

# Measuring Communal Coping in Type 2 Diabetes Using A Multi-Method Approach

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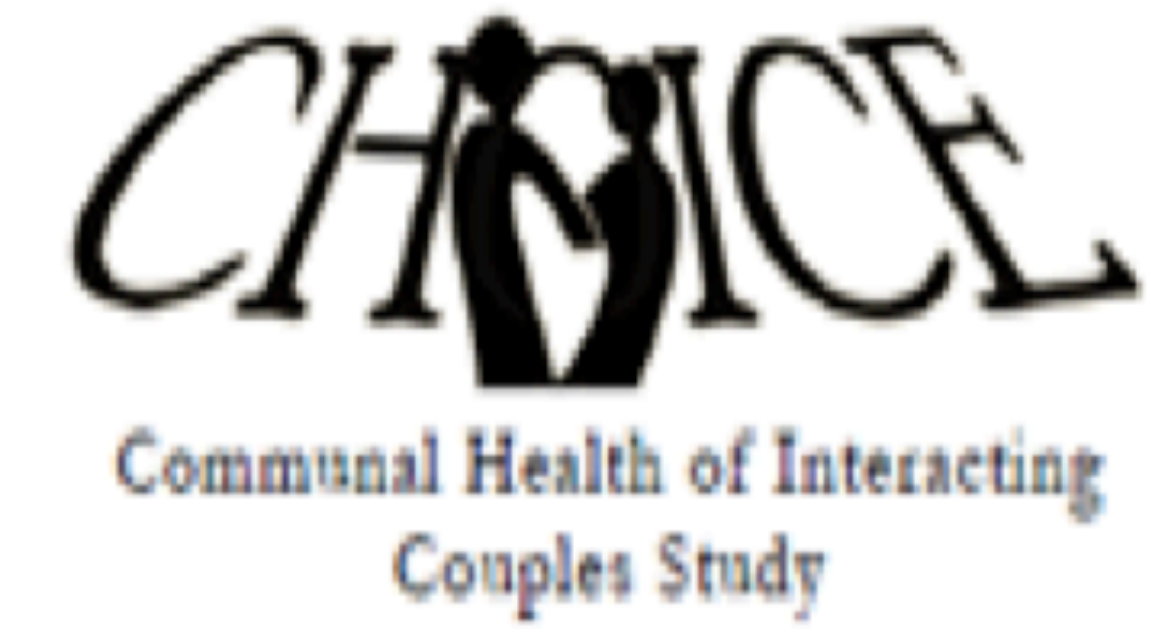
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## Abstract

Following a diagnosis of Type 2 diabetes individuals must make changes in self-care activities to maintain optimal functional status. This adjustment is inherently an interpersonal process. Within romantic relationships, couples may define diabetes as a joint (vs. individual) problem and collaborate to address the problem, a notion referred to as communal coping. However, there is no consensus regarding the best approach to measure this construct. We used a multi-method approach to assess communal coping in 125 couples in which one partner was recently diagnosed with type 2 diabetes (<3 years). Patients were 59% white, 55% male, with a mean age of 54 years. Communal coping was measured by: 1) self-report questions, 2) daily diary tracked over 10 days, 3) an index of “we” pronoun use during an audiotaped coping interview, 4) coding of patient and partner behavior from a videotaped discussion of a diabetes problem, and 5) the pictorial Inclusion of Other in Self (IOS) scale adapted for diabetes. Each measure was assessed in patients and partners. The five measures of communal coping were correlated with one another. Patient self-report, video code, and daily diary reports were correlated with those of partners, but patient and partner IOS or pronoun measures were not. We sought to determine which measure was most predictive of relationship, support, and health outcomes. All measures revealed some links to relationship outcomes, social support, and diabetes adherence, but video behavioral coding revealed the most consistent relations. Behavioral codes of communal coping were associated with higher relationship quality, greater receipt of emotional and instrumental support, less problematic support, and higher patient adherence (all  $p$ 's < .05). Importantly, patient and partner behavioral codes of communal coping were the only measures associated with patient psychological well-being (e.g., lower depression, all  $p$ 's < .05). Results suggest that behavioral codes of communal coping may have the strongest health implications.

## Specific Aims

- Goal 1: Use a multi-method approach to assess communal coping
- Goal 2: Determine how these communal coping measures relate to social support, relationship outcomes, diabetes self-care outcomes.

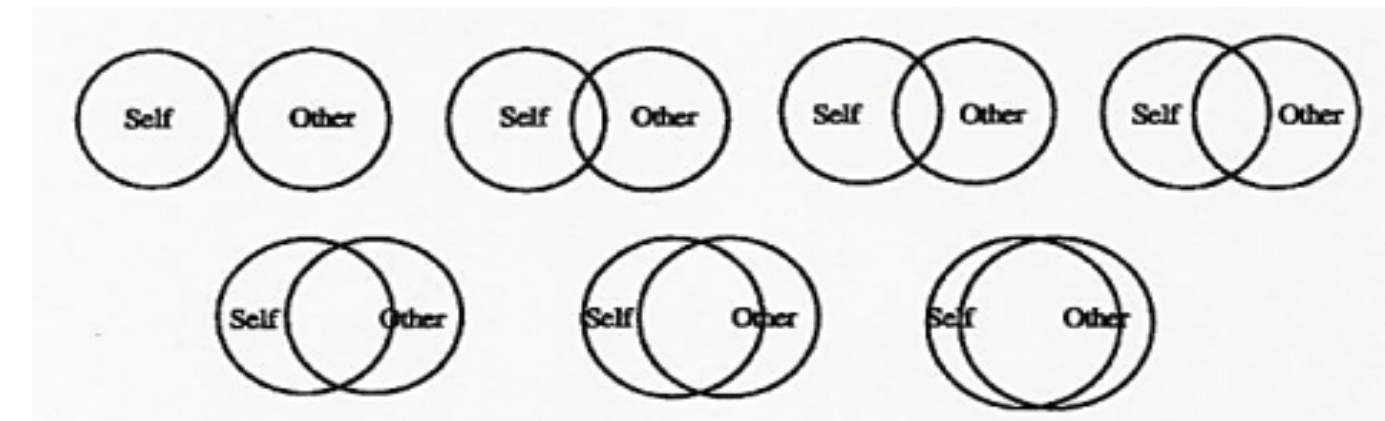
## Methods

- Participants**
- 125 couples in which one partner was recently diagnosed with Type 2 diabetes (less than 3 years from diagnosis)
- Patients:
  - 59% white
  - 55% male
  - $M = 54$  years (range 32-82)
  - Education = 65% at least some college
- Participants undergo two in-person interviews and a 10 day ecological momentary assessment protocol.
- Recruitment: churches, newspaper ads, mass transit ads, health fairs, etc.

## Method

### Communal Coping Measures

- Communal coping is measured in five ways in both patient and partner:
  - Self-report questionnaire
    - i.e. When a problem related to your diabetes arises, how much do you and your spouse work together to solve it?
  - Daily diary over 10 days
    - i.e. Diabetes problem: How did you handle this? (I handled it by myself, I mostly handled it myself and my spouse helped, **My spouse and I worked together**, My spouse handled it for me, Nobody handled it)
  - Index of “we” pronoun use during audiotaped coping interview
    - LIWC software codes first person plural pronouns “we,” often an indicator of joint perspective.
  - Videotaped behavioral coding
    - Extent to which current situation seems to be a joint problem, from both the patient and partner’s point of view.
  - Pictorial Inclusion of Other in Self (IOS) scale adapted for diabetes



- Relationship outcomes, social support variables, and health outcomes assessed as dependent variables.

## Results

Table 1: Correlations among patient, partner, and communal coping measures

	Self-Report	IOS	Video	Pronoun	Daily Diary
Self-report	.32***	.55***	.28**	.23**	.58***
IOS	.33***	.13	.22*	.23*	.37***
Video	.34***	.16+	.51***	.24**	.29**
Pronoun	.17+	.11	.31***	.13	.06
Daily Diary	.48***	.31***	.28**	.27**	.49***

- The blue diagonal represents the correlation between patient and partner measures. We can see that self-report, video, and daily diary measures were correlated, but IOS and pronoun measures were not.
- The orange numbers represent the correlation among patient communal coping measures. We can see that almost all communal coping measures correlated to some extent with the other measures.
- The green figures represent the correlations among partner communal coping measures. Again we can see that almost all measures were correlated with each other.

Table 2: Patient Communal Coping and Patient Adherence

	Self-Care	Self-Efficacy	Medication Adherence
Self-Report	.26***	.31***	.11
IOS	.09	.18	.15
Video	.29***	.32***	.17+
Pronoun	.04	.16+	-.04
Daily Diary	.24**	.30***	.11

- Table 2 shows that self-report, video, and daily diary measures of communal coping were all related to some self-care behaviors, but the video codes were the most consistently related to self-care.

Table 3: Partner Communal Coping and Patient Adherence

	Self-Care	Self-Efficacy	Medication Adherence
Self-Report	.15	.14	-.05
IOS	.22*	.22*	.14
Video	.25**	.27**	.25**
Pronoun	.20*	.15+	.09
Daily Diary	.06	.05	.01

- Partner video communal coping was the only measure of communal coping that was linked to patient self-care, self-efficacy, and medication adherence.

Table 4: Patient Communal Coping and Patient Distress

	Depression	Life Satisfaction	Perceived Stress
Self-Report	-.08	.14	-.23*
IOS	-.16+	.08	-.11
Video	-.28**	.19*	-.37***
Pronoun	-.03	.01	-.10
Daily Diary	-.08	.08	-.10

Table 5: Partner Communal Coping and Patient Distress

	Depression	Life Satisfaction	Perceived Stress
Self-Report	.01	-.01	-.01
IOS	-.14	.09	-.13
Video	-.29***	.25**	-.22*
Pronoun	-.19*	.12	-.13
Daily Diary	.20*	-.21*	.12

- Table 4 and Table 5 illustrate that patient and partner video coding were the only measures of communal coping that were linked to all three patient psychological well-being.
- Table 5: Note that the daily diary was related to lower life satisfaction.

Table 6: Patient Communal Coping and Patient Relationship Outcomes

	Quality of Marriage	Emotional Intimacy	Emotional Support	Instrumental Support
Self-Report	.29***	.35***	.47***	.52***
IOS	.24**	.24**	.43***	.45***
Video	.14	.23**	.25**	.23**
Pronoun	.11	.09	.20*	.15+
Daily Diary	.38***	.33***	.37***	.38***

- All but pronoun use were related to patient relationship outcomes and support.

Table 7: Partner Communal Coping and Patient Relationship Outcomes

	Quality of Marriage	Emotional Intimacy	Emotional Support	Instrumental Support
Self-Report	.14	.13	.20*	.23**
IOS	.25**	.14	.12	.19*
Video	.29***	.28***	.23**	.24**
Pronoun	.14	.09	.15+	.18*
Daily Diary	.17+	.09	.25**	.34***

- Partner video codes were related to emotional and instrumental support, as well as patient quality of marriage and emotional intimacy.

## Discussion

- Each type of communal coping measure revealed some links to relationship outcomes, social support, and diabetes adherence, but video behavioral coding revealed the most consistent relations.
- Importantly, patient and partner behavioral video codes of communal coping were the only measures associated with patient psychological well-being (e.g., lower depression, lower perceived stress, and higher life satisfaction) all  $p$ 's < .05.
- Behavioral codes might be a more pure measure of whether the couple is communally coping and adjusting to diabetes. Highest correlation between patient and partner were observed in the video codes, which suggests more symmetry in communal coping in this measure.
- Overall, these results suggest that video behavioral codes may be the optimal way to measure communal coping.

## Acknowledgments

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## Note

+ signifies  $p < .10$  \* signifies  $p < .05$ , \*\* signifies  $p < .01$ , \*\*\*signifies less than .001 in all tables.