### **Journal of Family Psychology**

# "It Takes Two to Take": Caregiving Style, Relational Entitlement, and Medication Adherence

Sivan George-Levi, Noa Vilchinsky, Rami Tolmacz, Abid Khaskiaa, Morris Mosseri, and Hanoch Hod

Online First Publication, August 11, 2016. http://dx.doi.org/10.1037/fam0000203

#### **CITATION**

George-Levi, S., Vilchinsky, N., Tolmacz, R., Khaskiaa, A., Mosseri, M., & Hod, H. (2016, August 11). "It Takes Two to Take": Caregiving Style, Relational Entitlement, and Medication Adherence. *Journal of Family Psychology*. Advance online publication. http://dx.doi.org/10.1037/fam0000203

## "It Takes Two to Take": Caregiving Style, Relational Entitlement, and Medication Adherence

Sivan George-Levi and Noa Vilchinsky Bar Ilan University, Ramat Gan, Israel Rami Tolmacz Interdisciplinary Center (IDC), Herzliya, Israel

Abid Khaskiaa and Morris Mosseri Meir Medical Center, Kefar Saba, Israel

Hanoch Hod Sheba Medical Center, Ramat-Gan, Israel

Partners' support has been associated with both patients' increased and decreased inclination toward health-promoting behaviors. Our hypothesis for understanding this enigma is that it is the interplay between partners' manner of care provision and patients' ability to accept these care efforts that may best predict patients' adherence. Thus, the current study's main goal was to examine the contribution of the interaction between caregivers' support style (sensitive and compulsive) and cardiac patients' sense of relational entitlement (restricted, excessive, assertive, entitlement expectations) to patients' medication adherence. The Adult Caregiving Questionnaire, the Sense of Relational Entitlement Scale, and the Medication Adherence Report Scale were administered to 114 cardiac patients and their partners, during patients' hospitalizations and 6 months later. The lowest levels of medication adherence were detected among patients high on restricted entitlement who were married to partners high on compulsive caregiving style. These findings strengthen our claim that it is the interaction between recipients' personality and providers' support style which explain self-regulatory processes that arise during times of family medical crises.

Keywords: acute coronary syndrome, caregiving styles, couples, medication adherence, sense of relational entitlement

Support provided by partners has been associated with patients' positive psychological and physical adjustment to various acute and chronic conditions, including recovery from heart disease (Kiecolt-Glaser & Newton, 2001). Yet growing evidence also suggests that support transactions are not simple or straightforward processes, as partners' support is not always beneficial to the recipients and at times might even worsen recipients' adjustment (Bolger, Zuckerman, & Kessler, 2000; Martire & Schulz, 2001).

A few explanations have been offered for these surprising findings, including the possibility that partners' support diminishes recipients' self-esteem by conveying a sense of dependency on the provider (Bolger et al., 2000), or that actions of support may instill

Sivan George-Levi and Noa Vilchinsky, Department of Psychology, Bar Ilan University, Ramat-Gan, Israel; Rami Tolmacz, The Baruch Ivcher School of Psychology, Interdisciplinary Center (IDC), Herzliya, Israel; Abid Khaskiaa and Morris Mosseri, Department of Cardiology, Meir Medical Center, Kefar Saba, Israel; Hanoch Hod, Department of Cardiology, Sheba Medical Center, Ramat-Gan, Israel.

This study is partially based on the first author's dissertation study carried out at Bar-Ilan University, Ramat-Gan, Israel.This study was supported by the Israel Foundation Trustees (IFT), The Schnitzer Foundation for research on the Israeli economy and society, and the Israel Heart Fund.

Correspondence concerning this article should be addressed to Sivan George-Levi, Department of Psychology, Bar Ilan University, Ramat-Gan 52900, Israel. E-mail: sivan.george@gmail.com

in the recipients a feeling that they are beholden to the providers (Gleason, Iida, Bolger, & Shrout, 2003). Others suggest that some ways of providing support might be miscarried (Coyne, Wortman & Lehman, 1988). Recently, studies have emphasized recipients' personality traits as relevant contributors to patients' ability to receive partners' care (DeLongis & Holtzman, 2005; Pietromonaco, Uchino, & Dunkel Schetter, 2013; Vilchinsky et al., 2010).

Current ecological perspectives assert that human behavior, and more specifically human *health* behavior, must be viewed as a complex process which is affected concurrently by social and personal resources (Bronfenbrenner, 2004; Brown, Stokols, Sallis, Hiatt, & Orleans, 2013; Lounsbury & Mitchell, 2009; Sallis, Owen, & Fisher, 2008). A novel explanation emerging from this perspective suggests that it is not enough to focus separately on either provider *or* recipient characteristics when aiming to reveal the circumstances under which support is beneficial to the recipient. Rather, it is the *interaction* between the specific manner in which support is provided by the caregiver and the ability of the recipient to accept the offered support (i.e., to make use of the instrumental and emotional support offered by the partner) which might explain the consequences of the support provision. Both must therefore be investigated (Vilchinsky et al., 2010).

Recent studies have indeed demonstrated that the provided support moderates the associations between recipients' personal ability to accept this support and recipients' psychological, physical and behavioral adjustment (e.g., Cutrona, Shaffer, Wesner, & Gardner, 2007; Martire, Stephens, Druley, & Wojno, 2002; Rook,

2 GEORGE-LEVI ET AL.

August, Stephens, & Franks, 2011; Vilchinsky et al., 2011). For example, a recent study conducted on cardiac patients and their female partners showed that female partners' perceptions regarding the support they provided (active engagement, protective buffering and overprotection) moderated the associations between patients' perceptions of the support they received and patients' various health outcomes, including their cholesterol levels and smoking cessation (Vilchinsky et al., 2011). These studies indicate that the sole main effects of partners' and patients' characteristics are less pertinent in explaining the benefits of support than is the interaction between them.

Based on Bowlby's (1982) theoretical perspective of attachment as fundamentally shaping one's ability to both provide and receive care, the current study's goal was to assess the contribution of the interplay between caregivers' unique *caregiving style* (i.e., sensitive and compulsive) and patients' *sense of relational entitlement* (i.e., a distinct theoretical concept tapping an individual's attitudes regarding what he or she deserves from his or her partner in terms of support and care) to patients' medication adherence.

As previously mentioned, many individual and social factors may contribute to patients' health behaviors. The current study focused on one particular factor representing the individual level (patients' sense of relational entitlement) and one particular factor representing the social level (partners' caregiving acts) and examined the interplay between them. The basic premise of the current study is that partners' caregiving styles will moderate the associations between patients' sense of relational entitlement and patients' level of medication-taking following acute coronary syndrome (ACS; which is defined as an acute myocardial infarction, or new onset chest pain requiring hospitalization for stabilization). This line of research may clarify the terms under which support during illness is beneficial for the patient versus when it is not.

Medication adherence is a well-established predictor of positive clinical adjustment after ACS (Chowdhury et al., 2013; Osterberg & Blaschke, 2005). Medication nonadherence has been associated with substantial worsening of disease, increased health care costs, and even higher death rates (Bitton, Choudhry, Matlin, Swanton, & Shrank, 2013; Rasmussen, Chong, & Alter, 2007). New approaches in the field of health behaviors and medication adherence highlight the importance of the interaction between individual characteristics and ecological or contextual factors, including social capital (Marrero et al., 2013). Indeed, a consistent finding is the positive association between social support and adherence to treatment among patients (DiMatteo, 2004; Marrero et al., 2013). Thus, assessing the contribution of the interaction between partners' caregiving style and patients' sense of relational entitlement to patients' medication-taking may be valuable in paving the way for increasing patients' adherence.

#### **Caregiving Styles**

John Bowlby (1982) provided a conceptualization of a caregiving behavioral system which included both an evolutional and developmental perspective explaining how people acted upon their childhood internal models when called upon to care for their loved ones in adulthood. Bowlby (1982) argued that human beings have an inherent capacity for caregiving which manifests itself in a repertoire of supportive behaviors. Like other behavioral systems, namely attachment and sexual mating, the caregiving system is

considered to be evolutionarily designed to enhance successful coping with environmental demands; that is to say, it involves the innate ability to identify the needs of others and the inclination to provide them with security and support. Bowlby's caregiving system is based on the early parent—child relationship, which he saw as continuing to play a crucial role in adult relationships, especially romantic ones (Bowlby, 1982).

The main goal of the caregiving system in couples' relationships is to benefit the recipients by either decreasing their distress or enhancing their sense of efficacy, confidence, or coping skills (Collins, Guichard, Ford, & Feeney, 2006). However, not all forms of caregiving are considered to be effective. According to Bowlby (1979), the manifestations of caregiving differ among individuals and can be classified into two styles: *sensitive* caregiving (which consists of the ability to be attuned, responsive and in harmony with another's support-seeking behavior) and *compulsive* caregiving (which consists of the tendency to provide intrusive, poorly timed and forced care). Compulsive caregiving reflects extreme overinvolvement with the recipient's problems to maintain or increase proximity to the recipient. This style is considered a form of "bad concern" (Tolmacz, 2010), and it characterizes less attentive and highly self-focused caregivers.

#### Sense of Relational Entitlement

Relational entitlement is conceptualized as the extent to which an individual feels that his or her wishes, needs, and expectations should be fulfilled by a romantic partner and is considered to be a personality construct deriving from early relationships with primal attachment figures (Tolmacz & Mikulincer, 2011). According to Bowlby's (1979) attachment theory, perceptions and memories of the type or quality of care that individuals received from early attachment figures shape the way they respond to their attachment figures in adulthood. Thus, romantic relationships are believed to be the primary domain in which entitlement-related wishes, needs, and expectations are uniquely expressed (Tolmacz & Mikulincer, 2011; Sivan George-Levi et al., 2014). It is important to note that individuals' attitudes toward deserving partner care may be impacted by a variety of personal factors such as one's personal history, temperament and gender (Tolmacz & Mikulincer, 2011).

Despite the importance of relational entitlement to couples' relationships, the concept was only recently subjected to an empirical examination (George-Levi, Vilchinsky, Tolmatcz, & Liberman, 2014; Tolmacz & Mikulincer, 2011). For example, a recent study conducted on couples in long-term relationships (George-Levi et al., 2014) identified four personal attitudes toward relational entitlement: *excessive entitlement*, which includes the inflated expectation that all of one's needs should be fulfilled by one's romantic partner; *restricted entitlement*, which refers to one's belief that he or she deserves very little from his or her partner; *assertive entitlement*, which represents a person's ability to assertively and realistically negotiate his or her needs with his or her partner; and *entitlement expectations*, the ability to maturely evaluate those things that one can expect from his or her partner.

In contrast to assertive entitlement and entitlement expectations, excessive and restricted entitlement are considered maladaptive, as they have been found to be associated with negative mood, emotional distress and low levels of relationship and life satisfaction (George-Levi et al., 2014; Tolmacz & Mikulincer, 2011). Re-

stricted entitlement was found to be associated with poor self-esteem (Tolmacz & Mikulincer, 2011), and it is believed to reflect one's tendency to neglect one's needs and inability to express them to gain social support (Kriegman, 1983). In times of high stress, such as when an illness occurs in the family, relational entitlement wishes and expectations might be especially salient with regard to a patient's ability to receive and appraise his or her partner's support efforts, as well as with one's lower inclination to take care of him- or herself. However, relational entitlement has never been examined in the context of couples coping with an acute stressor, such as the onset of ACS.

Our main goal was to examine the contribution of the *interaction* between partners' caregiving styles and patients' sense of relational entitlement to patients' medication adherence. We hypothesized that patients who were high on assertive entitlement or entitlement expectations and had partners high on sensitive caregiving or low on compulsive caregiving would present a better adjustment in terms of high levels of medication adherence 6 months after the cardiac event than would patients who were high on excessive or restricted entitlement and had partners high on compulsive caregiving or low on sensitive caregiving.

#### Method

#### **Participants and Procedure**

The current study used a longitudinal, prospective design. The target population was defined as all men who were hospitalized with the diagnosis of a first ACS and their female partners. Eligible patients were recruited during the years 2011–2013 from the cardiac care unit (CCU) of Sheba Medical Center, the largest medical center in Israel, and Meir Medical Center, located in a more peripheral region of Israel. During this period, 1,862 patients were hospitalized in both CCUs. Exclusion criteria were history of a previous cardiac event, comorbid conditions (such as advanced cancer or serious psychiatric illness), severe cognitive or physical impairments, a transfer to bypass surgery or discharge from the CCU, patients who did not have a partner or whose partner had undergone a life-threatening disease within the past 5 years, patients and partners whose mother tongue was not Hebrew, and patients who died during hospitalization. The rationale for solely targeting men was that the average female cardiac patient was older, more likely to be widowed, and therefore less likely to have social support provided by a marriage (Lemos, Suls, Jenson, Lounsbury, & Gordon, 2003) than the average male cardiac patient. A homosexual relationship was not considered an exclusion criterion; however, none of the eligible patients reported on being in a homosexual relationship. Of the 223 eligible patients, 66 refused to participate in the study (29.60%) and an additional 26 had partners who refused to participate in the study (11.66%). Thus, the sample consisted of 131 couples (58.7% recruitment rate).

Patients and partners who agreed to participate in the study were asked to complete the study questionnaires at *two time points*: once during hospitalization and once at the follow-up interview, 6 months later. Twelve couples refused to continue with the study at follow-up, two couples had separated by the time the follow-up interview took place, two couples were coping with a newly diagnosed lifethreatening illness which prevented them from participating in the follow-up interview, and one partner had died before completing the

follow-up questionnaire. Overall, 114 couples completed the study questionnaires at both time points (13% attrition rate).

During hospitalization, all eligible patients and partners were approached by the research team. Patients and partners were given the study's questionnaires and were instructed to complete them independently. A research assistant was available to answer questions and offer assistance. Six months later, patients and partners were interviewed separately at their homes, at a time of their choosing, by two research assistants. Patients and partners who completed all questionnaires, both at hospitalization and at the follow-up interview, received a gift certificate equivalent to \$55. The study was approved by the Sheba and Meir Medical Centers Review Boards.

#### Measures

Caregiving styles (measured at hospitalization). Female partners' caregiving styles were measured using the 32-item Hebrew version of the Adult Caregiving questionnaire (Kunce & Shaver, 1994). This measure consists of four scales: Proximity versus Distance (e.g., "When my partner seems to want or need a hug, I'm glad to provide it," Items 1-8), Sensitivity versus Insensitivity (e.g., "I am very attentive to my partner's nonverbal signals for help and support," Items 9-16), Cooperation versus Control (e.g., "I can help my partner to solve his problems without being too domineering," Items 17-24), and Compulsive Caregiving (e.g., "I tend to get over-involved in my partner's problems and difficulties;" Items 25-32). The items are rated from 1 (not at all like me) to 7 (very much like me). In accordance with a previous study (Feeney & Hohus, 2001), which showed that all scales with the exception of compulsive caregiving were strongly correlated, two separate scores (compulsive caregiving and sensitive caregiving) were calculated by averaging the responses on the relevant items. In the current study, Cronbach's alpha for the sensitive caregiving style was .85 and .72 for the compulsive caregiving style.

Sense of relational entitlement (measured at hospitalization). Patients completed the Sense of Relational Entitlement scale (Tolmacz & Mikulincer, 2011) during hospitalization. The participants were asked to rate the extent to which each item was descriptive of their attitudes, feelings, beliefs, and reactions in romantic relationships. Ratings were done on a 5-point scale  $(1 = not \ at \ all, 5 =$ very much). Each participant received a score for each dimension. In accordance with our previous analyses (George-Levi et al., 2014), we used 19 items representing four factors: (a) Excessive Entitlement, which describes one's tendency to have the inflated expectation that all of one's needs should be fulfilled by one's romantic partner and to overfocus on the negative features of the partner and the relationship (e.g., "I often feel I deserve to get more than I do in my relationship,"); (b) Restricted Entitlement, which describes an inhibited ability to express one's needs, wishes and expectations in the relationship (e.g., "I feel my partner deserves to get more than s/he does in our relationship,"); (c) Entitlement Expectations, which describes an individual's expectations of the partner's attention, concern and understanding (e.g., "I expect my partner to be very attentive to me,"); and (d) Assertive Entitlement, which describes the ability to assertively and realistically stand up for one's needs and wishes in the relationship (e.g., " I think my partner is lucky to be with me"). In the current study, Cronbach's alphas for the excessive, restricted, expectations and assertive factors were .87, .60, .72, and .68, respectively.

**Medication adherence (measured at follow-up).** At the 6-month follow-up, patients reported their medication adherence, using the six-item Medication Adherence Report Scale (Horne & Weinman, 2002). The questions were framed as negative statements (e.g., "I decided to skip a dose"). Patients were asked to rate the frequency with which they engaged in each nonadherent behavior on a 5-point scale ( $1 = very \ often \ to \ 5 = never$ ), so that higher scores reflected higher levels of medication-taking. In the current study, Cronbach's alpha was .72.

**Sociodemographic data.** During patients' hospitalization, patients and partners were asked to complete a short demographic questionnaire including age, duration (in years) of relationship, number of children, years of education, and socioeconomic status (SES). SES was measured using one item in which participants were asked to compare their family monthly income to the average family monthly income in Israel during 2012 (about \$2,000) on a scale of 1 (*much below average*) to 5 (*much above average*). For a concise presentation of the data, Categories 4 and 3 were combined into moderate SES, and Categories 2 and 1 into bad SES.

**Illness severity.** The severity of the patient's illness at discharge from each CCU was estimated by two senior cardiologists, one from each medical center, using two sets of criteria: an echocardiogram score, which assesses cardiac damage, and an angiogram score (status of obstructed arteries), which assesses the risk of future damage. Both scores were measured on a scale ranging from 1 (*normal*) to 5 (*extremely severe*). For scoring, we used an adaptation of the Coronary Angiographic Scoring Systems score (Neeland et al., 2012). For both the echocardiogram and angiogram scores, the "normal" and "moderate" categories were combined as well as the categories of "severe" and "extremely severe."

In addition, during the follow-up interview, patients were asked to report whether they had experienced an additional myocardial infarction event, a coronary artery bypass graft or percutaneous transluminal coronary angioplasty, since the time of the initial hospitalization. This information regarding patients' major adverse cardiovascular events was obtained to evaluate patients' illness status at follow-up.

#### **Statistical Analysis**

Descriptive statistics were used to describe the demographic details of the sample and the study's measures. Simple Pearson correlations were applied to assess the associations among the sociodemographic variables and the study's variables. T tests were used to compare the differences in the sociodemographics and the study's main variables between couples who dropped out at follow-up and the rest of the sample who completed all questionnaires at both time points.

To assess the interactive effects of patients' sense of entitlement and partners' caregiving style in predicting medication-taking at the 6-month follow-up, the data was analyzed using a two-step hierarchical regression, with the score on the Medication Adherence Report Scale as the predicted variable. Step 1 consisted of partners' caregiving styles (compulsive and sensitive) and patients' sense of entitlement scores (excessive, restricted, expectations and assertive).

The four hypothesized two-way interactions among partners' caregiving styles and patients' sense of entitlement were entered in Step 2, which consisted of the product of the centered scores of each relevant variable (Excessive  $\times$  Compulsive, Restricted  $\times$  Compulsive, Asser-

tive × Sensitive, and Expectations × Sensitive). To test the simple slopes of the interactions, we used the well-established and most common procedure outlined by Preacher, Curran, and Bauer (2006; for a review, see Judd, Yzerbyt, & Muller, 2014). This procedure was developed specifically for two-way linear regression models and it is based on testing and interpretation of interactions in multiple linear regression (e.g., Aiken, West, & Reno, 1991; Bauer & Curran, 2004; Curran, Bauer, & Willoughby, 2004). The calculation takes into account the simple intercepts, simple slopes, and the region of significance (Preacher et al., 2006).

#### Results

#### Characteristics of the Sample

Baseline characteristics of patients and partners are presented in Table 1. Patients' ages ranged from 36 to 77 years, and their average age was 56.17 years (SD=8.15). Partners' ages ranged from 34 to 75 years, and their average age was 52.72 years (SD=8.49). Patients and partners had a high level of education, were married for approximately 30 years, and the majority reported having a moderate economic status. The majority of patients experienced ACS with no severe obstruction of the arteries or severe damage to the heart. Also, patients had experienced very few repeat acute coronary events or readmissions 6 months after their first ACS.

Table 2 contains means and standard deviations of the study measures (patients' sense of entitlement, partners' caregiving styles, and patients' medication-taking). As can be seen in Table 2,

Table 1
Sociodemographic and Clinical Characteristics of the Sample

	361 2 .	П 1 .		
Characteristics	Male patients <i>M</i> (SD)	Female partners <i>M</i> ( <i>SD</i> )		
Age (years)	56.17 (8.15)	52.72 (8.49)		
Education (years)	14.00 (3.30)	14.63 (3.22)		
Relationship length (years)	27.82 (12.16)			
Number of children	2.96 (1.32)			
	n (%)	n (%)		
Perceived economic status				
Very good	21 (15.8)	13 (9.90)		
Moderate	106 (80.7)	108 (82.40)		
Bad	4 (3.5)	10 (7.7)		
Illness Severity				
Echocardiogram score				
Normal-moderate	65.60	_		
Severe-extremely severe	34.40			
Angiogram score				
Normal-moderate	78.60	_		
Severe-extremely severe	21.40			
MACE				
Repeat MI	2.60			
CABG	1.70			
Repeat PTCA	9.00			

*Note.* Echocardiogram score = criteria for assessing cardiac damage; angiogram score = status of obstructed arteries; MACE = major acute cardiovascular events; MI = myocardial infarction; CABG = coronary artery bypass graft; PTCA = percutaneous transluminal coronary angioplasty.

Table 2			
Means and Standard	Deviations of	the Study's	Main Measures

	Male patients $M$ ( $SD$ )		Female partners <i>M</i> ( <i>SD</i> )	
Study's measures	During hospitalization	Follow-up	During hospitalization	
Sensitive caregiving style	_	_	5.63 (.77)	
Compulsive caregiving style	_	_	3.75 (1.21)	
Excessive entitlement	1.50 (.65)	_		
Restricted entitlement	2.06 (.93)	_	_	
Entitlement expectations	3.70 (.85)	_	_	
Assertive entitlement	3.01(1.04)	_	_	
Medication adherence	<u> </u>	4.77 (.41)	_	

the average report on medication-taking is relatively high whereas the variance of this variable is low, indicating that most of the patients reported high levels of adherence.

Table 3 presents the Pearson correlations among the study's main variables. A significant negative association was found between patients' restricted entitlement and patients' level of medication-taking, showing that the higher the patients were on restricted entitlement, the less they adhered to their medication regime. No other correlations were found significant.

Applying the Bonferroni correction (p < .05), no significant differences were found in demographic parameters between the couples who participated at the 6-month follow-up and the couples who dropped out before the follow-up. However, it was found that female partners of patients who dropped out before the follow-up reported higher levels of compulsive caregiving than female partners of patients who participated at both time points, t(131) = 2.64, p < .00. No other differences were found, in terms of caregiving styles and relational entitlement, between the couples who participated at the 6-month follow-up and the couples who dropped out before the follow-up.

Applying the Bonferroni correction (p < .05), no significant simple correlations were found between the demographic parameters—age, perceived socioeconomic status, duration (in years) of relationship, number of children, and years of education—or patients' illness severity parameters and patients' level of medication-taking. Thus, none of the demographic parameters or illness severity parameters was controlled for in the regression analyses.

Table 3
Pearson Correlations Among the Study's Main Variables (N = 114)

Variables during hospitalization	Patients' medication adherence
Patient	
Excessive entitlement	02
Entitlement expectations	.02
Restricted entitlement	19*
Assertive entitlement	.05
Partner	
Sensitive caregiving style	01
Compulsive caregiving style	02

<sup>\*</sup> p < .05.

#### **Regression Analysis: Medication Adherence**

Table 4 presents the results of the linear regression analysis of partners' caregiving styles and patients' sense of entitlement (as measured during hospitalization) on patients' medication-taking (as measured at follow-up). For simplicity's sake, Table 4 presents only the effect of the significant interaction between partners' caregiving style and patients' sense of relational entitlement on medication-taking. A significant main effect was found for restricted entitlement, showing that the higher the patients were on the restricted entitlement scale, the less they tended to take their medications. In addition, the interaction between partners' compulsive caregiving and patients' restricted entitlement came up as significant. Figure 1 presents the results of this interaction. It was found that patients' restricted entitlement was negatively associated with patients' medication-taking when partners' compulsive caregiving was high (1 SD above the mean), b = -0.18, t(106) =3.50, p < .001, but not when partners' compulsive caregiving was low (1 SD below the mean), b = 0.07, t(106) = 1.07, p = .28. Thus, partners' compulsive style of support enhanced the negative association between patients' restricted entitlement and their medication-taking.

#### Discussion

The current study assessed the contribution of the interaction among partners' caregiving styles and patients' sense of relational entitlement (as measured during patients' hospitalization) to patients' medication-taking 6 months after their first ACS. As expected, the interaction between partners' caregiving style and recipients' sense of relational entitlement was more substantial in explaining patients' adjustment than the main effects were. This finding highlights the importance of the interplay between patients' social capital resources (partners' caregiving acts) and patients' personal resources (patients' sense of relational entitlement).

As the interaction hypothesis predicted, higher levels of compulsive support exacerbated the negative association between patients' restricted entitlement and patients' medication-taking. Individuals high on restricted entitlement are strongly characterized by the sense that they do not deserve to have their needs fulfilled by their romantic partner due to their own sense of unworthiness (Kriegman, 1983; Levin, 1970; Moses & Moses-Hrushovski, 1990; Tolmacz & Mikulincer, 2011). The current findings indi-

6 GEORGE-LEVI ET AL.

Table 4
Partners' Compulsive Caregiving Style as a Moderator of the Association Between Patients'
Restricted Entitlement and Patients' Medication Adherence at Follow-Up (N = 114)

Variables	$R^2$	$\Delta R^2$	β	SE B	β
Step 1					_
Partners' caregiving styles					
Sensitive caregiving (SC)	.05	.05	04	.05	07
Compulsive caregiving (CC)			00	.03	00
Patients' sense of entitlement					
Excessive (EX)			.02	.06	.03
Restricted (RE)			11**	.05	25
Expectations (EE)			.01	.06	.01
Assertive (AE)			.03	.05	.08
			F(6, 107) = .99		
Step 2					
Partners' CC × Patients' RE	.12	.06	12***	.04	28
			$F(1, 106) = 7.64^{***}$		

*Note.* For simplicity's sake, only the effect of the significant interaction between partners' caregiving style and patients' sense of relational entitlement on patients' medication adherence is presented. Patients' sense of entitlement and partners' caregiving styles were measured at hospitalization, and patients' medication adherence was measured at the 6-month follow-up.

\*\* p < .05. \*\*\* p < .001.

cated that patients high on this form of entitlement tend to deny their need for care and treatment and consequently neglect their health, as they report lower levels of medication-taking.

One possible explanation for the current findings may be that having a partner with a compulsive caregiving style who is not attentive and who is highly self-focused seems to worsen restricted persons' fundamental sense of unworthiness. The caregiver who is allegedly busy with the patient's situation, but is in fact preoccupied with her own needs, relays the message to the patient that he is indeed unseen, uncounted, and unimportant, therefore magnifying the restricted person's already fragile self-image. This caregiving process is hypothesized to cause restricted individuals to feel less entitled to be cared for and attended to, and down the road it might also lessen the likelihood that these individuals will take care of themselves; that is to say, they might be less inclined to, among other things, adhere to their medication regimen. Former studies indeed showed that those personal characteristics which reduce patients' self-image and willingness to take care of them-

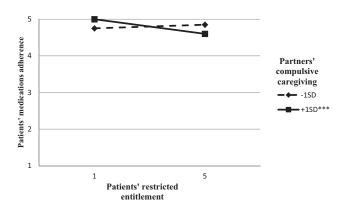


Figure 1. The interactive effect of partners' compulsive caregiving and patients' restricted entitlement on patients' medications adherence. \*\*\* p < .001.

selves (e.g., dismissing attachment style, Ciechanowski, Katon, Russo, & Walker, 2011; self-efficacy, Maeda, Shen, Schwarz, Farrell, & Mallon, 2013) are also related to lower levels of medication adherence.

Despite the fact that the sense of relational entitlement has never been examined in the context of coping with an illness, previous findings highlight the contribution of the interplay between personal and social factors in predicting patients' health outcomes, such as their cholesterol levels, smoking cessation and depression (Vilchinsky et al., 2011). For example, in our former study we found that when partners provided high levels of intrusive support (overprotectiveness), and at the same time the patients themselves perceived the support provided to them as overly protective, these patients' low-density cholesterol levels were higher than when lower levels of such unhelpful support was provided by partners and perceived by patients. This kind of support, which seemed to lower patients' self-esteem, putatively contributed to their reduced motivation for self-care, including the regular taking of medications which, later on, was reflected in their higher levels of low-density cholesterol (Vilchinsky et al., 2011). The question as to why the sensitive support style was not found to moderate the inherent negative association among restricted entitlement and medication-taking has yet to be answered. Despite the fact that sensitive caregiving is theoretically conceived as an adaptive form of caregiving, our current findings did not detect its hypothesized buffering potential of the negative effect of patients' restricted entitlement on patients' medication- taking. One possible way to account for this null-finding is to look at restrictive individuals' difficulty in accepting even sensitive acts of care, due to their rigid perception of themselves as being unworthy of care. Even their partners' best intentions are automatically rejected because they do not coincide with restricted individuals' negative and selfdefeating conceptions of themselves.

Similarly, we did not find any associations with assertive entitlement or entitlement expectations. These two factors were previously found to represent the more adaptive dimension of relational entitlement which expresses a person's ability to realistically appraise and negotiate the things that one can expect from his or her partner (Tolmacz & Mikulincer, 2011). It may be that patients high on these factors are able to adapt their expectations of their partners in a more realistic way, one which corresponds specifically with the manner in which their partners provide support. Alternatively, when the kind of support provided by the partner does not match their expectations, these patients may be able to effectively negotiate their needs and demands in accordance with their partners' capabilities. Either way, the results are consistent with former studies showing that negative or adverse effects evoke stronger responses than neutral or positive ones (Taylor, 1991). In sum, a fragile personal characteristic such as restricted sense of entitlement is not only directly associated with poorer medication-taking but is also susceptible to partners' deficient style of support.

Despite the current study's strengths—for example, a longitudinal, prospective design; data collected from both patients and partners—several possible limitations should be noted with regard to the current results. First, we relied on patients' subjective perceptions regarding their tendency to adhere to the medications prescribed for them. These reports might have been biased by social desirability (Osterberg & Blaschke, 2005), as most of the patients reported high levels of adherence. However, it is important to note that even the slightest improvement in patients' medication adherence is crucial in terms of patients' rates of cardiac event recurrence, and even their rates of mortality (Bitton et al., 2013). Second, the reliability of the "restricted entitlement" factor was rather low (.60). However, it is important to note that this factor consisted of only three items, and a small number of items decreases the reliability score (Raykov & Marcoulides, 2011). Third, only one of the six interactions among partners' caregiving style and patients' relational entitlement came out as significant; these results therefore require replication. Fourth, in the current study we deliberately refrained from including female cardiac patients, because a first ACS among women tends to occur more often as women get older and are more likely to be widowed; they are thus not part of a conjugal relationship, the focus of the current research. The caregiver role in this case can therefore not be separated from the gender role. Also, the current study focused solely on partners' caregiving and did not address additional sources of potential social capital such as the support provided by other family members or peers. At the same time, it is important to note that at the age when cardiac events usually erupt, the spouse is most often the central agent providing support for the patient (Revenson & DeLongis, 2011; Rohrbaugh et al., 2004; Vilchinsky et al., 2011), and this factor was the rationale for focusing on partners as the main social resource. Finally, the participants in the current study were older married or cohabiting heterosexual couples and were characterized by a high economic status and level of education; any generalization of the findings should therefore be made cautiously.

Nevertheless, the study has several theoretical implications. First, the results strengthen the postulation that personality characteristics, especially those most relevant to support transactions (such as relational entitlement and caregiving styles), play a major role in the process of adjustment to illness (Bogg & Roberts, 2013); such variables should therefore be more vigorously incorporated into the field of behavioral medicine. Second, the findings showed that it is the interplay between patients' sense of relational

entitlement and their partners' caregiving styles which present a unique contribution to patients' adjustment. For these reasons, it is crucial that any endeavor to understand the process of support giving and receiving must take into account the characteristics of not only the patients, nor only of the spouses, but of *both* parties. It's the combined perspective which enables a fuller comprehension of the complex dynamics of couple support transaction during a medical crisis.

We also detected that the type of support provision considered to be less constructive (high levels of compulsive caregiving) might increase the already harmful effects that patients' restricted entitlement have on their tendency not to adhere to their medication regimen. Those individuals typified by fewer personal resources are in danger of being excessively affected by incompatible support provided to them during times of crisis. This twofold risk must receive more scientific as well as clinical attention. Our finding that those caregivers who dropped out of the study were characterized by higher levels of the compulsive caregiving style strengthens the claim that this style is marked by uncooperative tendencies.

Future studies may benefit from examining the interaction between partners' caregiving style and patients' sense of entitlement over time. For example, it is possible that a caregiver may become more compulsive as the patient becomes more restricted, and this change may be reflected in patients' adherence tendencies. It is also important to examine the role of relationship satisfaction as a mediator of the interaction between patients' sense of entitlement and partners' caregiving style on patients' medication adherence (e.g., it is possible that patients high on restricted entitlement who are highly satisfied with their relationship are less affected by the compulsive efforts of their partners than patients' who are less satisfied with the relationship). Future studies may also benefit from examining patients' objective measures of medication adherence to overcome the limitation of social desirability inherent in using *subjective* measures of medication adherence.

From the clinical point of view, interventions designed for both patients and partners have been found to increase patients' healthpromoting behaviors to a greater degree than interventions which focused exclusively on the patient (Martire, Schulz, Helgeson, Small, & Saghafi, 2010). Considering the multidisciplinary perspective of the current research, the findings would be of value to nurses, family doctors, social workers and other professionals who provide care to patients and couples. Specifically, therapists working with couples coping with ACS may benefit from identifying the form of relational entitlement that is most dominant among the patients as well as the partners' caregiving styles. By doing so. they may facilitate patients' ability to appraise the offered support in a more realistic and well-adjusted manner. They may also help partners to be more attentive to patients' needs. Consequently, therapists can assist couples to form more effective interactions during the process of receiving and providing support by way of helping them to improve their communication skills, express their emotions, upgrade the exchange of social support between them, restore equity to the relationship, and enhance their dyadic coping efforts (for reviews on interventions targeted to enhance spousal support interactions, see Badr & Krebs, 2013; Bodenmann & Shantinath, 2004; Cutrona, Russell, & Gardner, 2005; Martire et al., 2010). In stressful times, such as times of coping with illness, this intervention may even contribute to enhanced levels of medication adherence among patients and thus improve health outcomes.

#### References

- Aiken, L. S., West, S. G., & Reno, R. R. (1991). Multiple regression: Testing and interpreting interactions. Atlanta, GA: Sage.
- Badr, H., & Krebs, P. (2013). A systematic review and meta-analysis of psychosocial interventions for couples coping with cancer. *Psycho-Oncology*, 22, 1688–1704. http://dx.doi.org/10.1002/pon.3200
- Bauer, D. J., & Curran, P. J. (2004). The integration of continuous and discrete latent variable models: Potential problems and promising opportunities. *Psychological Methods*, 9, 3–29. http://dx.doi.org/10.1037/ 1082-989X.9.1.3
- Bitton, A., Choudhry, N. K., Matlin, O. S., Swanton, K., & Shrank, W. H. (2013). The impact of medication adherence on coronary artery disease costs and outcomes: A systematic review. *The American Journal of Medicine*, 126, 357.e7–357.e27. http://dx.doi.org/10.1016/j.amjmed.2012.09.004
- Bodenmann, G., & Shantinath, S. D. (2004). The Couples Coping Enhancement Training (CCET): A new approach to prevention of marital distress based upon stress and coping. *Family Relations*, *53*, 477–484. http://dx.doi.org/10.1111/j.0197-6664.2004.00056.x
- Bogg, T., & Roberts, B. W. (2013). The case for conscientiousness: Evidence and implications for a personality trait marker of health and longevity. *Annals of Behavioral Medicine*, 45, 278–288. http://dx.doi.org/10.1007/s12160-012-9454-6
- Bolger, N., Zuckerman, A., & Kessler, R. C. (2000). Invisible support and adjustment to stress. *Journal of Personality and Social Psychology*, 79, 953–961. http://dx.doi.org/10.1037/0022-3514.79.6.953
- Bowlby, J. (1979). The making and braking of affectional bonds. London, United Kingdom: Tavistock.
- Bowlby, J. (1982). Attachment and loss: Vol. 1. Attachment. New York, NY: Basic Books.
- Bronfenbrenner, U. (2004). Making human beings human: Bioecological perspectives on human development. Thousand Oaks, CA: Sage.
- Brown, A., Stokols, D., Sallis, J., Hiatt, R., & Orleans, T. (2013). *The possibilities and potential of social ecological frameworks to understand health behaviours and outcomes*. Symposium presented at the 34th Annual Conference of the Society of Behavioral Medicine, San Francisco, CA. Retrieved from http://www.sbm.org/UserFiles/file/Symposium\_24\_Stokols.pdf
- Chowdhury, R., Khan, H., Heydon, E., Shroufi, A., Fahimi, S., Moore, C., . . . Franco, O. H. (2013). Adherence to cardiovascular therapy: A meta-analysis of prevalence and clinical consequences. *European Heart Journal*, 34, 2940–2948. http://dx.doi.org/10.1093/eurheartj/eht295
- Ciechanowski, P. S., Katon, W. J., Russo, J. E., & Walker, E. A. (2001). The patient-provider relationship: Attachment theory and adherence to treatment in diabetes. *The American Journal of Psychiatry*, 158, 29–35. http://dx.doi.org/10.1176/appi.ajp.158.1.29
- Collins, N. L., Guichard, A., Ford, M., & Feeney, B. (2006). Responding to need in intimate relationships: Normative processes and individual differences. In M. Mikulincer & G. Goodman (Eds.), *Dynamics of* romantic love: Attachment, caregiving, and sex (pp. 149–189). New York, NY: Guilford Press.
- Coyne, J. C., Wortman, C. B., & Lehman, D. R. (1988). The other side of support: Emotional overinvolvement and miscarried helping. In B. Gottlieb (Ed.), *Marshaling social support: Formats, processes, and effects* (pp. 305–330). New York, NY: Sage.
- Curran, P. J., Bauer, D. J., & Willoughby, M. T. (2004). Testing main effects and interactions in latent curve analysis. *Psychological Methods*, 9, 220–237. http://dx.doi.org/10.1037/1082-989X.9.2.220
- Cutrona, C. E., Russell, D. W., & Gardner, K. A. (2005). The Relationship Enhancement Model of Social Support. In T. Revenson, K. Kayser & G. Bodenmann (Eds.), Couples coping with stress: Emerging perspectives

- on dyadic coping (pp. 73–95). Washington, DC: American Psychological Association. http://dx.doi.org/10.1037/11031-004
- Cutrona, C. E., Shaffer, P. A., Wesner, K. A., & Gardner, K. A. (2007). Optimally matching support and perceived spousal sensitivity. *Journal of Family Psychology*, 21, 754–758. http://dx.doi.org/10.1037/0893-3200.21.4.754
- DeLongis, A., & Holtzman, S. (2005). Coping in context: The role of stress, social support, and personality in coping. *Journal of Personality*, 73, 1633–1656. http://dx.doi.org/10.1111/j.1467-6494.2005.00361.x
- DiMatteo, M. R. (2004). Social support and patient adherence to medical treatment: A meta-analysis. *Health Psychology*, 23, 207–218. http://dx .doi.org/10.1037/0278-6133.23.2.207
- Feeney, B. C., & Hohus, L. (2001). Attachment and spousal caregiving. Personal Relationships, 8, 21–39. http://dx.doi.org/10.1111/j.1475-6811 .2001.tb00026.x
- George-Levi, S., Vilchinsky, N., Tolmacz, R., & Liberman, G. (2014).
  Testing the concept of relational entitlement in the dyadic context:
  Further validation and associations with relationship satisfaction. *Journal of Family Psychology*, 28, 193–203. http://dx.doi.org/10.1037/a0036150
- Gleason, M. E. J., Iida, M., Bolger, N., & Shrout, P. E. (2003). Daily supportive equity in close relationships. *Personality and Social Psychology Bulletin*, 29, 1036–1045. http://dx.doi.org/10.1177/0146167203253473
- Horne, R., & Weinman, J. (2002). Self-regulation and self-management in asthma: Exploring the role of illness perceptions and treatment beliefs in explaining non-adherence to preventer medication. *Psychology & Health*, 17, 17–32. http://dx.doi.org/10.1080/08870440290001502
- Judd, C. M., Yzerbyt, V. Y., & Muller, D. (2014). Mediation and moderation. Handbook of Research Methods in Social and Personality Psychology, 2, 653–676.
- Kiecolt-Glaser, J. K., & Newton, T. L. (2001). Marriage and health: His and hers. *Psychological Bulletin*, 127, 472–503. http://dx.doi.org/10 .1037/0033-2909.127.4.472
- Kriegman, G. (1983). Entitlement attitudes: Psychosocial and therapeutic implications. The Journal of the American Academy of Psychoanalysis, 11, 265–281.
- Kunce, L. J., & Shaver, P. R. (1994). Advances in personal relationships.
  In K. Bartholomew & D. Perlman (Eds.), An attachment-theoretical approach to caregiving in romantic relationships (Vol. 5, pp. 205–237).
  London, United Kingdom: Kingsley.
- Lemos, K., Suls, J., Jenson, M., Lounsbury, P., & Gordon, E. E. I. (2003). How do female and male cardiac patients and their spouses share responsibilities after discharge from the hospital? *Annals of Behavioral Medicine*, 25, 8–15. http://dx.doi.org/10.1207/S15324796ABM2501\_02
- Levin, S. (1970). On the psychoanalysis of attitudes of entitlement. *Bulletin of the Philadelphia Association for Psychoanalysis*, 20, 1–10.
- Lounsbury, D. W., & Mitchell, S. G. (2009). Introduction to special issue on social ecological approaches to community health research and action. *American Journal of Community Psychology*, 44, 213–220. http://dx.doi.org/10.1007/s10464-009-9266-4
- Maeda, U., Shen, B. J., Schwarz, E. R., Farrell, K. A., & Mallon, S. (2013).
  Self-efficacy mediates the associations of social support and depression with treatment adherence in heart failure patients. *International Journal of Behavioral Medicine*, 20, 88–96. http://dx.doi.org/10.1007/s12529-011-9215-0
- Marrero, D. G., Ard, J., Delamater, A. M., Peragallo-Dittko, V., Mayer-Davis, E. J., Nwankwo, R., & Fisher, E. B. (2013). Twenty-first century behavioral medicine: A context for empowering clinicians and patients with diabetes: A consensus report. *Diabetes Care*, 36, 463–470. http://dx.doi.org/10.2337/dc12-2305
- Martire, L. M., & Schulz, R. (2001). Informal caregiving to older adults: Health effects of providing and receiving help. In A. Baum, T. Revenson, & J. Singer (Eds.), *Handbook of health psychology* (pp. 477–493). Mahwah, NJ: Erlbaum.

- 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, 325–342. http://dx.doi.org/10.1007/s12160-010-9216-2
- Martire, L. M., Stephens, M. A. P., Druley, J. A., & Wojno, W. C. (2002).
  Negative reactions to received spousal care: Predictors and consequences of miscarried support. *Health Psychology*, 21, 167–176. http://dx.doi.org/10.1037/0278-6133.21.2.167
- Moses, R., & Moses-Hrushovski, R. (1990). Reflections on the sense of entitlement. The Psychoanalytic Study of the Child, 45, 61–78.
- Neeland, I. J., Patel, R. S., Eshtehardi, P., Dhawan, S., McDaniel, M. C., Rab, S. T., . . . Quyyumi, A. A. (2012). Coronary angiographic scoring systems: An evaluation of their equivalence and validity. *American Heart Journal*, 164, 547–552. http://dx.doi.org/10.1016/j.ahj.2012.07 .007
- Osterberg, L., & Blaschke, T. (2005). Adherence to medication. *The New England Journal of Medicine*, 353, 487–497. http://dx.doi.org/10.1056/ NEJMra050100
- 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. http://dx.doi.org/ 10.1037/a0029349
- Preacher, K. J., Curran, P. J., & Bauer, D. J. (2006). Computational tools for probing interaction effects in multiple linear regression, multilevel modeling, and latent curve analysis. *Journal of Educational and Behavioral Statistics*, 31, 437–448. http://dx.doi.org/10.3102/10769986031004437
- Rasmussen, J. N., Chong, A., & Alter, D. A. (2007). Relationship between adherence to evidence-based pharmacotherapy and long-term mortality after acute myocardial infarction. *Journal of the American Medical Association*, 297, 177–186. http://dx.doi.org/10.1001/jama.297.2.177
- Raykov, T., & Marcoulides, G. (2011). *Introduction to psychometric theory* (p. 158). New York, NY: Routledge.
- Revenson, T. A., & DeLongis, A. (2011). Couples coping with chronic illness. In S. Folkman (Ed.), *The Oxford Handbook of Stress, Health,* and Coping (pp. 101–123). New York, NY: Oxford University Press.

- Rook, K. S., August, K. J., Stephens, M. A. P., & Franks, M. M. (2011).
  When does spousal social control provoke negative reactions in the context of chronic illness? The pivotal role of patients' expectations.
  Journal of Social and Personal Relationships, 28, 772–789.
- Rohrbaugh, M. J., Shoham, V., Coyne, J. C., Cranford, J. A., Sonnega, J. S., & Nicklas, J. M. (2004). Beyond the "self-" in self-efficacy: Spouse confidence predicts patient survival following heart failure. *Journal of Family Psychology*, 18, 184–193.
- Sallis, J., Owen, N., & Fisher, E. (2008). Ecological models of health behavior. In K. Glanz, B. Rimer, & K. Viswanath (Eds.), *Health behavior and hhealth education: Theory, research, and practice* (pp. 465–482). San Francisco, CA: Jossey-Bass.
- Taylor, S. E. (1991). Asymmetrical effects of positive and negative events: the mobilization-minimization hypothesis. *Psychological Bulletin*, 110, 67
- Tolmacz, R. (2010). Forms of concern: A psychoanalytic perspective. In M. Mikulincer & P. R. Shaver (Eds.), Prosocial motives, emotions, and behavior: The better angels of our nature (pp. 93–107). Washington, DC: American Psychological Association. http://dx.doi.org/10.1037/ 12061-005
- Tolmacz, R., & Mikulincer, M. (2011). The sense of entitlement in romantic relationships: Scale construction, factor structure, construct validity, and its associations with attachment orientations. *Psychoanalytic Psychology*, 28, 75–94. http://dx.doi.org/10.1037/a0021479
- Vilchinsky, N., Dekel, R., Leibowitz, M., Reges, O., Khaskia, A., & Mosseri, M. (2011). Dynamics of support perceptions among couples coping with cardiac illness: The effect on recovery outcomes. *Health Psychology*, 30, 411–419. http://dx.doi.org/10.1037/a0023453
- Vilchinsky, N., Haze-Filderman, L., Leibowitz, M., Reges, O., Khaskia, A., & Mosseri, M. (2010). Spousal support and cardiac patients' distress: The moderating role of attachment orientation. *Journal of Family Psychology*, 4, 508–512. http://dx.doi.org/10.1037/a0020009

Received July 20, 2015
Revision received March 28, 2016
Accepted May 1, 2016