

Linking financial distress to marital quality: The intermediary roles of demand/withdraw and spousal gratitude expressions

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Abstract

This study investigates demand/withdraw communication and spousal expressions of gratitude as intervening variables in the association between financial distress and marital quality. With a sample of 468 married individuals, dual-mediation models revealed demand/withdraw transmitted the effect of financial distress onto 3 different marital outcomes; in most instances, this indirect effect occurred through total couple demand/withdraw and not one spouse-specific pattern. In moderated mediation models, spousal gratitude exerted main effects on all marital outcomes and, for a subset of outcomes, protective effects for couples with high levels of demand/withdraw. Results elucidate how demand/withdraw patterns link financial distress to marital outcomes and highlight spousal gratitude expressions as a promising, yet understudied, process within couples that promotes and protects marital quality.

The deleterious effect of financial distress on spouses and their marriage is well documented, with higher levels of financial distress commonly associated with lower levels of observed and self-reported marital interaction and marital quality (see Conger et al., 1990; Falconier & Epstein, 2011a; Williamson, Karney, & Bradbury, 2013). With this effect established, research attention shifts to understanding the mechanisms and contingencies for this phenomenon (Hayes, 2012). In other words,

research activities increasingly focus on elucidating (a) mediators that function as pathways through which financial strain affects marital quality, as well as (b) moderators that account for why the links between financial distress, negative couple interactions, and lower marital quality occur for some but not all couples.

This study investigates such mediation and moderation questions in relation to two couple processes—demand/withdraw communication and spousal expressions of gratitude. First, using a series of parallel mediation models, we examine the roles of husband demand/wife withdrawal and wife demand/husband withdrawal as mediating the association between financial distress and three indicators of marital quality. Second, in moderated mediation models, we analyze the direct effect of expressions of gratitude from one's spouse on individual's marital quality as well as its ability to protectively buffer marital quality from the negative effects of financial distress and/or demand/withdraw. In doing so, we aim to (a) refine previous research on demand/withdraw communication as a mechanism linking financial distress to marital quality as well as (b)

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introduce spousal gratitude expressions as a promising, yet rarely studied, couple process that fosters positive marital outcomes.

Financial Distress and Marital Quality

Theoretical framework

Multiple theories have been developed to account for how financial strain and other contextual stressors affect marital and family functioning (see Randall & Bodenmann, 2009). Although highlighting different areas of emphasis, such models uniformly “share the assumption that the relation between stress and marital outcomes is mediated by intradyadic variables” (Ledermann, Bodenmann, Rudaz, & Bradbury, 2010, p. 195). Aspects of couples’ communication patterns often receive attention as intervening this association, including fluctuations in levels of hostility, warmth, constructive communication, and demand/withdraw interactions (Conger et al., 1990; Falconier & Epstein, 2011b; Ledermann & Macho, 2009). In this study, we focus our attention on the mediating role of demand/withdraw.

In addition to operating as mechanisms accounting for *how* stress shapes marital outcomes, other intradyadic variables may function to shape *when* this association appears. That is, certain couple processes may protectively buffer relationships from stressors arising from events both internal (e.g., negative partner behavior) and external (e.g., financial distress) to the relationship (see Fincham, Stanley, & Beach, 2007; Neff & Karney, 2007). Hill’s (1958) original ABC-X model of stress illustrated this basic tenet, describing how the impact of a stressor on the degree of crisis subsequently experienced by a family depended on the family’s coping resources and perceptions of the stressor. In essence, certain couple interpersonal processes can ameliorate, and others amplify, the mediating pathways proposed in couple stress models (Neff & Karney, 2007). Such protective couple factors can conceivably intervene at various stages in this pathway, such as altering the direct effect of external stress on marital outcomes (e.g., Conger, Rueter, & Elder, 1999) or altering the effects on

intermediate pathways, namely, that of external stress on spousal behaviors (e.g., Masarik, Martin, Ferrer, & Conger, 2012) and spousal behaviors on marital quality (e.g., Caughlin & Huston, 2002). This study explores the ability of spousal expressions of gratitude to function in a similarly protective manner.

Mediating processes—demand/withdraw communication

In this study, demand/withdraw interactions are investigated as an intervening couple process that links financial distress to aspects of marital quality. This communication pattern, which has been supported by decades of research in romantic relationships, is characterized by one partner criticizing, nagging, or making demands of the other, and the partner responding by avoiding the confrontation, becoming defensive, or withdrawing (Eldridge & Christensen, 2002). Multiple studies have documented the negative effects of this communication pattern on concurrent marital satisfaction (Caughlin & Huston, 2002; Eldridge & Christensen, 2002). Previous research has also specifically implicated demand/withdraw as a couple process that increases under conditions of financial distress and operates as a mechanism that accounts for the association between financial distress and lower marital quality (Falconier & Epstein, 2011b; Wilmarth, Nielsen, & Futris, 2014).

The frequency of demand/withdraw behaviors appears to vary by gender, with wife demand/husband withdraw occurring more frequently than husband demand/wife withdraw (Eldridge & Christensen, 2002). However, despite these gender asymmetries, little research to date has comparatively examined whether this intervening effect of demand/withdraw between financial distress and marital quality is accounted for primarily through one particular spouse-specific demand/withdraw pattern (e.g., wife demand/husband withdraw) or is more centrally accounted for by the total couple demand/withdraw within the dyad. We identified only one study linking economic strain to relationship quality that tested a two mediator model with both forms of demand/withdraw behavior between spouses;

results found support for the intervening effect for wife demand/husband withdraw but not husband demand/wife withdraw (Falconier & Epstein, 2011b). The aforementioned study by Falconier and Epstein (2011b) did not, however, quantify the significance of the actual indirect effects occurring through each path or compare these specific effects to the overall indirect effect through total couple demand/withdraw. Thus, in order to identify the nature of demand/withdraw that appears most explanatory for transmitting the effect of financial strain onto marital quality, further analyses appear warranted that test the indirect effects occurring through spouse-specific demand/withdraw pathways separately as well as collectively.

Moderating processes—spousal expression of gratitude

In addition to examining the intervening effects of demand/withdraw, we also consider whether perceptions of spousal gratitude and appreciation moderate any of the associations between financial distress, demand/withdraw, and marital outcomes. The scientific study of gratitude in interpersonal relationships has increased substantially in the last decade, with emerging findings indicating gratitude to be highly important and advantageous for the well-being of romantic unions (see Algoe, 2012). To illustrate, individuals with higher levels of gratitude for their partner feel closer to their partner, engage in more relationship maintenance behaviors, and have greater relationship commitment, satisfaction, and stability (Algoe, Gable, & Maisel, 2010; Gordon, Impett, Kogan, Oveis, & Keltner, 2012; Joel, Gordon, Impett, MacDonald, & Keltner, 2013; Kubacka, Finkenauer, Rusbult, & Keijsers, 2011). Individuals who express gratitude to their partner also report more comfort voicing relationship concerns and, over time, greater communal strength in the relationship (Lambert, Clark, Durtschi, Fincham, & Graham, 2010; Lambert & Fincham, 2011).

Along with the aforementioned salutary effects of individuals' being grateful for their partner and relationship (i.e., being

appreciative¹), a smaller body of research has begun to devote attention to perceiving and receiving gratitude *from* one's partner (i.e., feeling appreciated). Gordon et al. (2012), for instance, found individuals' sense of feeling appreciated by their partner was associated with greater appreciation for their partner and greater responsiveness to partner needs. Greater perceived appreciation for household labor contributions has also predicted higher relationship satisfaction (Klumb, Hoppmann, & Staats, 2006). Nevertheless, despite the recent growth in research on gratitude (whether for or from one's partner), studies have predominantly focused on the direct effects of gratitude on relationship well-being. Consequently, comparatively little research has considered the potential moderating, or protective, effect of gratitude in relationships.

Emerging findings, however, lend support for gratitude in romantic relationships—including that of perceiving spousal gratitude—to alter the effects of financial distress and negative partner behaviors on individuals' marital quality. First, perceptions of partner gratitude have been identified as promoting positive cognitions, behaviors, and appraisals within individuals toward their partner and relationship (Fincham & Beach, 2013; Gordon et al., 2012). These correlates of gratitude would be expected to counteract the negative cognitions and appraisals of one's partner and relationship that arise when spouses experience above-average levels of stress (Neff & Karney, 2004, 2009). In addition, gratitude has been associated with fostering a greater communal (rather than exchange-based) orientation to relationships (Algoe, 2012; Lambert et al., 2010). As communal relationships are characterized by partners having less of a focus on the relative costs incurred and benefits received from the

1. Conceptual clarity remains a lingering issue in the study of gratitude (Fincham & Beach, 2013), both in terms of defining gratitude (i.e., generalized vs. benefit triggered) and differentiating it from appreciation. Gordon et al. (2012) note that scholars often use the words *appreciation* and *gratitude* interchangeably, and indeed, in most measures of gratitude (Algoe et al., 2010; Gordon et al., 2012; Lambert & Fincham, 2011) *appreciation* is included in item language.

relationship (Clark & Mills, 1979), negative partner behaviors and communication patterns are not expected to exert as strong an influence on subsequent appraisals of marital quality for those with higher levels of perceived spousal gratitude. Thus, in line with other forms of positive engagement, perceptions of spousal gratitude may help foster a general climate of positivity and appreciation within a marriage, so conflicts and stressors that do appear are less consequential to marital outcomes (see Bradbury & Karney, 2004, for similar discussion regarding positive affect).

Present Study

Figure 1 depicts the conceptual models tested in this study. In each model, marital quality is assessed across three different outcomes: satisfaction, commitment, and divorce proneness. In the first model (Figure 1a), husband demand/wife withdraw and wife demand/husband withdraw were examined as parallel mediators transmitting the effect of financial distress onto each indicator of marital quality. This expands on previous research, involving both the current sample (Wilmarth et al., 2014) and many others (e.g., Ledermann et al., 2010), which has focused on single-mediation models with couples' general negative communication as mediating the relation between stress and marital quality. Given the limited prior research testing multiple mediation models of demand/withdraw, no specific a priori hypotheses were stated regarding whether total couple demand/withdraw or a spouse-specific pattern would be more explanatory. Although wife demand/husband withdraw appears more frequently (Eldridge & Christensen, 2002) and has been found to link financial distress to marital distress (Falconier & Epstein, 2011b), the potential for indirect effects through both mediators is nevertheless supported from previous studies that have found husbands and wives to both report more anger and withdrawal following more stressful days at work (Story & Repetti, 2006) as well as both husband demand/wife withdraw and wife demand/husband withdraw being concurrently linked to lower marital satisfaction (Caughlin, 2002).

To examine how spousal expressions of gratitude interact with external and internal events to shape marital outcomes, the second analytic model investigated the direct and moderating effects of spousal gratitude on this pathway (see Figure 1b). For direct effects, gratitude expressions from one's partner were expected to predict favorable levels on all three indicators of marital quality. The moderating effect of spousal gratitude expressions was investigated for the associations between (a) financial distress and demand/withdraw (line 1 in Figure 1b), (b) financial distress and marital outcomes (line 2), and (c) demand/withdraw and marital outcomes (line 3). These analyses were also considered exploratory due to minimal previous research into the moderating effects of spousal gratitude and hence no a priori hypotheses were formulated.

Method

Participants and procedures

Adult residents residing in a Southeastern state were contacted by phone in 2011 using a random-digit dial sample of numbers and asked to participate in a study on financial management behaviors and relationship quality. To be eligible, individuals had to be 18 years or older, married, and sharing a residence with their spouse. Consenting individuals then completed a survey via a computer-assisted telephone interview instrument. Selection of whether the husband or wife would complete the interview was randomized in an attempt to obtain equal percentages. Rural numbers were oversampled to increase geographic diversity. All procedures were approved by the institutional review board of the sponsoring research university.

A total of 9,170 phone numbers were dialed, with 1,008 successful contacts made (i.e., entry stored in database). From this, 540 individuals were eliminated from the sample due to being unmarried ($n = 257$), refusing to provide marital status ($n = 4$), ending the phone call before any information was obtained ($n = 235$), or ending the call before information was obtained on the variables used in this study ($n = 44$). Thus, the final sample included

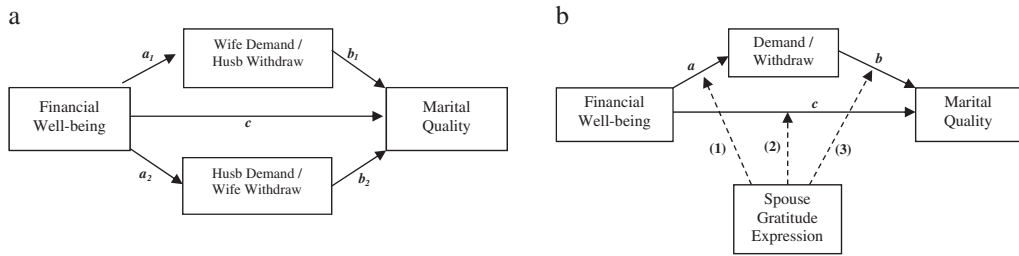


Figure 1. Models analyzed in study: (a) multiple mediation and (b) moderated mediation.

468 married individuals, ranging in age from 21 to 86 years ($M = 51.41$, $SD = 14.00$) and a majority of whom were female (63%). Marital duration ranged from less than 1 year to 66 years ($M = 23.09$, $SD = 16.02$) and 35% of the unions reflected remarriages for one or both spouses. The majority of individuals (79%) reported having children. About one fourth (22%) of the sample resided in a rural area. Concerning race, 74% of the sample self-identified as White, 22% as Black/African American, 3% multiracial, and 1% Asian American. Only 2% reported being Latino/a. Highest level of education completed ranged from grade school to advanced/professional degree, with median completion level being a bachelor's degree. Twenty percent of participants had household incomes of less than \$50,000, 40% had household incomes between \$50,000 and \$90,000, and 41% had household incomes greater than \$90,000. All demographic characteristics reflect multiply imputed estimates from five implicates. With the exception of income (32% missing), all demographic characteristics were missing responses from less than 2% of participants.

Measures

Financial well-being/financial distress

Individuals' reports of financial well-being/financial distress were assessed via the Personal Financial Wellness (PFW) Scale™ (Prawitz et al., 2006). This eight-item measure (10-point Likert scale) assessed the level of stress and well-being individuals felt regarding their financial situation (males, $\alpha = .92$; females, $\alpha = .90$). The PFW Scale™ identifies both objective (e.g., "How frequently do you

find yourself just getting by financially and living paycheck to paycheck") and subjective (e.g., "How stressed are you about your personal finances in general") indicators of PFW. Higher scores reflected greater financial well-being/lower financial distress, consistent with usage and reporting guidelines of the PFW Scale™.

Demand/withdraw communication

The Communication Patterns Questionnaire–Short Form (CPQ–SF; Christensen & Heavey, 1993) was employed to assess respondent's perception of their own and their spouse's typical communication behaviors when issues or problems arise. Following recommendations by Caughlin and Huston (2002), four items from the CPQ–SF were utilized to assess the likelihood (1 = *very unlikely*, 9 = *very likely*) of particular demand/withdraw patterns occurring in the dyad. Two items reflected husband demand/wife withdraw patterns and two items reflected wife demand/husband withdraw; couple demand/withdraw represented all four items. Mean scores were computed for husband demand/wife withdraw (males, $\alpha = .59$; females, $\alpha = .68$), wife demand/husband withdraw (males, $\alpha = .71$; females, $\alpha = .68$), and couple demand/withdraw (males, $\alpha = .77$; females, $\alpha = .81$).

Spousal expression of gratitude

Reports of spousal expression of gratitude were assessed via an adaptation of the Expression of Gratitude in Relationships scale developed by Lambert and Fincham (2011). The original three-item measure gauged respondents' expressions of gratitude *for* their partner (e.g.,

“I express my appreciation for the things that my partner does for me”). The adapted scale asked respondents to report the frequency (1 = *never*, 5 = *always*) of gratitude expressions *from* their partner (i.e., “My spouse expresses appreciation for the things I do for him/her”; “My spouse lets me know that he/she values me”; “My spouse acknowledges me when I do something nice for him/her”). Higher scores reflected greater levels of perceived spousal gratitude expressions. The adapted measure demonstrated strong internal reliability (males, $\alpha = .91$; females, $\alpha = .89$) similar to the original measure ($\alpha = .92$; see Lambert & Fincham, 2011).

Marital quality

Three dimensions of marital quality were assessed: satisfaction, commitment, and divorce proneness. Selection and measurement of these items aligned with approaches utilized in previous studies of marriage (e.g., Wilcox & Dew, 2012). First, *marital satisfaction* was assessed via a single item that asked, “All things considered, how happy are you with your marriage” (1 = *extremely unhappy*, 10 = *perfectly happy*). Second, *relationship commitment* was assessed via a four-item index from The Commitment Inventory (Stanley & Markman, 1992), in which individuals reported on items such as their desire for the relationship to continue (1 = *strongly disagree*, 7 = *strongly agree*; males, $\alpha = .64$; females, $\alpha = .70$). Lastly, *divorce proneness* was assessed via a single item that asked about individuals’ thoughts or discussions of separation or divorce (1 = *never*, 6 = *all of the time*). Higher scores reflected greater levels of each outcome. Scores on all three variables indicated non-normal distributions, and variable transformations were subsequently conducted (square for right-skewed, square root for left-skewed) to adjust distributions to better approach normality.

Controls

Control variables in the analyses included demographic characteristics (i.e., education, marital duration, having children, first-order or higher order union) that have been linked to

levels of marital satisfaction (Sweeney, 2010; Twenge, Campbell, & Foster, 2003; VanLaningham, Johnson, & Amato, 2001; Wilcox, 2010). Classification of higher order marriages reflected couples in which either spouse had been previously married.

Plan of analyses

Data analysis was conducted using SPSS 21 (IBM SPSS, 2012) and the statistical macro package PROCESS (Hayes, 2012). Indirect effect significance levels were tested via bootstrapping, given the non-normal distribution of the product term comprising the indirect effect (Hayes, 2013). Financial well-being, demand/withdraw, and spousal gratitude expressions were all mean-centered prior to moderation analyses to permit better interpretability of results (Dalal & Zickar, 2012). To account for low levels of missing data, multiple imputation was conducted from five imputates via NORM software (Schafer, 1999). Pooled estimates of regression coefficients and their standard errors followed procedures outlined by Rubin (1987) to account for within- and between-imputation variances.

Results

Preliminary analyses

Table 1 presents the descriptive statistics for the variables involved in the analyses. Males and females reported, on average, highly positive levels of marital quality within their respective unions. This appeared with respect to all three marital outcomes of interest. For marital processes, low demand/withdraw communication patterns were exhibited as well as high average levels of spousal gratitude expressions. Average levels of financial well-being, as classified by PFW Scale™ criteria, were *low financial distress/good financial well-being*. Correlations among the three marital outcomes suggested overlapping, yet clearly distinct, constructs (males, $r_s = .23-.29$; females, $r_s = 0.26-0.53$; all $p_s < .01$). Independent-sample *t* tests found no significant gender differences, indicating that neither males nor females reported any

Table 1. Descriptive statistics for study variables

Variable	Females ($N = 293$)				Males ($N = 175$)			
	<i>M</i>	<i>SD</i>	Range	% Missing	<i>M</i>	<i>SD</i>	Range	% Missing
Marital satisfaction ^a	8.90	1.78	1–10	1.0	9.10	1.64	1–10	1.1
Commitment ^a	6.47	0.95	1–7	0.3–2.1	6.56	0.89	1–7	0.0–0.6
Divorce proneness ^a	1.46	0.96	1–6	0.7	1.42	1.00	1–6	1.7
Spousal gratitude expression	4.22	0.90	1–5	0.7–1.4	4.29	0.88	1–5	0.6
Total couple demand/withdraw	2.66	1.99	1–7.75	2.0–2.4	2.83	1.86	1–7.75	1.1–2.3
Wife demand/husband withdraw	2.78	2.24	1–9	2.0	2.97	2.22	1–9	1.7
Husband demand/wife withdraw	2.53	2.11	1–9	2.0–2.4	2.68	1.94	1–9	1.1–2.3
Financial well-being	6.97	2.25	1–10	0.0–2.7	7.34	2.32	1–10	0.0–1.7
Marital duration	22.62	15.32	0–65	0.3	23.71	17.12	0–66	1.1
First marriage ^b	0.63	0.48	0–1	0.0	0.68	0.47	0–1	0.6
Education	6.19	1.82	2–9	0.7	6.42	1.88	2–9	0.0
Have children ^b	0.79	0.41	0–1	0.7	0.78	0.42	0–1	1.1

^aVariable transformed prior to analysis due to positive (marital satisfaction, commitment) or negative (divorce proneness) skew. Nontransformed values reported here. ^b1 = yes, 0 = no. Mean, standard deviation, and range determined from multiply imputed data ($m = 5$ implicates). Percentage missing based on original data set. Range of percentage of missing data (e.g., 0.3–2.1) is reported for composite variables based on levels of missingness for individual items.

particular relationship behavior or cognition to greater or lesser degree. Across the entire sample, paired-sample *t* test comparisons found wife demand/husband withdraw ($M = 2.85$, $SD = 2.23$), was reported more frequently than husband demand/wife withdraw (average $M = 2.59$, $SD = 2.05$), $t_{ave}(467) = 3.16$, all $p < .01$ across five implicates.

A series of ordinary least squares regressions were also conducted to examine the direct effect of financial well-being on each of the indicators of marital quality, controlling for sociodemographic variables (i.e., education level, marital status, marital duration, and having children). For females, higher financial well-being was associated with higher marital satisfaction ($B = 2.69$, $p < .01$), commitment ($B = 0.66$, $p < .05$), and lower divorce proneness ($B = -0.02$, $p < .05$). Similarly for males, higher financial well-being was associated with higher marital satisfaction ($B = 2.30$, $p < .01$), commitment ($B = 1.13$, $p < .01$), and lower divorce proneness ($B = -0.03$, $p < .05$). Thus, a direct effect of financial well-being was

evident on each indicator of marital quality for both males and females.

Demand/withdraw communication

Analyses began by testing the multiple mediation model depicted in Figure 1a, with separate analyses conducted for females and males across each of the three marital outcomes. Tests of parallel multiple mediation can identify whether an overall indirect effect exists across the set of mediators, as well as the extent to which each intervening variable mediates the effect of *X* (i.e., financial well-being) on *Y* (i.e., marital quality), accounting for the presence of any other mediator(s) in the model. Because of the attenuation of indirect effects stemming from correlated mediators, result interpretation in multiple mediation models principally focuses on the total indirect effect across the set of mediators; significance levels of specific indirect effects receive attention only in instances when the total indirect effect is non-significant (see Preacher & Hayes, 2008).

Table 2 summarizes the indirect effects through husband demand/wife withdraw and wife demand/husband withdraw (i.e., specific indirect effects) as well as through the overall couple demand/withdraw (i.e., total indirect effect). In five of the six models, the effect of financial well-being on the marital quality indicator was significantly transmitted by total demand/withdraw in the couple and not one specific spousal pattern. The one exception involved males' divorce proneness, in which only wife demand/husband withdraw demonstrated a significant indirect effect. Hence, results indicated that demand/withdraw significantly transmitted the effect of financial well-being on marital quality, with the dual set of both husband- and wife-initiated demand/withdraw (i.e., couple demand/withdraw)—and not only particular spouse-specific pattern—most commonly transmitting this effect.

Spousal expression of gratitude

As per Figure 1b, analyses then tested the direct and protective effects of spousal gratitude

expressions on (a) demand/withdraw and (b) indicators of marital quality. We first examined the effects of financial well-being, spousal gratitude, and their interaction on demand/withdraw communication (line 1, Figure 1b). Here, higher levels of spousal gratitude expressions were associated with lower levels of couple demand/withdraw for both males ($B_{\text{Grat}} = -0.77$, $SE = 0.16$, $p < .01$) and females ($B_{\text{Grat}} = -0.64$, $SE = 0.13$, $p < .01$), even after controlling for financial well-being and various demographic variables (i.e., marital duration, remarriage status, education, and having children). For females, only financial well-being ($B_{\text{Fin}} = -0.11$, $SE = 0.05$, $p < .05$) also predicted levels of couple demand/withdraw beyond reported spousal gratitude. Among males, no variables besides perceived spousal gratitude significantly accounted for variability in levels of demand/withdraw. The interaction term of Financial Well-Being \times Spousal Gratitude Expressions on demand/withdraw was nonsignificant for males ($B_{\text{Fin} \times \text{Grat}} = -0.10$, $SE = 0.08$, $p = .26$) and females ($B_{\text{Fin} \times \text{Grat}} = 0.05$, $SE = 0.05$, $p = .32$).

Table 2. Indirect effects of demand/withdraw for pathway linking financial well-being to marital outcomes

	Females ($N = 293$)			Males ($N = 175$)		
	Marital satisfaction	Commitment	Divorce proneness	Marital satisfaction	Commitment	Divorce proneness
Mediator						
Wife demand/husband withdraw ($M_1 = a_1 \times b_1$)	0.298	0.077	-0.003	0.515*	0.190*	-0.008*
Husband demand/wife withdraw ($M_2 = a_2 \times b_2$)	0.346	0.159*	-0.005	-0.024	-0.003	0.003
Total couple demand/withdraw ($M_{\text{Tot}} = M_1 + M_2$)	0.644*	0.236*	-0.007*	0.491*	0.187*	-0.005

Notes. 5,000 bootstrap samples. Results control for marital duration, education, remarriage status, and having children. a_1 and b_1 reflect paths depicted in Figure 1a. Boldface values reflect mediating variable included in moderated mediation model (Figure 1b).

* indicates 95% bias-corrected confidence interval excluded zero (equivalent to $p < .05$).

indicating that any effects of financial distress on demand/withdraw communication did not vary based on the amount of gratitude expressions from one's spouse (tabulated results available from first author).

We then proceeded to examine the effects of financial distress, demand/withdraw, spousal gratitude expressions, and their interactions on marital quality outcomes (lines 2 and 3, Figure 1b). Results are summarized in Table 3. For main effects, higher levels of spousal gratitude expressions were associated

with higher levels of males' and females' marital satisfaction and commitment as well as lower levels of females' divorce proneness. Moreover, across all independent variables, reports of spousal expressions of gratitude were the most consistent significant predictor of all independent variables for marital quality indicators for both genders. For females, only demand/withdraw also demonstrated a significant effect across all three outcomes, and for males, only financial well-being demonstrated a consistent significant effect. A portion of

Table 3. Multiple regression estimates predicting marital satisfaction, commitment, and divorce proneness

Predictor	Marital satisfaction		Commitment		Divorce proneness	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Females (<i>N</i> = 293)						
Spousal gratitude expression	8.55**	1.68	2.05**	0.67	-0.05*	0.02
Demand/withdraw (D/W)	-2.56**	0.67	-0.97**	0.28	0.03**	0.01
Financial well-being (Fin. Well.)	1.51**	0.58	0.25	0.24	-0.01	0.01
D/W × Spousal Gratitude	0.98	0.70	0.83**	0.28	-0.02*	0.01
Fin. Well. × Spousal Gratitude expression	0.29	0.60	0.19	0.24	-0.01	0.01
Marital duration	0.20*	0.09	0.03	0.04	0.00	0.00
First marriage ^a	0.66	2.85	2.01	1.18	0.01	0.04
Education	-1.48*	0.73	0.48	0.30	0.02	0.01
Have children ^a	-8.21*	3.39	-2.10	1.41	0.03	0.05
Constant	93.47**	5.70	39.80**	2.37	1.05**	0.08
<i>R</i> ²	.292**		.216**		.162**	
Males (<i>N</i> = 175)						
Spousal gratitude expression	4.72*	2.35	4.31**	0.96	-0.03	0.03
Demand/withdraw (D/W) ^b	-2.33*	0.92	-0.57	0.38	0.02	0.01
Financial well-being (Fin. Well.)	1.64*	0.76	0.78*	0.30	-0.02*	0.01
D/W × Spousal Gratitude	1.05	1.24	-0.46	0.48	-0.03**	0.01
Fin. Well. × Spousal Gratitude expression	0.59	1.05	-0.17	0.41	0.00	0.01
Marital duration	0.14	0.10	-0.07	0.04	0.00	0.00
First marriage ^a	6.10	3.77	2.76	1.58	-0.01	0.06
Education	-2.26*	0.87	-0.36	0.36	-0.02	0.01
Have children ^a	-6.53	4.03	1.18	1.68	0.02	0.06
Constant	98.10**	6.58	44.79**	2.73	1.27**	0.10
<i>R</i> ²	.236**		.246**		.218**	

^a1 = yes; 0 = no. ^bFor divorce proneness, D/W indicates wife demand/husband withdraw (total couple D/W otherwise). **p* < .05. ***p* < .01.

these main effect findings is qualified, however, by significant interaction terms, to which we now turn our attention.

Moderation effects of spousal expressions of gratitude on marital outcomes were examined with respect to financial well-being as well as demand/withdraw communication (lines 2 and 3, respectively, in Figure 1b). As shown in Table 3, the interaction between financial well-being and perceived gratitude was nonsignificant in all instances, indicating that spousal gratitude did not moderate the effect of financial well-being on marital quality. Thus, after accounting for other variables in the model, the effect of financial well-being on each of the marital outcomes did not differ based on levels of spousal gratitude expressions. However, reported gratitude expressions from spouses did alter the effect of demand/withdraw on particular indicators of marital quality. Specifically, a significant interaction between spousal gratitude and demand/withdraw appeared in models involving females' commitment and males' and females' divorce proneness.

To more clearly interpret and illustrate these results, we plotted estimated levels of each marital outcome at low (1 *SD* below mean) and high (1 *SD* above mean) levels of demand/withdraw and spousal expressions of gratitude (Figure 2). Plots of these interactions appear in Figure 2. As illustrated in each plot, higher levels of reported spousal gratitude expressions buffered females' marital commitment as well as males' and females' divorce proneness from the detrimental effect of higher levels of demand/withdraw. That is, with increasing levels of demand/withdraw communication, individuals with high levels of perceived spousal gratitude did not exhibit a corresponding decline in commitment or increase in divorce proneness as occurred with individuals reporting lower levels of spousal gratitude expressions.

For the three instances with significant moderation effects, a final set of analyses investigated the potential of moderated mediation (i.e., that the mediating indirect effect of demand/withdraw in linking financial well-being to marital quality is conditioned on the level of perceived spousal gratitude).

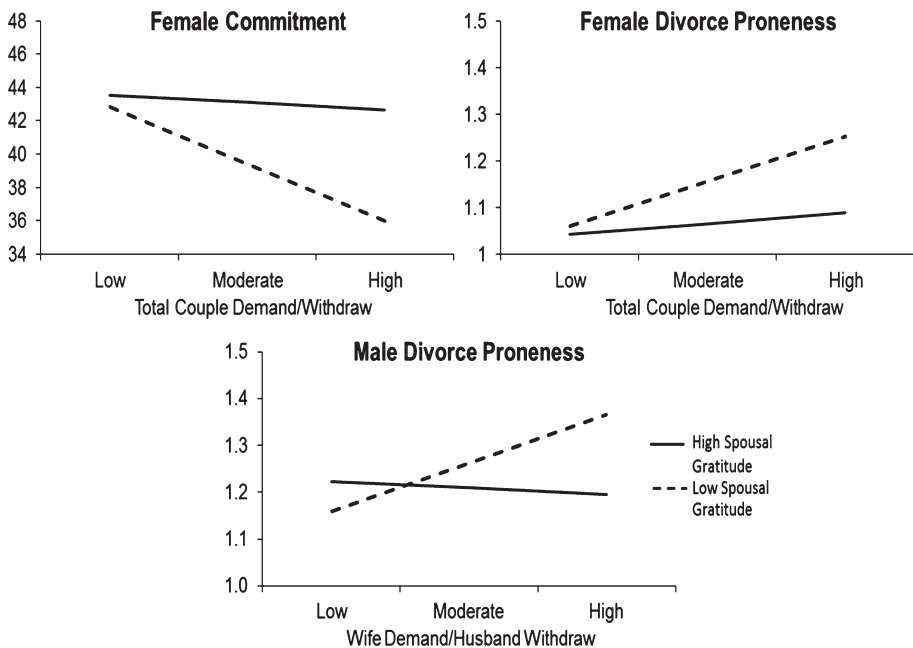


Figure 2. Spouses' marital quality indicators as function of demand/withdraw communication and spouse expression of gratitude (low = 1 *SD* below the mean, high = 1 *SD* above the mean).

Moderated mediation was supported for outcomes of females' commitment and females' divorce proneness. In both instances, the indirect effect of demand/withdraw no longer reached levels of statistical significance for females with high levels of expressions of gratitude from their spouses.² This suggests that demand/withdraw communication transmitted the effect of financial well-being onto females' commitment and divorce proneness only among females with low or average levels of reported gratitude expressions by spouses; at high levels of perceived gratitude, this indirect effect did not appear, given the diminished effect of demand/withdraw communication on these outcomes due to high spousal gratitude. In moderated mediation models for males' divorce proneness, the indirect effect was nonsignificant across all levels of gratitude, thus precluding any inferences on conditional indirect effects and highlighting the ability of reported gratitude expressions from spouses to interrupt this pathway among males (tabulated results available from first author).

Discussion

This study converges two growing areas of interest in marital research, namely, pathways of influence that link external stress to marital outcomes (Neff, 2012) and the importance of interpersonal gratitude in promoting and maintaining relationship well-being (Algoe, 2012). Collectively, results provide greater understanding of "how" and "when" financial distress is related to marital satisfaction, commitment, and divorce proneness. In particular, new insights emerge concerning demand/withdraw communication and spousal expressions of gratitude, both of which appear highly influential on marital quality.

Results from parallel mediation models revealed that the negative effect of financial distress on marital quality was transmitted

through its effects on elevating levels of demand/withdraw interactions between partners. In nearly all instances, the intervening effect involved demand/withdraw within the dyad collectively and not one particular spouse-specific pattern. This finding slightly differs from previous research employing similar spouse-specific mediators that found only wife demand/husband withdraw as intervening (Falconier & Epstein, 2011b). Speculatively, the present results may offer a more accurate depiction, as the earlier study did not calculate the total or specific indirect effects associated with the spouse-specific mediators. The one instance (men's divorce proneness) in which a spouse-specific demand/withdraw pattern was the central intermediate pathway suggests the unique role that the wife demand/husband withdraw pattern (but not husband demand/wife withdraw) has for the association between husbands' financial distress and their relationship termination. For marital enrichment and intervention programs, these associations between financial distress, maladaptive couple interactions, and marital outcomes reinforce the importance of content in these programs that helps couples understand how stressful contextual factors can spill over and affect marital behaviors and cognitions. Such attention is further underscored by writing that suggests couples rarely acknowledge the effects of contextual factors on their relationship quality (Berscheid, Lopes, Ammazalorso, & Langenfeld, 2001).

A series of notable findings also emerged with respect to spousal expressions of gratitude. Concerning main effects, reported gratitude expressions from one's spouse were favorably associated with nearly all marital outcomes, a finding that held for both females and males. Thus, positive relationship outcomes appear to be associated not only with being appreciative and possessing gratitude for one's partner (Algoe et al., 2010; Gordon et al., 2012) but also as the current study highlights, feeling appreciated and perceiving gratitude from one's partner. This salutary effect of perceived partner gratitude was found across multiple dimensions of relationship well-being, as previous writing has suggested (Fincham & Beach, 2013).

2. For example, the indirect effects for demand/withdraw in transmitting the effect of females' financial well-being to marital commitment were equal to 0.258*, 0.106*, and 0.024 at low (-1 SD), medium (mean), and high ($+1$ SD) levels of perceived gratitude. An asterisk (*) indicates the 95% confidence interval for this effect excluded zero.

The protective effect of perceived spousal gratitude and appreciation occurred with respect to demand/withdraw communication and various marital quality outcomes (line 3 in Figure 1b), but did not appear with respect to financial distress and its associations with either negative communication (line 1) or marital quality (line 2). In this manner, expressions of gratitude from one's spouse appeared to function in a similar manner as positive affect, which also has demonstrated an ability to mitigate the negative effect on marital quality associated with demand/withdraw communication (Caughlin & Huston, 2002) and poor problem-solving skills (Johnson et al., 2005). This protective effect of spousal gratitude expressions only emerged with indicators of marital stability (commitment, divorce proneness), but not satisfaction. Such findings draw further attention to the distinctiveness between marital satisfaction and stability that, although related, have only a modest association in meta-analyses ($r_s = .3-.4$; Karney & Bradbury, 1995). As such, efforts to promote marital satisfaction and marital stability entail two discrete foci and carry differing practical and ideological implications for researchers, practitioners, and couples (see Barton & Bishop, 2014). Furthermore, to the degree that matters of commitment—and not personal happiness—are central to defining marital success (Amato, Booth, Johnson, & Rogers, 2007), reinforcing the benefits of spousal gratitude and helping partners express and act in ways that lead each spouse to feel appreciated appears highly germane for marital intervention and prevention efforts.

Recent findings also highlight the ability to increase spouses' gratitude for their partner as well as expressions of gratitude to their partner. One longitudinal study, for example, demonstrated increases in both partners' grateful mood by having one spouse keep a daily gratitude journal or overtly expressing greater amounts of gratitude to their spouse (Leong, 2009). Other research suggests that simply asking individuals to daily report how often they express gratitude may lead individuals to verbally express more statements of gratitude to their partner (Gordon, Arnette, & Smith, 2011). Taken together, the current results and

those of other studies call attention to gratitude as a key process related to the development and maintenance of marital unions as well as a malleable protective factor for emphasis in marital enrichment programming.

Certain limitations of the study merit consideration when interpreting its results. First, data are cross-sectional and from a single reporter, hindering the ability to make definitive causal statements as well as introducing potential confounds of sentiment override and common method variance. Second, information was only available from one spouse in the marital union, precluding the possibility of dyadic analyses. Third, sample size limitations (particularly for males) and measurement error in composite variables both increase the likelihood of Type II error, particularly for moderating terms (Aguinis, 1995), leading some findings to be perhaps overly conservative. Cronbach's alpha for certain demand/withdraw indicators were low, similar to previous research (Caughlin & Huston, 2002), suggesting a need for improved spousal-specific measures of this communication pattern. Levels of gratitude in a relationship are likely to fluctuate over time, and future longitudinal efforts could be devoted to identifying the degree of stability versus change in types of gratitude over time as well as identifying predictors of above- or below-average levels of gratitude. Future efforts could also investigate the "spillover" effect from gratitude onto other prosocial cognitions, emotions, and behaviors (see Fincham & Beach, 2013; Kubacka et al., 2011). Spillover thus far in marital scholarship has been largely described in relation to external stress and hence carried a negative connotation (e.g., Randall & Bodenmann, 2009). Shifting attention to identifying catalysts for "positive spillover"—such as partner expressions of gratitude—illustrates one of the many potential avenues for further investigation in this promising emerging area of research on marital and romantic relationships.

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