Does Marital Quality Protect Against Distress? Marital Quality and

Momentary Negative Mood in Later Life

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ABSTRACT

We examine: associations between marital quality (i.e., support and strain) and three indicators of momentary distress (i.e., sadness, frustration, and worry) among older husbands and wives; the relative impact of own versus spouse's marital appraisals on distress (crossover effects); and the extent to which the impact of own marital appraisals are moderated by spouse's appraisals. Data are from the 2009 Disability and Use of Time (DUST) daily diary supplement to the Panel Study of Income Dynamics (N=722). One's own marital strain, support, and overall quality are significant predictors of all three outcomes; effects do not differ by gender. We find counter-intuitive evidence of cross-over effects; as wives' level of marital support increase, husbands' levels of frustration increase. The protective effect of marital support on men's sadness is amplified when his wife also reports high levels of support. We discuss implications for older spouses' psychological distress.

The protective effects of marriage for physical and emotional health are widely documented (Carr & Springer, 2010). However, recent research shows that these effects are conditional upon the quality of the marriage; problematic marriages take an emotional toll whereas high quality marriages provide benefits, especially for women (Proulx, Helms & Buehler, 2007) and older adults (Umberson, Williams, Powers, Liu, & Needham, 2006). Although the association between marital strain and psychological distress is well established, several important issues remain unexplored. First, most studies focus on young and midlife adults (see Bookwala, 2012 for review), thus relatively little is known about the ways that marital strain and a lack of marital support affect well-being among older adults in long-term marriages. Second, most studies focus on only one spouse's marital appraisals, and fail to consider that both own and spouse's appraisals may contribute independently to emotional well-being and distress (i.e., "cross-over" effects). Although mounting research suggests one spouse's marital (dis)satisfaction may affect a partner's well-being via "emotional transmission" (Larson & Almeida, 1999), such studies typically focus on young or midlife persons (Beach, Katz, Kim, & Brody, 2003; Fincham et al., 1997; Whisman, Uebelacker, & Weinstock, 2004).

Third, we know of no studies that explore the interactive effect of both partners' marital appraisals on well-being. Older spouses' marital appraisals are correlated only modestly ($r < 0.50$ in this study; see also Bulanda, 2011; Carr & Boerner, 2009; Cohen, Geron, & Farchi, 2009), thus it is plausible that spouses' appraisals as well as convergences (or divergences) therein may contribute independently to emotional distress. For example, the deleterious effects of marital strain on emotional distress may be amplified when one's spouse also is dissatisfied with the marriage, whereas these effects may be muted or even reversed when one's partner is satisfied.

Finally, most studies of marriage and emotional distress tend to use aggregated symptom checklists that capture one's feelings within the last week, such as the Center for Epidemiologic Depression (CESD) scale (Radloff, 1977). Such scales require an aggregated and retrospective appraisal of one's overall feelings experiences within a particular time frame. As such, they may be susceptible to reporting biases including recall problems, and the tendency for one's current mood to color one's retrospective appraisal. We are interested instead in "experienced emotion" or the moment to moment reports of how frustrated, sad, or worried one is at a particular moment. "Experienced emotion" has attracted researchers' attention in the last decade; studies suggest that this type of measure of distress may relate to marital interactions in ways that are distinctive from aggregated measures (Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004, 2006; Schwarz, Kahneman, & Xu, 2008).

Thus, we explore the distinctive ways that both own and spouse's marital quality appraisals affect three negative emotions: momentary frustration, sadness, and worry. Data are from the 2009 Disability and Use of Time (DUST) supplement to the Panel Study of Income Dynamics, which includes 24-hour time diaries capturing activities and emotions experienced on the previous day. Using these data obtained from older married couples, we explore: (a) associations between positive, negative, and overall marital quality appraisals, and three aspects of emotional distress for husbands and wives; (b) the impact of own versus spouse's marital appraisals (crossover effects); (c) the extent to which the impact of own and spouse's marital quality appraisals persist net of demographic, health, socioeconomic status, and specific characteristics (e.g., day of week, activity) of the target day; and (d) the extent to which the impact of one's own marital appraisal on emotional distress is moderated by spouse's appraisal.

Understanding later-life marriage is an important pursuit, given current demographic trends. The proportion of adults ages 65 and older is projected to increase from 13 percent in 2010 to nearly 20 percent in 2030 (Federal Interagency Forum on Aging Related Statistics, 2012). As such, family demographers will need to develop a richer understanding of the nature and implications of marital relations in later life, especially because marital quality may buffer against (while marital strain may amplify) the health-depleting effects of later-life stressors including sensory impairment, functional limitation, and caregiving duties (e.g., Bookwala & Franks, 2005). In the full manuscript, we will draw on studies of later-life relationships and their implications for mental health, with attention to gender differences therein, as well as attention to the ways that "his" and "her" marital appraisals may have distinctive implications for own and spouse's levels of emotional distress.

DATA AND METHODS

Data

Analyses are based on data from the Disability and Use of Time (DUST) supplement (Freedman & Cornman, 2012) to the 2009 Panel Study of Income Dynamics (PSID; Hill, 1992), a national panel study of a representative sample of families in the United States. The original 1968 PSID sample included 18,000 individuals in approximately 5,000 families. All respondents from the original sample and anyone born to or adopted by one of these families have been followed in the study. PSID is a self-sustaining sample; the sample increases as children leave their parents' households, and form new households. Adult children are then tracked by the study investigators; the design produces a nationally representative cross-section of families each year (McGonagle & Schoeni, 2006). Interviews were conducted annually between 1968 and 1997 and biennially thereafter. Re-interview rates for original sample members have been

consistently 98% per year (96% over two years) and the sample of families now exceeds 8,000. In 2009, the response rate for the PSID (including new split-off households) was 94.3%.

DUST sampled couples in the 2009 PSID in which both spouses were at least 50 years old and at least one spouse was at least 60 years old as of December 31, 2008. Because the vast majority of married persons ages 60 and older have spouses who are age 50 and older, the sample represents married persons ages 60 and older. To enhance opportunities for studying disability, couples in which one or both spouses reported a health limitation during the 2009 core interview were oversampled, and strata further divided by the husband's age (<70, 70+).

The DUST instrument, which was administered by telephone within a few months following the 2009 core PSID interview, was designed as a 30 to 40 minute diary. DUST was paired during the first of two interviews with a 15 to 20 minute supplemental questionnaire which included global well-being, functioning, marital quality, and stylized time use questions. To obtain a balanced sample of days, couples were systematically assigned interview days that would yield one weekday and one weekend day diary; thus, up to four daily diaries could be completed per couple. The diary asked about all activities on the previous day, beginning at 4 a.m. and continuing until 4 a.m. the day of interview. Respondents also were asked detailed questions about how they felt while doing activities during up to three randomly selected times during the day (hereafter referred to as momentary distress). The times were randomly selected from three windows (8 am-11:59 am; 12:00 pm-3:59 pm and 4:00 pm-8:00 pm), ensuring distribution throughout the waking day.

Of the 543 eligible couples sampled for DUST, at least one diary was completed for 394 couples, yielding a response rate of 73%. About 4% of respondents (n=33) had a spouse who could not participate because of a permanent health condition (e.g. memory loss). For these

couples, diaries were collected from the spouse without a health condition. Because analyses

focus on own and spouse's reports of marital quality, our analytic sample is limited to couples

for whom we have both spouses' reports of marital quality (n=361). For analyses assessing

momentary distress, we have 720 paired husband-wife diary days. Analyses of momentary

emotional distress are based on the random subset of diary activities and include 2,078 activities

for husbands and 2,103 for wives.

Dependent Variables

Our three measures of *momentary distress* refer to how frustrated, sad, and worried a

respondent was while doing reported activities on the study day. For up to three randomly

selected activities entered into each diary, respondents reported how frustrated, sad, or worried

they were on a scale from 0 (not at all) to 6 (very). This measure is modeled after the Day

Reconstruction Method (Kahneman et al., 2004) and Princeton Affect and Time Study (Krueger,

2007). DUST assessed momentary well-being for three randomly selected activities to minimize

subject fatigue and boredom; this sampling procedure is consistent with other national daily

diary studies (Ida et al., 2012). Comparison of momentary measures collected through 24-hour

diary format with real time experience sampling methods suggest very good agreement (Dockray

et al., 2010).

Independent Variables

Marital quality. Marital quality is derived from a subset of six items drawn from a

standardized instrument reflecting both martial strain and support (Whalen & Lachman, 2000).

Support measures indicate how much: you can open up to your spouse if you need talk about

your worries; your spouse appreciates you; and spouse understands the way you feel about

things. *Strain* measures indicate how much your spouse: argues with you; makes you feel

tense; and gets on your nerves. Response categories range from 1 (not at all) to 4 (a lot).

Responses are averaged and higher values reflect more of each attribute. We also constructed an

overall marital quality measure, which averaged the support and reverse-coded strain subscales,

where overall scores indicate a better quality marriage. Confirmatory factor analyses yielded

scale alphas of 0.71 for the support subscale, 0.71 for the strain subscale, and 0.78 for the full

six-item scale.

     Control Variables. All models are adjusted for selected respondent, spouse, and couple

characteristics that may potentially confound the statistical association between marital quality

and emotional distress. Respondent and spouse characteristics include age, self-rated health, and

disability. *Age categories* are 50-69 (reference category), 70-79, and 80+ for men, and 50-59

(reference category), 60-69, 70+ for women. The different cutpoints for husbands and wives

reflect the fact that at least one member of the dyad had to be age 60 or older for study inclusion,

and men tend to marry women younger than themselves. These categories also reflect the low

number of men under age 60 and women over age 80 in the sample. We use categorical rather

than continuous measures because the association between age and distress is not linear (Frijters

& Beaton, 2012).

     Order of marriage refers to whether one is in a remarriage; first marriage is the reference

category.. We also control for whether a respondent *has any children* (1=yes, 0 = no). *Self-rated*

health refers to whether one rates his/her own health as excellent, very good, good, fair, or poor,

where higher scores reflect poorer health. The five-level ordinal measure is preferable to a

dichotomous indicator (e.g., poor/fair versus other) as the latter conceals important gradations in

later-life health (Finnas et al., 2008). *Disability* refers to whether one has "serious difficulty"

with: hearing; seeing even when wearing glasses; concentrating, remembering or making

decisions because of a physical, mental or emotional condition; walking or climbing stairs; difficulty dressing or bathing; and doing errands alone such as visiting a doctor's office or shopping because of a physical, mental, or emotional condition. This measure was developed for the American Community Survey (Weather, 2005). Couple characteristics are *total household income for 2008* (in quartiles)*, total wealth* (in quartiles), and *marital duration* (in years).

Because the momentary mood assessment were asked in the context of daily activities, we also control for whether the activity was performed *on a weekend* (vs. weekday), *at home* (vs. elsewhere), *with the spouse* (vs. alone or with someone else), and which of 17 different activity categories best captures the *nature of the randomly-selected activity*. Because the activity categories are mutually exclusive, we use travelling as the comparison group. One of the chief benefits of diary data is its detailed information on what people are doing when their momentary mood is assessed. In preliminary analyses, we contrasted regression models using the full set of 17 activities indicators versus aggregated categories to predict distress. The distinctive effects of the 17 categories in our sex-specific models suggested that we would need to create different aggregated categories for each gender, and we wanted to keep the sex-specific models identical.

PSID has very low levels of missing data; at most 24 (0.6%) activities have missing data on any one variable. All variables except one (education) have less than 1.5% missing data; we recoded the missing data to the modal category of the variable. Education had missing data for 2.9% of cases, thus we imputed the age-sex specific mode.

Analytic Plan

In our complete paper, we will present weighted descriptive statistics for husbands and wives (see Table 1). Next, we will present ordinary least square regression models of the unadjusted and adjusted associations between both own and spouse's marital quality appraisals

and the three distress outcomes, estimating separate models for men (husbands) and women (wives; see tables 2-4.. In all models, we use an adjusted Wald test to test the equality of coefficients for husbands and wives. Finally, we will estimate models that include an interaction term between husband and wife marital assessments. All analyses will be performed in Stata 11.1.

All regression models will be weighted to take into account differential sub-sampling of eligible PSID couples across strata and differential non-response by strata. Weights will be further adjusted for the over-representation of weekend days in the original sample, differential response rates by day of the week, and the fact that activities of longer duration have a proportionately greater chance of being randomly selected for the sample of activities for which momentary distress is assessed. By using a cluster variable that combines the sampling cluster (PSU) variable and the respondent ID, standard errors in the regression models are adjusted for both survey design and the fact that multiple observations (e.g. activities) come from one respondent.

In preliminary analyses, we also assessed random effects models with cluster adjusted standard errors, and models based on a data set that selects one activity per person, to account for clustering. However, the model fit was superior in the OLS models described above, results were virtually identical across models, and the more sophisticated models had limitations including loss of information (one random activity per person), and inability to weight data (random effects models). (Models available from authors).

PRELIMINARY RESULTS

Consistent with prior studies, we find that wives report significantly lower overall marital quality scores relative to husbands (3.1 versus 3.3, $p < .001$), and they also differ with respect to

both marital support (3.5 versus 3.6, p < .001) and conflict (2.2 versus 2.0, p < .001; Table 1). Although husbands and wives do not differ in their reports of momentary frustration or worry, wives report significantly higher levels of sadness (.42 vs. .25, $p <$.01), a pattern consistent with most research on gender differences in depressed affect.

In the final manuscript we will present and discuss models showing the effects of own and spouse's marital quality assessments on own momentary distress, as well as significant two-way interaction terms between husbands' and wives' reports to show the extent to which the effect of one's own assessment of marital quality on psychological distress is affected by a spouse's marital quality assessment. Here, we report on several key findings that will be elaborated in the final paper.

First, we find that for both husbands and wives, one's own overall rating of marital quality is inversely associated with momentary distress. That is, better marital quality assessments are associated with less frustration, sadness, and worry (Models H3a and W3a, Tables 2 to 4). Although the size of the association generally does not differ for husbands and wives, marital quality appears to have the largest impact on frustration.

Second, turning to the marital quality subscales, we find strain is more salient than support in predicting momentary distress, particularly for wives (Models H3b and W3b, Tables 2-4). For wives, more marital strain is associated with more frustration, sadness and worry and for husbands with more frustration. The effect of marital strain on sadness is significantly different for men and women. These results are consistent with prior studies of marital quality and depression, which reveal stronger effects for negative versus positive aspects of marital relations.

Third, we find few cross-over effects and, where we do, they appear only in models of husbands' momentary distress. That is, for husbands, their wives' martial quality ratings are significantly associated with their feelings of frustration and worry. Specifically, husbands' feelings of frustration are stronger as their wives overall marital quality appraisals improve and feelings of frustration and worry both are greater when wives report more martial support. This finding is counter-intuitive, and will be explored more fully in our final manuscript.

Finally, preliminary results (not shown), indicate inconsistent evidence of interaction effects between husbands' and wives' appraisals. Only one of the two-way interaction terms was statistically significant: the effect of husbands' rating of support on feeling sad is contingent upon their wives' ratings of support. These results will be discussed more fully in the final manuscript.

Overall, our results suggest that the well-documented linkage between marital quality and psychological distress, where higher quality marriage protects against and poorer quality marriage exacerbates symptoms, is more complex than prior work suggests. These linkages are contingent upon gender, upon the specific aspect of distress considered, and on the larger marital context – including spouse's marital appraisals. These findings carry potentially important implications for understanding health and well-being in later life, and linkages between marriage and health, more broadly.

REFERENCES

Beach, S. R. H., Katz, J., Kim, S. & Brody, G. H. (2003). Prospective effects of marital satisfaction on depressive symptoms in established marriages: A dyadic model. Jour*nal of Social and Personal Relationships, 20,* 355-371.

Bookwala, J. (2012). Marriage and other partnered relationships in middle and late adulthood. Pp. 91-124 in *Handbook of Aging and the Family, 2nd ed*., edited by R. Blieszner and V. H. Bedford. Santa Barbara, CA: ABC-CLIO.

Bookwala, J., & Franks, M. M. (2005). The moderating role of marital quality in older adults' depressed affect: Beyond the main-effects model. *Journal of Gerontology: Psychological Science, 60,* 338-341.

Bulanda, J. R. (2011). Gender, marital power, and marital quality in later life. *Journal of Women & Aging, 23,* 2-22.

Carr, D., & Boerner, K. (2009). Do spousal discrepancies in marital quality assessments affect psychological adjustment to widowhood? *Journal of Marriage and Family, 71,* 495-509.

Carr**,** D. and Springer, K. W. (2010), Advances in families and health research in the 21st century. *Journal of Marriage and Family, 72,* 743–761.

Cohen, O., Geron, Y., & Farchi, A. (2009). Marital quality and global well-being among older adult Israeli couples in enduring marriages. *The American Journal of Family Therapy, 37,* 299-317.

Dolan, P., T. Peasgood, and M. White. (2008). Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective well-being. *Journal of Economic Psychology*, 29, 94-122.

Federal Interagency Forum on Aging-Related Statistics. (2012). *Older Americans 2012: Key Indicators of Well-Being.* Federal Interagency Forum on Aging-Related Statistics. Washington, DC: U.S. Government Printing Office.

Fincham, F. D., Beach, S. R. H., Harold, G. T., & Osborne, L. N. (1997). Marital satisfaction and depression: Different causal relationships for men and women? *Psychological Science, 8,* 351-357.

Finnas, F., Nyqvist, F., & Saarela, J. (2008). Some methodological remarks on self-rated health. *The Open Public Health Journal*, *1*, 32-39.

Fowler, J. H., & Christakis, N. A. (2008). Dynamic spread of happiness in a large social network: Longitudinal analysis over 20 years in the Framingham Heart Study. *British Medical Journal, 337,* 2338-2347.

Freedman, V.A., & Cornman J.C. 2012. The Panel Study of Income Dynamics' Supplement on Disability and Use of Time (DUST) User Guide: Release 2009.1. Institute for Social Research, University of Michigan.

Frijters, P., & Beatton, T. (2012). The mystery of the U-shaped relationship between happiness and age. *Journal of Economic Behavior & Organization*, *82,* 525-42.

Hill, M. S. (1992). *The Panel Study of Income Dynamics: A user's guide*. Newbury Park, California: Sage.

Kahneman, D., Krueger, A., Schkade, D., Schwarz, N., & Stone, A. (2006). Would you be happier if you were richer? A focusing illusion. *Science, 312,* 1908-1910.

Krueger, A. (2007). Are we having more fun yet? Categorizing and evaluating changes in time allocation. *Brookings Papers on Economic Activity, 2,* 193-215.

Larson, R. W., & Almeida, D. M. (1999). Emotional transmission in the daily lives of families: A new paradigm for studying family process. *Journal of Marriage and Family, 61*, 5-20.

McGonagle, K., & Schoeni, R. (2006). The Panel Study of Income Dynamics: Overview and summary of scientific contributions after nearly 40 years. Technical Series Paper #06-01. http://psidonline.isr.umich.edu/Publications/Papers/tsp/2006-01_PSID_Overview_and_summary_40_years.pdf, accessed June 12, 2013.

Proulx, C. M., Helms, H. M. and Buehler, C. (2007). Marital quality and personal well-being: a meta-analysis. *Journal of Marriage and Family, 69,* 576–593.

Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*(3), 385-401.

Schwarz, N., & Strack, F. (1999). Reports of subjective well-being: Judgmental processes and their methodological implications. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 61-84). New York: Russell-Sage.

Teasdale, J. D., Taylor, R. &. Fogarty, S. J. (1980). Effects of induced elation- depression on the accessibility of memories of happy and unhappy experiences. *Behavior Research and Therapy, 18,* 339–346.

Umberson, D., Williams, K., Powers, D. A., Liu, H., & Needham, B. (2006). You make me sick: Marital quality and health over the life course. *Journal of Health and Social Behavior, 47*, 1-16.

Weathers, R. (2005). A guide to disability statistics from the American community survey. Ithaca, NY: Employment and Disability Institute, Cornell University

Whalen, H. R., & Lachman, M. E. (2000). Social support and strain from partner, family and

friends: Costs and benefits for men and women in adulthood. *Journal of Social and*

Personal Relationships, 17, 1, 5-30.

Whisman, M. A., Uebelacker, L. A., & Weinstock, L. M. (2004). Psychopathology and marital

satisfaction: The importance of evaluating both partners. *Journal of Consulting and*

Clinical Psychology, 72, 830-838.

Table 1: Weighted Means (and Standard Deviations) or Percentages for All Variables Used in Analysis, by Gender

	Husbands (n=361)	Wives (n=361)	*p*-value
Momentary Distress			
Frustration (Range: 0 to 6)	.80 (1.55)	.93 (1.60)	.181
Sad (Range: 0 to 6)	.25 (0.88)	.42 (1.08)	.006
Worried (Range: 0 to 6)	.53 (1.21)	.61 (1.26)	.357
Marital Quality			
Overall marital quality (Range: 1 to 4)	3.3 (0.53)	3.1 (0.57)	<0.001
Marital strain (Range: 1 to 4)	2.0 (0.67)	2.2 (0.70)	<0.001
Marital support (Range: 1 to 4)	3.6 (0.53)	3.5 (0.60)	<0.001
Respondent/Spouse Characteristics			
Age			<0.001
50-69	58.6		
50-59		17.9	
60-69		52.7	
70-79	27.3		
70+		29.4	
80+	14.1		
Completed education (in years)	13.9 (2.72)	13.3 (2.35)	<0.001
Race: black vs. non-black	2.9	2.6	0.325
Second or higher order marriage	27.9	28.5	0.628
Has any children	85.5	88.7	0.145
Has a disability (1= yes)	44.3	36.1	0.087
Self-rated health (1-excellent to 5-poor)	2.6 (1.13)	2.7 (1.08)	0.069
Couple Characteristics (n=361 couples)			
Income quartile, 2008			
0 to 25th percentile	21.3		n/a
25th to 50th percentile	21.0		

50th to 75th percentile	25.8		
75th to 100th percentile	31.9		
Wealth/assets quartile, 2009			
0 to 25th percentile	19.1		n/a
25th to 50th percentile	22.8		
50th to 75th percentile	27.8		
75th to 100th percentile	30.4		
Marital duration (in years)	38.5 (14.57)		
Characteristics of activities			
On the weekend (1 = yes)	31.3	33.7	0.085
At home (1 = yes)	47.7	59.0	<0.001
With spouse (1 = yes)	32.1	30.4	0.474
Randomly-selected activities yesterday (percent participating)			
Self-maintenance	9.3	7.9	0.390
Eating	11.8	10.8	0.504
Working for pay	7.8	4.4	0.012
Shopping for food	1.9	2.2	0.644
Shopping for other goods	3.1	2.8	0.735
Preparing food	2.6	12.5	<0.001
Doing household chores	1.3	5.3	<0.001
Doing household maintenance	8.0	5.8	0.129
Managing finances	2.4	1.7	0.333
Caring for others	1.3	2.0	0.275
Socializing	5.2	8.2	0.021
Watching TV/movies	10.3	7.7	0.046
Doing other non-active leisure activities	6.5	7.1	0.611
Doing active leisure activities	3.1	2.5	0.492
Doing organizational activities	1.6	1.0	0.161
Using the computer	4.5	3.2	0.228
Traveling	19.3	14.5	0.034
N of activities	2078	2103	

Notes: We conducted *t*-tests to evaluate statistically significant gender differences for continuous variables, and a two-sample test of equality for categorical measures. The sample includes 361 married couples (i.e., 361 wives and 361 husbands), and reports based on 2078 activities for men and 2103 activities for women.

Table 2: Weighted Ordinary Least Squares Regression Predicting Frustration, by Own and Spouse's Marital Quality Appraisals

	Husbands						Wives					
	Unadjusted		Fully Adjusted[1]	Unadjusted		Fully Adjusted[1]	Unadjusted		Fully Adjusted[1]	Unadjusted		Fully Adjusted[1]
VARIABLES	H1a	H2a	H3a	H1b	H2b	H3b	W1a	W2a	W3a	W1b	W2b	W3b
Marital Quality Full Scale												
Own marital quality	-0.40**	-0.50**	-0.51**				-0.48**	-0.44**	-0.46**			
	(0.12)	(0.12)	(0.12)				(0.11)	(0.13)	(0.13)			
Spouse marital quality		0.21	0.21*					-0.08	-0.05			
		(0.11)	(0.10)					(0.15)	(0.15)			
Marital Quality Subscales												
Own Marital Quality												
Support scale				-0.11	-0.20	-0.17				0.07	0.03	0.03
				(0.12)	(0.12)	(0.11)				(0.16)	(0.16)	(0.14)
Strain scale				0.26*	0.26*	0.29**				0.48**	0.44**	0.44**
				(0.11)	(0.10)	(0.10)				(0.12)	(0.12)	(0.11)
Spouse Marital Quality												
Support scale					0.34**	0.34**					0.25	0.28
					(0.10)	(0.09)					(0.20)	(0.18)
Strain scale					0.09	0.10					0.23	0.21
					(0.12)	(0.09)					(0.12)	(0.12)
Observations	2078	2078	2078	2078	2078	2078	2103	2103	2103	2103	2103	2103
R-squared	0.018	0.023	0.093	0.019	0.033	0.103	0.027	0.027	0.101	0.039	0.046	0.118

[1]Models are adjusted for all covariates.

Notes: Unstandardized regression coefficients and standard errors are presented.

Statistical significance denoted as ** $p < 0.01$, * $p < 0.05$.

Table 3: Weighted Ordinary Least Squares Regression Predicting Sadness by Own and Spouse's Marital Quality Appraisals

	Husbands						Wives					
	Unadjusted		Fully Adjusted[1]	Unadjusted		Fully Adjusted[1]	Unadjusted		Fully Adjusted[1]	Unadjusted		Fully Adjusted[1]
VARIABLES	H1a	H2a	H3a	H1b	H2b	H3b	W1a	W2a	W3a	W1b	W2b	W3b
Marital Quality Full Scale												
Own marital quality	-0.12*	-0.11	-0.11*				-0.31**	-0.27*	-0.30**			
	(0.05)	(0.06)	(0.05)				(0.09)	(0.11)	(0.10)			
Spouse marital quality		-0.01	-0.00					-0.11	-0.08			
		(0.07)	(0.07)					(0.11)	(0.10)			
Marital Quality Subscales												
Own Marital Quality												
Support scale				-0.11	-0.11	-0.12				-0.04	-0.04	-0.01
				(0.10)	(0.11)	(0.10)				(0.12)	(0.12)	(0.12)
Strain scale				0.02	0.02	0.01				0.25*	0.21*	0.27**
				(0.06)	(0.06)	(0.06)				(0.10)	(0.11)	(0.10)
Spouse Marital Quality												
Support scale					-0.01	0.01					0.04	0.07
					(0.07)	(0.06)					(0.12)	(0.12)
Strain scale					-0.00	0.01					0.12	0.10
					(0.05)	(0.04)					(0.09)	(0.08)
Observations	2078	2078	2078	2078	2078	2078	2103	2103	2103	2103	2103	2103
R-squared	0.005	0.005	0.069	0.006	0.006	0.070	0.025	0.027	0.095	0.029	0.032	0.103

[1]Models are adjusted for all covariates.

Notes: Unstandardized regression coefficients and standard errors are presented.

Statistical significance denoted as ** $p < 0.01$, * $p < 0.05$.

Table 4: Weighted Ordinary Least Squares Regression Predicting Worry by Own and Spouse's Marital Quality Appraisals

	Husbands						Wives					
	Unadjusted		Fully Adjusted[1]	Unadjusted		Fully Adjusted[1]	Unadjusted		Fully Adjusted[1]	Unadjusted		Fully Adjusted[1]
VARIABLES	H1a	H2a	H3a	H1b	H2b	H3b	W1a	W2a	W3a	W1b	W2b	W3b
Marital Quality Full Scale												
Own marital quality	-0.22	-0.29*	-0.25*				-0.32**	-0.24*	-0.26*			
	(0.12)	(0.12)	(0.11)				(0.10)	(0.12)	(0.10)			
Spouse marital quality		0.15	0.14					-0.18	-0.12			
		(0.10)	(0.09)					(0.11)	(0.10)			
Marital Quality Subscales												
Own Marital Quality												
Support scale				-0.23	-0.29*	-0.21				0.03	0.02	0.04
				(0.12)	(0.12)	(0.11)				(0.13)	(0.13)	(0.12)
Strain scale				0.03	0.04	0.06				0.30**	0.24*	0.27*
				(0.10)	(0.09)	(0.09)				(0.11)	(0.12)	(0.11)
Spouse Marital Quality												
Support scale					0.19*	0.20*					0.05	0.12
					(0.09)	(0.08)					(0.12)	(0.11)
Strain scale					0.01	0.03					0.18*	0.17
					(0.10)	(0.08)					(0.09)	(0.09)
Observations	2078	2078	2078	2078	2078	2078	2103	2103	2103	2103	2103	2103
R-squared	0.009	0.013	0.098	0.011	0.019	0.098	0.019	0.024	0.092	0.026	0.032	0.103

[1]Models are adjusted for all covariates.

Notes: Unstandardized regression coefficients and standard errors are presented.

Statistical significance denoted as ** $p < 0.01$, * $p < 0.05$.