the day. For the same reasons that gender may be linked to communal coping (described above), gender should also be linked to these daily manifestations of communal coping. Thus, a second study goal is to examine whether gender is linked to how communal coping is enacted in daily life—hypothesizing more shared meals, more shared exercise, and greater diabetes problem-solving when the patient is male than female.

Another manifestation of communal coping in daily life is diabetes communication. Several researchers have argued (Afifi et al., 2020; Bodenmann, 1997) that communal coping is constructed through communication—people communicate with one another verbally or nonverbally about the stressor, the circumstances surrounding it, and the meaning it holds. Communal coping should not only be linked to the quantity of communication but also to the quality of that communication. To the extent that couples are discussing the disease in more depth—what it is and how to treat it—partners should have a better understanding of disease symptoms and implications for health. In other words, a higher quality communication about diabetes has the potential to lead to more knowledgeable partners. Neither the quantity nor the quality of communication has been empirically examined in the context of communal coping.

Gender might play a role in determining the quantity and quality of the communication, as research has shown that both men and women self-disclose to women more than men (see Dindia & Allen, 1992, for a review) and that women are more involved than men in their spouse's illness (Umberson & Kroeger, 2016). Tests of the systemic-transactional model have shown that women engage in more daily communication than men (Pagani

et al., 2019). Thus, as part of our second study goal, we hypothesized more frequent diabetes-related communication and a higher quality communication (measured indirectly by partner diabetes knowledge) when the patient is male than female.

Communal Coping Connected to Shared Household Labor

Communal coping, like other interpersonal coping theories, has typically been applied to how an individual copes with a specific stressor—often chronic illness. While some interpersonal theories have addressed how couples cope with daily stressful events (e.g., systemic-transactional model of dyadic coping; Bodenmann, 1997), studies have rarely examined how couples navigate daily tasks that specifically impact daily management of chronic disease. Thus, we wondered whether communal coping with a chronic illness generalizes to how couples cope or interact more broadly—especially in areas that may be affected by health. There are gender-linked daily activities that may be involved in coping with a health problem (e.g., meal preparation, grocery shopping) and gender-linked household chores that may be more difficult to execute in the context of chronic illness (e.g., laundry, house cleaning). The question is whether communal coping in general is linked to a communal approach to household chores, as shared household chores might be particularly beneficial in the context of chronic disease management.

While household chores tend to shift from patient to spouse following the onset of chronic illness, this shift is influenced by patient gender (Helgeson, 1993). Research has shown that female caregivers help their spouses with household chores more than male caregivers (Revenson et al., 2016). Because women traditionally start out with more household chores than men, shifting labor away from a female patient can lead to a more equal division of labor, while shifting labor away from a male patient exacerbates the labor imbalance (Revenson et al., 2005). Among healthy couples, the gendered division of labor is reduced in Black compared to White families, as Black men participate more than White men in household chores (Dillaway & Broman, 2001). However, the effect of chronic illness on this effect is unknown.

Thus, the final study goal was to examine how communal coping was related to the division of household labor and whether those relations were the same for women and men with diabetes. Because household labor is gendered (i.e., females do more than males; Pew Research Center, 2015), we hypothesized that communal coping with diabetes would be linked to a more shared division of household labor and that this would be especially the case when the patient was female rather than male. That is, for female patients, household labor would move from being a largely female chore to a shared chore, whereas for male patients, household labor would move to female spouses doing even more. We did not make specific predictions regarding whether race would moderate the relation of communal coping to household labor, but we explored these associations.

Introduction to the Present Study

We examined these three questions in the context of a study that adopted a multi-method approach to the study of communal coping among romantic couples in which one person

had been recently diagnosed with type 2 diabetes (Zajdel & Helgeson, 2020). The study aimed to have half female and half male patients, and half White and half Black patients because diabetes disproportionally affects Black persons (Chow et al., 2012).

Our first study goal was to examine gender differences in the shared appraisal and collaboration components of communal coping. Our second study goal was to examine gender difference in potential manifestations of communal coping enacted in daily life: shared meals, shared exercise, collaborative diabetes problem-solving, communication, and knowledge. The final study goal was to examine the relation of communal coping with diabetes to the division of household labor and test whether those relations were moderated by gender. For all study goals, we conducted exploratory analyses to determine whether these relations were moderated by race. These analyses were exploratory in part because we had no predictions and in part because we did not have the power to detect a three-way between-subjects interaction (i.e., gender by race by communal coping). However, the study was powered to detect two-way between-subjects interactions (i.e., communal coping by gender; .94 power to detect $d = .25$ and .80 power to detect $d = .20$ effect size).

Method

Participants

Participants were 207 persons who had been recently diagnosed with type 2 diabetes and were married (72%) or currently living with (28%) a romantic partner in the United States. (We refer to romantic partners as spouses, so that we can use the word 'partner' to refer to either patients or spouses.) Because our study goals centered around the gender roles of male-female relationships, we excluded the four same-sex couples from the analyses.

Of the 203 couples, 55% patients identified as male and 45% of patients identified as female, although we did not specifically collect information on whether participants were cisgender or transgender. In addition, 53% were White and 47% were Black. Age ranged from 25 to 82 ($M = 53$, $Md = 53$, $SD = 11.12$). Average time since diagnosis was less than 2 years. Over half of the sample (56%) had incomes that ranged between $30,000 and $80,000; 13% had incomes < $20,000. Complete demographics are shown in Supplemental Table 1.

Recruitment

Patients were recruited from the greater Pittsburgh community (i.e., health fairs, mass media advertising, brochures in physician offices). Interested persons contacted the research team by phone and were screened for eligibility. Patients had to have been diagnosed with type 2 diabetes within the past 5 years[1], not have another illness that affected daily life more than diabetes (e.g., cancer), have a partner who did not have diabetes, and be married or cohabiting with their partner in a marital-type relationship.

Of the 658 people who contacted us, 419 were ineligible, 22 refused after screening, 4 refused before eligibility could be determined, and 3 were determined to be ineligible after

signing the consent form but before completing the protocol (1 couple was not romantically involved; in 2 couples, both persons had diabetes). Of the 210 couples who completed the study, three were dropped from analyses (1 couple was intoxicated, 1 couple was not romantically involved, 1 participant had type 1 instead of type 2 diabetes).

Procedure

The study received Institutional Review Board approval from Carnegie Mellon University and the University of Pittsburgh. The procedure consisted of an in-person structured interview in couples' homes (71.5%) or at the university laboratory (28.5%) and a 14-day daily diary protocol. Prior to study start, informed consent was obtained from patients and spouses. Each couple member was interviewed separately (all patients and 96% of spouses were interviewed by a female) in a private room. Instruments were administered aloud to reduce participant burden (given the wide range of education, some participants were likely to have had difficulty reading the questions), allow participants the opportunity to ask questions, and make the interview more enjoyable. During this interview, patients and spouses completed measures of communal coping, daily behaviors (eating shared meals, diabetes discussion), diabetes knowledge, and household labor. The interview included a brief audiotaped portion in which participants were asked to describe how they were coping with diabetes. Responses were transcribed and coded for "we-talk," as described below. Next, patients and spouses had a private 8-minute discussion about resolving diabetes difficulties that was videotaped. Patient and spouse communal coping behavior was coded by independent raters. At the end of the session, participants were presented with an iPad to complete a brief questionnaire assessing communal coping and several behaviors (exercise, diabetes problem-solving) at the end of the day for 14 consecutive days. Participants were paid for each portion of the study.

Communal Coping Measures

We employed seven distinct measures of communal coping for patients and spouses separately. These measures have been described in detail in a previous report that adopted a latent-variable approach to distinguish the two components of communal coping—shared appraisal and collaboration (Zajdel & Helgeson, 2020), but we briefly describe each measure here: (1) 3-item survey measure of shared appraisal from the in-person interview that focused on the extent to which participants perceived diabetes to be a shared problem or only the patient's problem, (2) 1-item survey measure of collaboration from the in-person interview in which participants indicated the extent to which they worked together to manage diabetes, (3) observed behavioral measure of communal coping based on trained observers' ratings of patient and spouse separately during the dyadic diabetes problem discussion, (4) "we-talk," or use of first person plural pronouns, from transcriptions of the brief audiotaped coping interview, (5) adapted version of the Inclusion of Other in Self Scale (Aron et al., 1992; Helgeson & Van Vleet, 2019) in which participants chose the set of overlapping circles that best represented how they and their partner were managing diabetes (from in-person interview), (6) aggregate measure of 14

daily diary surveys of shared appraisal, in which participants are asked about the extent to which they viewed diabetes as the patient's problem alone or a shared problem each day, and (7) aggregate measure of 14 daily diary surveys of collaboration, in which participants are asked about the extent to which they worked together to manage diabetes that day.

To reduce the number of communal coping variables, we created two composite scores—one that reflected appraisal and one that reflected collaboration—based on the previous latent-variable confirmatory factor analysis that distinguished measures that reflected appraisal from measures that reflected collaboration (Zajdel & Helgeson, 2020). Based on those results, we standardized the four variables that loaded on the latent shared appraisal construct (self-report appraisal, aggregate daily diary self-report appraisal, we-talk, observed behavior) to create a composite appraisal variable, and standardized the three variables that loaded on the latent collaboration construct (self-report collaboration, aggregate daily diary self-report collaboration, diabetes-specific IOS) to create a composite collaboration variable. We used these composite indices of appraisal and collaboration throughout the analyses.

Potential Manifestations of Communal Coping in Daily Life

Shared Meals (Survey). Patients and spouses were asked separately: "When you eat together, do you generally eat the same foods or do you have two different meals—one for you and one for your spouse?" Responses ranged from (1) Always the same foods, (2) Mostly the same foods, (3) Mostly two different meals, and (4) Always two different meals. We reverse scored this item so that higher numbers reflected daily communal coping behavior.

Daily Shared Exercise (Daily Diary). At the end of the day for 14 consecutive days, patients and spouses indicated how much of the time they exercised together on a 4-point scale: (1) none, (2) a little, (3) some, and (4) most. We averaged across the 14 days to create an aggregate score.

Daily Diabetes Problem-Solving (Daily Diary). At the end of the day for 14 consecutive days, patients were asked what was most bothersome about dealing with diabetes. If they identified an event, they were asked how they handled the event: (1) by myself, (2) mostly by myself with partner assistance, (3) partner and I worked together, (4) partner handled it for me, or (5) nobody handled it. We calculated the proportion of the days that patients reported they collaborated (i.e., partner and I worked together) on this problem. Because 48 patients never said that they had a diabetes problem, these persons were not included in this specific analysis.[2] Spouses were asked the same set of questions.

Diabetes Discussion (Survey). Patients and spouses were asked how often they talked about diabetes in the past month on a 6-point scale, ranging from (1) never to (6) multiple times a day.

Diabetes Knowledge (Survey). Diabetes knowledge was measured with a 10-item knowledge questionnaire (Rothman et al., 2005) developed for vulnerable populations, which characterizes many of our participants. Items included: "What are the signs and symptoms of low blood sugar?" and "How do you treat low blood sugar?" Open-ended responses to each question were scored for correctness by two research assistants. Inter-rater reliability ranged from kappa = .79 to .99 for patients and .83 to .99 for spouses. Discrepancies were resolved by a third person who arbitrated a discussion between the two raters. We computed a knowledge discrepancy score (spouse knowledge minus patient knowledge) to evaluate the level of spouse knowledge relative to patient knowledge. Higher scores indicate spouses have more knowledge relative to patients' knowledge.

Connections of Communal Coping to Daily Life Behaviors. Because we argue that these measures are manifestations of communal coping in daily life, we examined whether shared appraisal and collaboration were linked to these behaviors using actor–partner interdependence models (APIM) because both couple members responded to the same measures. We examined the effects of role (patient vs. spouse) and interactions of role with appraisal/collaboration, but none of these interactions were significant. As shown in Supplementary Table 2, actor effects for appraisal and for collaboration each were related to more shared meals, shared exercise, diabetes problem-solving, and diabetes discussions. Partner effects for appraisal and collaboration were linked to greater shared exercise and diabetes discussion. Because spouse relative knowledge was computed from both patient and spouse scores, we turned to regression analysis. Neither patient nor spouse appraisal predicted spouse relative knowledge, but patient collaboration predicted greater spouse relative knowledge ($\beta = .90$, $SE = .28$, $p < .001$). These results support the idea that these measures reflect daily manifestations of communal coping.

Division of Household Labor

Household chores consisted of a 5-item survey adapted from Cowan et al.'s (1978) *Who Does What* measure: preparing meals, cleaning up after meals/washing dishes, house cleaning, buying groceries, and laundry. Patients and spouses indicated who does each item on a 5-point scale ranging from (1) always partner to (5) always me—with 3 indicating both equally. The internal consistency was .77 for patients and .78 for spouses. Higher numbers reflect greater self-contribution to the division of labor.

Overview of the Analyses

We first examined whether there were demographic or illness variables linked to gender or race that should be statistically controlled. To the extent covariates were identified, they were statistically controlled in all analyses.

For our first aim, which was to examine whether there were gender (and race) differences in communal coping, we conducted gender by race repeated measures (patient vs. spouse) analyses of covariance on shared appraisal and collaboration. For our second

aim, which was to examine whether there are gender (and race) differences on potential manifestations of communal coping enacted in daily life, we used APIM for distinguishable dyads with role being the distinguishing factor because patients and spouses both responded to the same dependent measures. Whereas traditional APIM provides estimates of four effects (actor effect on actor DV, partner effect on partner DV, actor effect on partner DV, partner effect on actor DV), these models estimate only two effects because the actor gender effect on actor DV is the same as the partner gender effect on the actor DV (and the partner gender effect on the partner DV is the same as the actor gender effect on the partner DV). Because all couples are heterosexual, partner gender is the inverse of actor gender. Importantly, we examine whether actor gender effects are moderated by role (patient vs. spouse). Actor gender by role interactions signify that the actor gender effect differs for patients and spouses. These models contain significant covariates, two between-subjects effects (actor gender, actor race), one within-subjects effect (role), and the two-way and three-way interactions involving gender, race, and role. For all effects reported below, we provided standardized betas and standard errors.

For our third aim, which was to examine the link between appraisal/collaboration and the division of household labor, we used APIM for distinguishable dyads. We examined actor and partner effects of appraisal on household labor in one analysis and actor and partner effects of collaboration in a second analysis. These analyses necessarily examined the effect of role and interactions of appraisal/collaboration with role. To explore whether the links of appraisal and collaboration to the division of household labor is the same for women and men as well as White and Black persons, we examined interactions of appraisal/collaboration not only with the within-subjects factor of role but also with the between-subjects factors of gender, race, and gender by race—although we view the three-way between-subjects interaction (gender by race by appraisal/collaboration) exploratory. In no instance did the three between-subjects factors (communal coping by gender by race) interact with the within-subjects factor of role. Thus, this four-way interaction term was dropped from the final model in all analyses. Below, we present main effects models when interactions were not significant. Again, we provided standardized betas and standard errors.

Results

Covariate Selection

Among the demographic variables shown in Supplemental Table 1, there was a gender difference only on income, such that lower incomes were reported in families with female than those with male patients. There were many demographic variables related to race. Black patients were younger, had lower incomes, had diabetes for a longer period of time, and were more likely to be on insulin than White patients. Black patients were less likely to be married to their partner, less likely to have children, and to be in relationships of shorter duration. Because there was redundancy among these variables, we entered all seven into a logistic regression to predict patient race. Only relationship length and income remained significant (p's $< .05$). There were trends for length of diabetes and

marital status (p's < .10). To be conservative, we statistically controlled for marital status, relationship length, income, and length of diabetes in all analyses.

Effects of Gender and Race on Shared Appraisal and Collaboration

The repeated measures analysis of covariance on shared appraisal revealed a main effect of gender, $F(1, 195) = 4.21$, $p < .05$; partial eta^2 = .02. There was greater shared appraisal when patients were male ($M = .07$, $SD = .06$) than female ($M = -.10$, $SD = .06$). Because there was no interaction with role, patients and spouses generally agreed with this assessment. There were no interactions with race.

The repeated measures analysis of covariance on collaboration revealed a main effect of gender, F (1, 195) = 12.48, $p < .001$; partial eta^2 = .06, that was qualified by an interaction with role, $F(1, 195) = 4.87$, $p < .05$; partial eta^2 = .02. The gender difference was larger for patient than spouse report. Male patients reported more collaboration ($M = .20$, $SD = .07$) than female patients ($M = -.26$, $SD = .08$), and female spouses ($M = .10$, $SD = .07$) reported more collaboration than male spouses ($M = -.12$, $SD = .08$). There were no interactions involving race.

Effects of Gender and Race on Manifestations of Communal Coping in Daily Life

Shared Meals. There was a marginally significant effect for gender ($\beta = -.07$, $SE = .04$, $p = .06$), in the direction of more frequently eating the same foods when participants were male than female. There were no effects of race or role.

Daily Shared Exercise. There were no effects of gender, race, or role on exercising together.

Daily Diabetes Problem-Solving. There were main effects for gender ($\beta = -.11$, $SE = .06$, $p < .05$) and role ($\beta = .33$, $SE = .06$, $p < .001$). Problems were more likely to be handled together when persons were male ($M = .15$, $SE = .10$) than female ($M = -.07$, $SE = .09$), and according to spouses ($M = .37$, $SE = .11$) more than patients ($M = -.28$, $SE = .08$).

Diabetes Discussion. There was a gender by role interaction on frequency of diabetes discussion ($\beta = .21$, $SE = .06$, $p < .001$), such that the gender difference was larger among spouses. Male patients reported more frequent discussion ($M = .15$, $SE = .10$) than female patients ($M = -.18$, $SE = .11$); female spouses reported more frequent discussion ($M = .26$, $SE = .10$) than male spouses ($M = -.23$, $SE = .11$). There were no effects of race.

Diabetes Knowledge. There was a main effect of gender on spouse relative knowledge, $F(1, 194) = 54.57$, $p < .001$, partial eta^2 = .22. Female spouses had more relative knowledge ($M = +.35$, $SE = .23$) than male spouses ($M = -2.19$, $SE = .26$). There were no effects of race.

Links of Communal Coping to Division of Household Labor

Prior to hypothesis testing, we examined whether there were gender and race effects on household labor using APIM. There was a gender main effect ($\beta = .56$, $SE = .05$, $p < .001$), a race main effect ($\beta = .05$, $SE = .02$, $p < .05$), and a gender by race interaction ($\beta = -.12$, $SE = .05$, $p = .01$). The sex difference in household chores (female greater than male) was smaller among Blacks (female $M = .49$, $SE = .08$; male $M = -.39$, $SE = .08$) than Whites (female $M = .66$, $SE = .08$; male $M = -.73$, $SE = .08$). These findings held for patients and spouses.

When actor and partner appraisal were examined as predictors of household labor, there was a main effect of role ($\beta = .23$, $SE = .07$, $p = .001$), an interaction of role with actor appraisal ($\beta = .10$, SE .04, $p < .05$), and an interaction of role with partner appraisal ($\beta = .11$, $SE = .04$, $p < .05$). The first interaction indicated that actor shared appraisal was related to less household labor for patients ($\beta = -.10$, $SE = .07$, $CI = -.25$ to .05) but more household labor for spouses ($\beta = .09$, $SE = .08$, $CI = -.06$ to .25), but neither slope was significantly different from zero. Similarly, partner shared appraisal was related to less household labor for patients ($\beta = -.15$, $SE = .08$, $CI = -.30$ to .01) but more household labor for spouses ($\beta = .06$, $SE = .08$, $CI = -.09$ to .21), but neither slope was significantly different from zero.

When actor and partner collaboration were examined as predictors of household labor, there was a main effect of role ($\beta = .23$, $SE = .06$, $p < .001$), a main effect of actor collaboration that was qualified by an interaction with role ($\beta = .18$, $SE = .04$, $p < .001$), and a main effect of partner collaboration that was qualified by an interaction with role ($\beta = .11$, $SE = .04$, $p = .10$). Actor collaboration was significantly related to lower household labor for patients ($\beta = -.36$, $SE = .07$, $CI = -.51$ to $-.21$) but not spouses ($\beta = -.01$, $SE = .08$, $CI = -.16$ to .15). Similarly, partner collaboration was significantly related to more household labor for spouses ($\beta = .24$, $SE = .08$, $CI = .00$–$.39$) but not patients ($\beta = .03$, $SE = .08$, $CI = -.12$ to .18).

To determine whether the relations of appraisal and collaboration to household labor were affected by gender and race, we added interactions of gender and race with actor and partner appraisal/collaboration. For appraisal, there was a gender by role by actor appraisal interaction ($\beta = .11$, $SE = .05$, $p < .05$) and a gender by role by partner appraisal interaction ($\beta = -.12$, $SE = .05$, $p < .05$), which are displayed in Supplementary Figures 1 and 2. Actor shared appraisal was related to reduced household labor for female patients ($\beta = -.23$, $SE = .09$, $CI = -.40$ to $-.06$) but not for male patients or any spouses. Partner shared appraisal was related to reduced household labor for male patients ($\beta = -.20$, $SE = .08$, $CI = -.36$ to $-.04$) but was unrelated to household labor for female patients or any spouses. There were no interactions of appraisal with race. For collaboration, there were no interactions with gender or race.

Discussion

In American society, women have traditionally been socialized to be communal, are more likely than men to have an interdependent self-construal, and are more likely than men to

have caregiving roles (Cross & Madson, 1997). Given these norms, we hypothesized that women would be more likely than men to engage in communal coping when they were caregivers of patients with type 2 diabetes but more likely than men to benefit from communal coping when they were patients with type 2 diabetes. In this study, we had three gender-related goals: (1) to examine gender differences in communal coping, (2) to investigate gender differences in communal coping manifested in daily life behaviors relevant to diabetes management, and (3) to explore gender differences in the link between communal coping and the division of household labor. We also took an intersectional approach to these goals, exploring interactions of gender with race. Our results showed gender to be an important factor in all three areas.

First, we found strong evidence that there was more communal coping among couples when patients were male than female. These relations did not intersect with race. Thus, women who face chronic disease, such as diabetes, may be more reluctant than men to engage in communal coping, possibly due to concerns about burdening their spouse or concerns with violating the caregiving norm for women (Revenson et al., 2016). There also may be less communal coping when patients are female because male spouses are more reluctant to become involved in the illness. Research has shown that male spouses are less likely than female spouses to provide assistance to patients with chronic disease (Revenson et al., 2005) and are more likely to withdraw in the face of marital distress (Baucom et al., 2010). Thus, it is unclear if the lack of communal coping on the part of female patients in heterosexual relationships is due to their desire not to involve their spouses or due to a reluctance by male spouses to become involved.

Turning to our second study goal, we predicted that communal coping would be manifested in daily life more so when the patient was male than female. We found moderate support for this hypothesis. There was significantly greater daily diabetes problem-solving and a trend for greater shared meals when patients were male compared to female. There were no gender differences in shared exercise, but it is worth noting that couples' shared exercise scores were very low (patients' mean = 1.51, spouses' mean = 1.51), with average scores between "none" and "a little." Participants may not engage in much exercise alone let alone with each other.

We hypothesized greater frequency of communication (i.e., diabetes discussions) and a higher quality communication (i.e., diabetes knowledge) when patients were male and spouses were female. Results were consistent with these hypotheses. Both patients and spouses reported more frequent diabetes discussions when the patient was male than female. In addition, female spouses knew more about diabetes compared to male spouses, suggesting a higher quality communication when spouses were female than male. We speculated that communication about diabetes might be one way that spouses learn about diabetes. In support of this idea, both patient and spouse reports of diabetes discussions were positively related to spouse knowledge *(*$r = .21$, $p < .01$; $r = .25$, $p < .001$, respectively) but not patient knowledge. Thus, diabetes discussions may be one source of spouse knowledge.

For our final study goal, we predicted that communal coping would be linked to a more shared division of household labor—especially for female patients. Both shared appraisal and collaboration were linked to a reduction in household labor for patients and an

increase in household labor for spouses, as predicted. In terms of gender, shared appraisal was most strongly linked to a greater shared division of labor for female patients compared to male patients. Thus, although female patients engage in communal coping less than male patients, in a sense, female patients benefit more than male patients from communal coping.

Taken collectively, this study provides a robust assessment of how patients and spouses are thinking and acting in regard to diabetes management from a communal coping perspective. This study extends the communal coping literature specifically—and interpersonal coping literatures more broadly—by focusing on how communal coping manifests itself in daily life and identifying how communal coping is contextualized by gender. While some research has demonstrated that female patients engage in less interpersonal coping than male patients (Acitelli & Badr, 2005), this is the first study to examine the links of gender to the specific components of communal coping—shared appraisal and collaboration—and to the way that communal coping is manifested in daily life. We not only found that communal coping was more common when patients were male than female but also that diabetes is discussed more often in households in which patients are male compared to female and that female spouses are more knowledgeable about diabetes compared to male spouses. Future studies would benefit from understanding the role of communication in the communal coping process—particularly as it relates to gender and race.

A major study strength was the sample diversity. It is increasingly recognized that there are intersectional influences across categories and that researchers should consider more than one sociodemographic category (Bauer, 2014). Although we did not find many effects for race, the intersectional nature of race and gender is particularly important in diseases such as type 2 diabetes that disproportionately affect Black individuals (Chow et al., 2012). Future research should expand upon these findings by examining other intersectional influences and increasing the sample size to provide the power to extract more complex interactions. It is also the case that communal coping may operate differently in various cultural settings. Patients in more interdependent cultural contexts may engage in more communal coping because they are situated in a context where interpersonal coping is more normative; conversely, they may engage in less communal coping due to greater concerns about burdening others. Although we explored comparisons between Black and White individuals with diabetes, predictions are unclear because empirical research shows that African Americans are equally as collectivistic as European Americans, but European Americans are more individualistic in some respects than African Americans (Vargas & Kemmelmeier, 2013). Additionally, we explored these hypotheses in a sample of heterosexual couples; however, like the division of household labor, caregiving roles may be adopted in more equitable patterns in LGBTQIA+ couples (Kelly & Hauck, 2015). There are likely to be other contextual variables that have implications for these findings, such as relationship length or relationship closeness. Relationship length has moderated the link of other interpersonal coping variables to relationship quality (Iafrate et al., 2012), and relationship quality may be an antecedent to communal coping (Helgeson et al., 2018).

It is important to note that this study examined dyads as they were adapting to the illness and navigating new patterns of behaviors—a time in which communal coping processes are likely being adopted. In this sample, participants had been recently diagnosed with type 2 diabetes and reported no other illness that limits daily life more than diabetes. The majority of partners (71%) reported no other health problems; in fact, the average number of health problems was less than one (mean = .62). We did not collect information on participant disabilities. Navigating health as a couple may become an increasingly dyadic concern with age and the accrual of multiple health problems, making communal coping an even more important resource.

Future research would benefit from examining the congruence in perspectives of communal coping—not only in terms of agreement or disagreement but also in terms of the match between each person's own communal coping and their perception of their partner's communal coping. Other research has shown that people project perceptions of their own behavior onto their partners, which in turn has implications for relationships (Lemay & Clark, 2008). In fact, perceptions of partner behavior have been shown to play an explanatory role in linking one's own behavior to relationship satisfaction (Donato et al., 2015). While communal coping is an interpersonal process that impacts multiple social network members, it is important to consider how individual factors—such as gender and race—may influence perceptions and behaviors associated with illness management.

To summarize, we found evidence of more communal coping in couples when the patient was male than female, as predicted. However, there was some evidence that female patients benefitted more from communal coping than male patients in terms of the connection to shared household labor. Given the numerous links of communal coping to well-being (Helgeson et al., 2018), it is important to note the differential implications of communal coping for male and female patients. There are a number of clinical implications that stem from these findings. First, clinicians may want to target male spouses in regard to diabetes education, as male spouses had lower levels of diabetes knowledge compared to female spouses. Second, dyadic and communal coping interventions should take gender into consideration. Although intervention research based on communal coping theory is in its nascent stages (e.g., Rohrbaugh, 2020), there is a robust literature linking dyadic interventions to improved chronic disease management (Martire et al., 2010). However, gender has not played a prominent role in this research. Gender may not only influence the likelihood of communal coping but also how communal coping is translated into everyday life activities—some of which are directly and others of which are indirectly impacted by the disease.

Acknowledgments

We acknowledge the support of NIH R01 R01 DK09578. We are grateful to the research assistants who interviewed the participants for this study, especially Gianna Davis, Tiona Jones, and Jennifer Melnyk.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This study was supported by grants from the National Institutes of Health (No. R01 DK095780).

Open research statement

As part of IARR's encouragement of open research practices, the author(s) have provided the following information: This research was not pre-registered.
The data used in the research can be publicly posted and are available upon request. The data can be obtained by emailing vh2e@andrew.cmu.edu.
The materials used in the research can be publicly posted and are available upon request. The materials can be obtained at the following OSF link https://osf.io/bz8f6/ or by emailing vh2e@andrew.cmu.edu

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Supplementary material

Supplementary material for this article is available online.

Notes

1. Although being diagnosed less than 5 years ago was an eligibility requirement, participants were self-referred to the study, and diagnosis date was verified by physicians after study procedures had been completed. We later learned that 11 participants had been diagnosed between 5-8 years ago. Because their inclusion did not alter the findings, we retained the full sample in the study.
2. We compared participants who did and did not identify a bothersome event on any of the 14 days on communal coping and the demographic variables shown in Supplementary Table 1. There were no group differences on patient or spouse communal coping (appraisal or collaboration), age, education, marriage length, years since diagnosis, work status, or use of insulin. However, there was a difference on income, such that those who did not report any problems had lower incomes ($M = 4.16$, $SD = 2.63$) than those who reported a problem on at least one day ($M = 5.35$, $SD = 2.93$), $F(1, 201) = 6.96$, $p < .01$ (eta^2 = .03). There was also a gender difference, such that a greater proportion of males did not report any problems (33%) than females (19%), $X^2(1) = 5.30$, $p < .05$ (Cramer's V = .16), and a race difference, such that a greater proportion of Black persons (38%) than White persons (17%) reported no problems, $X^2(1) = 11.08$, $p < .001$ (Cramer's V = .23). Given that men, low income, and Black persons were the people least likely to identify a problem, future research should explore whether these differences reflect a willingness to report a problem or the existence of problems.

References

Acitelli, L. K., & Badr, H. J. (2005). My illness or our illness? Attending to the relationship when one partner is ill. In T. A. Revenson, K. Kayser, & G. Bodenmann (Eds.), *Couples coping with stress: Emerging perspectives on dyadic coping* (pp. 121–136). American Psychological Association. https://doi.org/10.1037/11031-006

Afifi, T. D., Afifi, W. A., Acevedo Callejas, M., Shahnazi, A., White, A., & Nimah, N. (2019). The functionality of communal coping in chronic uncertainty dnvironments: The context of Palestinian refugees in Lebanon. *Journal of Health Communication*, *34*(13), 1585–1596. https://doi.org/10.1080/10410236.2018.1514682

Afifi, T. D., Basinger, E. D., & Kam, J. A. (2020). The extended theoretical model of communal coping: Understanding the properties and functionality of communal coping. *Journal of Communication*, *70*(3), 424–446. https://doi.org/10.1093/joc/jqaa006

Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of Other in the Self Scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology*, *63*(4), 596–612. https://doi.org/10.1037/0022-3514.63.4.596

Baucom, B. R., McFarland, P. T., & Christensen, A. (2010). Gender, topic, and time in observed demand-withdraw interaction in cross- and same-sex couples. *Journal of Family Psychology*, *24*(3), 233–242. https://doi.org/10.1037/a0019717

Bauer, G. R. (2014). Incorporating intersectionality theory into population health research methodology: Challenges and the potential to advance health equity. *Social Science & Medicine*, *110*, 10–17. https://doi.org/10.1016/j.socscimed.2014.03.022

Berg, C. A., & Upchurch, R. (2007). A developmental-contextual model of couples coping with chronic illness across the adult life span. *Psychological Bulletin*, *133*(6), 920–954. https://doi.org/10.1037/0033-2909.133.6.920

Berg, C. A., Wiebe, D. J., Butner, J., Bloor, L., Bradstreet, C., Upchurch, R., Hayes, J., Stephenson, R., Nail, L., & Patton, G. (2008). Collaborative coping and daily mood in couples dealing with prostate cancer. *Psychology and Aging*, *23*(3), 505–516. https://doi.org/10.1037/a0012687

Bodenmann, G. (1997). Dyadic coping-a systematic-transactional view of stress and coping among couples: Theory and empirical findings. *European Review of Applied Psychology*, *47*, 137–140.

Chow, E. A., Foster, H., Gonzalez, V., & McIver, L. S. (2012). The disparate impact of diabetes on racial/ethnic minority populations. *Clinical Diabetes*, *30*(3), 130–133. https://doi.org/10.2337/diaclin.30.3.130

Cole, E. R. (2009). Intersectionality and research in psychology. *American Psychologist*, *64*(3), 170–180. https://doi.org/10.1037/a0014564

Cowan, C., Cowan, P., Coie, L., & Coie, J. D. (1978). Becoming a family: The impact of a first child's birth on the couple's relationship. In W. B. Miller, & L. F. Newman (Eds.), *The first child and family formation* (pp. 296–324). NC Carolina Population Center.

Cross, S. E., & Madson, L. (1997). Models of the self: Self-construals and gender. *Psychological Bulletin*, *122*(1), 5–37. https://doi.org/10.1037/0033-2909.122.1.5

Dillaway, H., & Broman, C. (2001). Race class and gender differences in marital satisfaction and divisions of household labor among dual-earner couples. *Journal of Social Issues*, *22*(3), 309–327.

Dindia, K., & Allen, M. (1992). Sex differences in self-disclosure: A meta-analysis. *Psychological Bulletin*, *112*(1), 106–124. https://doi.org/10.1037/0033-2909.112.1.106

Donato, S., Parise, M., Iafrate, R., Bertoni, A., Finkenauer, C., & Bodenmann, G. (2015). Dyadic coping responses and partners' perceptions for couple satisfaction: An actor-partner interdependence analysis. *Journal of Social and Personal Relationships*, *32*(5), 580–600. https://doi.org/10.1177/0265407514541071

Falconier, M., Jackson, J. B., Hilpert, P., & Bodenmann, G. (2015). Dyadic coping and relationship satisfaction: A meta-analysis. *Clinical Psychology Review*, *42*, 28–46. https://doi.org/10.1016/j.cpr.2015.07.002

Franks, M. M., Sahin, Z. S., Seidel, A. J., Shields, C. G., Oates, S. K., & Boushey, C. J. (2012). Table for two: Diabetes distress and diet-related interactions of married patients with diabetes and their spouses. *Families, Systems and Health*, *30*(2), 154–165. https://doi.org/10.1037/a0028614

Gallant, M. P. (2003). The influence of social support on chronic illness self-management: A review and directions for research. *Health Education and Behavior*, *30*(2), 170–195. https://doi.org/10.1177/1090198102251030

Helgeson, V. S. (1993). The onset of chronic Iilness: Its effect on the patient-spouse relationship. *Journal of Social and Clinical Psychology*, *12*(4), 406–428. https://doi.org/10.1521/jscp.1993.12.4.406

Helgeson, V. S., Berg, C. A., Kelly, C. S., Van Vleet, M., Zajdel, M., Tracy, E. L., & Litchman, M. L. (2019). Patient and partner illness appraisals and health among adults with type 1 diabetes. *Journal of Behavioral Medicine*, *42*(3), 480–492. https://doi.org/10.1007/s10865-018-0001-1

Helgeson, V. S., Jakubiak, B., Van Vleet, M., & Zajdel, M. (2018). Communal coping and adjustment to chronic illness: Theory update and evidence. *Personality and Social Psychology Review*, *22*(2), 170–195. https://doi.org/10.1177/1088868317735767

Helgeson, V. S., & Van Vleet, M. (2019). Short report: Inclusion of other in the self scale: An adaptation and exploration in a diverse community sample. *Journal of Social and Personal Relationships*, *36*(11–12), 4048–4056. https://doi.org/10.1177/0265407519848491

Iafrate, R., Bertoni, A., Donato, S., & Finkenauer, C. (2012). Perceived similarity and understanding in dyadic coping among young and mature couples. *Personal Relationships*, *19*(3), 401–419. https://doi.org/10.1111/j.1475-6811.2011.01369.x

Johnson, M. D., Anderson, J. R., Walker, A., Wilcox, A., Lewis, V. L., & Robbins, D. C. (2013). Common dyadic coping is indirectly related to dietary and exercise adherence via patient and partner diabetes efficacy. *Journal of Family Psychology*, *27*(5), 722–730. https://doi.org/10.1037/a0034006

Karan, A., Rosenthal, R., & Robbins, M. L. (2019). Meta-analytic evidence that we-talk predicts relationship and personal functioning in romantic couples. *Journal of Social and Personal Relationships*, *36*(9), 2624–2651. https://doi.org/10.1177/0265407518795336

Karney, B. R. (2021). Socioeconomic status and intimate relationships. *Annual Review of Psychology*, *72*(2), 391–414.

Khan, C. M., Stephens, M. A. P., Franks, M. M., Rook, K. S., & Salem, J. K. (2013). Influences of spousal support and control on diabetes management through physical activity. *Health Psychology*, *32*(7), 739–747. https://doi.org/10.1037/a0028609

Lemay, E. P., & Clark, M. S. (2008). How the Head Liberates the Heart: Projection of Communal Responsiveness Guides Relationship Promotion. *Journal of Personality and Social Psychology*, *94*(4), 647–671. https://doi.org/10.1037/0022-3514.94.4.647

Lincoln, K. D., Lloyd, D. A., & Nguyen, A. W. (2017). Social Relationships and Salivary Telomere Length Among Middle-Aged and Older African American and White Adults. *Journals of Gerontology: Social Sciences*, *74*(6), 105301061. https://doi.org/10.1093/geronb/gbx049

Lyons, R. F., Mickelson, K. D., Sullivan, M. J. L., & Coyne, J. C. (1998). Coping as a communal process. *Journal of Social and Personal Relationships*, *15*(5), 579–605.

Martire, L. M., Schulz, R., Helgeson, V. S., Small, B. J., & Saghafi, E. M. (2010). Review and meta-analysis of couple-oriented interventions for chronic illness. *Annals of Behavioral Medicine*, *40*(3), 325–342. https://doi.org/10.1007/s12160-010-9216-2

Pagani, A. F., Donato, S., Parise, M., Bertoni, A., Iafrate, R., & Schoebi, D. (2019). Explicit stress communication facilitates perceived responsiveness in dyadic coping. *Frontiers in Psychology*, *10*, 1–9. https://doi.org/10.3389/fpsyg.2019.00401

Pew Research Center. (2015). *Teen relationships survey.* Pew Research Center Website.

Rentscher, K. E. (2019). Communal coping in couples with health problems. *Frontiers in Psychology*, *10*, 398. https://doi.org/10.3389/fpsyg.2019.00398

Revenson, Tracey A., Abraído-Lanza, A. F., Majerovitz, S. D., & Jordan, C. (2005). Couples coping with chronic illness: What's gender got to do with it? In T.A. Revenson, K. Kayser, & G. Bodenmann (Eds.), *Couples coping with stress: Emerging perspectives on dyadic coping.* (Issue February 2015, pp. 137–156). American Psychological Association. https://doi.org/10.1037/11031-007

Revenson, T.A., Griva, K., Luszczynska, A., Morrison, V., Panagopoulou, E., Vilchinsky, N., & Hagedoorn, M. (2016). Gender and caregiving: The costs of caregiving for women. In *Caregiving in the illness context* (pp. 48–63). Palgrave Pivot.

Rohrbaugh, M. J. (2020). Constructing we-ness: A communal coping intervention for couples facing chronic illness. *Family Process*, *60*(1), 1–15. https://doi.org/10.1111/famp.12595

Rothman, R. L., Malone, R., Bryant, B., Wolfe, C., Padgett, P., DeWalt, D. A., Weinberger, M., & Pignone, M. (2005). The spoken knowledge in low literacy in diabetes scale: A diabetes knowledge scale for vulnerable patients. *Diabetes Educator*, *31*(2), 215–224. https://doi.org/10.1177/0145721705275002

Umberson, D., & Kroeger, R. A. (2016). Gender, marriage, and health for same-sex and different-sex couples: The future keeps arriving. In S. M. McHale, V. King, J. Van Hook, & A. Booth (Eds.), *Gender and couple relationships (National symposium on family issues)*, vol 6. (pp. 189–213). Springer International Publishing.

Van Vleet, M., Helgeson, V. S., Seltman, H. J., Korytkowski, M. T., & Hausmann, L. R. M. (2018). Communally coping with diabetes: An observational investigation using the actor-partner interdependence model. *Journal of Family Psychology*, *32*(5), 654–663. https://doi.org/10.1037/fam0000414

Vargas, J. H., & Kemmelmeier, M. (2013). Ethnicity and contemporary American culture: A meta-analytic investigation of horizontal-vertical individualism-collectivism. *Journal of Cross-Cultural Psychology*, *44*(2), 195–222. https://doi.org/10.1177/0022022112443733

Venditti, E. M. (2016). Behavior change to prevent or delay type 2 diabetes: Psychology in action. *American Psychologist*, *71*(7), 602–613. https://doi.org/10.1037/a0040433

Wlodarczyk, A., Basabe, N., Páez, D., Reyes, C., Villagrán, L., Madariaga, C., Palacio, J., & Martínez, F. (2016). Communal coping and posttraumatic growth in a context of natural disasters in Spain, Chile, and Colombia. *Cross-Cultural Research*, *50*(4), 325–355. https://doi.org/10.1177/1069397116663857

Zajdel, M., & Helgeson, V. S. (2020). Communal coping: A multi-method approach with links to relationships and health. *Journal of Social and Personal Relationships*, *37*(5), 1700–1721. https://doi.org/10.1177/0265407520903811

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*(3), 228–238. https://doi.org/10.1093/abm/kax047