


# Associations among financial well-being, daily relationship tension, and daily affect in two adult cohorts separated by the great recession

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August I. C. Jenkins<sup>1,2</sup> , Yunying Le<sup>1</sup> , Agus Surachman<sup>3</sup> ,  
David M. Almeida<sup>1,4</sup> , and Steffany J. Fredman<sup>1</sup> 

## Abstract

Financial well-being may be an important context for daily emotional reactivity to relationship tension (e.g., arguments) whose salience varies across historical time or as a function of exposure to economic downturns. This study investigated how emotional reactivity, operationalized as daily fluctuations in negative and positive affect associated with the occurrence of daily relationship tension, varied by financial well-being among those who were and were not exposed to the Great Recession of 2008. Two matched, independent subsamples of partnered individuals from the National Study of Daily Experiences completed identical 8-day diary protocols, one before the Great Recession ( $n = 587$ ) and one after ( $n = 351$ ). Individuals reported higher negative affect and lower positive affect on days when relationship tension occurred. Further, results indicated that negative affect reactivity, but not positive affect reactivity, was moderated by both financial well-being and cohort status. For the pre-recession cohort, negative affect reactivity was stronger among those with lower financial well-being. However, among the post-recession cohort, financial well-being did not moderate negative affect reactivity to relationship tension. Findings highlight the utility of considering major societal events, such as economic downturns, to understand variability in emotional reactivity to day-to-day relationship tension in the context of financial well-being, as the salience of financial

<sup>1</sup>Department of Human Development and Family Studies, The Pennsylvania State University, USA

<sup>2</sup>Department of Human Development and Family Studies, University of Illinois at Urbana-Champaign, USA

<sup>3</sup>Center for Health and Community, School of Medicine, University of California San Francisco, USA

<sup>4</sup>Center for Healthy Aging, The Pennsylvania State University, USA

## Corresponding author:

August I. C. Jenkins, University of Illinois at Urbana-Champaign, 904 West Nevada Street, Urbana, IL 61801, USA.

Email: [aj34@illinois.edu](mailto:aj34@illinois.edu)

well-being in the ways relationship tension and negative affect are related on a daily basis appears to vary by historical context.

### **Keywords**

Daily Diary, Emotional Reactivity, Historical Time, Romantic Relationships, Financial Strain, Family Studies

A large body of research has established connections between relationship adjustment and emotional health (Whisman et al., 2021), particularly how stressful everyday relationship events and tension are related to poorer emotional health (Birditt et al., 2005; Smith et al., 2012). For instance, previous work has demonstrated the associations between daily marital strain, as reported by both self and partner, with greater psychological distress for both spouses (Garcia & Umberson, 2019) and the linkages between relationship tension (e.g., conflict or arguments) with higher daily negative affect and lower daily positive affect (Tolpin et al., 2006). This work suggests that individuals are emotionally reactive (i.e., experience changes in daily affect) to the occurrence of everyday stressful interactions within romantic relationships. However, little is known about whether individuals' susceptibility to such emotional reactivity depends on their financial well-being (i.e., the subjective perception about their relative financial situation; Netemeyer et al., 2018), as lower financial well-being could serve as an ambient contextual stressor that increases individuals' risk for poorer daily affect in the face of relationship strain. Furthermore, it is unknown whether the relevance of one's financial context for these linkages varies across historical time, including experiences of economic downturn. As such, questions remain regarding whether individuals with lower financial well-being are more (or less) emotionally vulnerable to the occurrence of everyday relationship tension and if there is variability in this potential vulnerability among those who experienced economic downturns. The current study expands the literature on intimate relationships and daily affect by investigating the moderating effect of financial well-being for daily reactivity to relationship tension and investigates variability in the moderating role of financial well-being across historical time by comparing these associations for those who had and had not experienced a major economic downturn—the Great Recession.

### **Emotional Reactivity to Daily Relationship Tension and the Role of Financial Well-Being**

Daily emotional reactivity to stressful events is considered to be a key mechanism through which relationship functioning exerts long-term effects on individual health outcomes (Alonso-Ferres et al., 2020; Farrell & Stanton, 2019; Sbarra & Coan, 2018; Selcuk et al., 2016; Stanton et al., 2019), with interpersonal tension among the most potent and distressing type of daily stressors (Birditt et al., 2005; Bolger et al., 1989). Contextual stress, such as low financial well-being, may contribute to the additional cumulative risks that individuals face every day and, in turn, affect romantic relationships and their impacts

on individuals' health outcomes (Brock et al., 2019; Kanter & Proulx, 2021; Neff & Karney, 2004). As highlighted in the vulnerability-stress-adaptation model (VSA; Karney & Bradbury, 1995) and the family stress model (FSM; Conger et al., 1990), low financial well-being can act as a risk factor for relationship quality—increasing occurrences of tension, disagreements, and related negative processes. Within the VSA framework, the contextual stress generated by chronic financial instability can also impede adaptive relationship processes. Further, the FSM posits that financial pressure is also related to elevated emotional or psychological distress, potentially generating feelings of anger, sadness, or frustration (Conger et al., 1990; Masarik & Conger, 2017). Together, these theories suggest the relevance of financial well-being for the linkages between intimate relationships and emotional health, where lower levels of financial well-being can serve as a chronic stressor that amplifies the adverse emotional consequences of negative relationship interactions.

To date, an extensive literature demonstrates the importance of financial well-being for long-term relationship functioning, emotional health, and the linkages between them (Falconier & Jackson, 2020; Sturgeon et al., 2014; Wickrama et al., 2012; Wickrama & O'Neal, 2019). However, the extant literature on the importance of financial well-being in the *daily* processes of emotional reactivity to relationship tension is still relatively limited, and much remains unknown. For instance, a recent study demonstrated the daily transactions between fluctuations in relationship functioning and fluctuations in negative and positive affect within a sample of low-income individuals (Brock et al., 2019). However, the homogeneity of the sample in terms of their socioeconomic status makes it difficult to determine how variability in financial well-being is related to differences in affective reactivity to daily relationship tension. Understanding the role of financial well-being in these daily processes may provide information regarding how economic factors may increase or decrease individuals' risk for poorer long-term relational and emotional outcomes, along with opportunities for intervention via the daily transactions between relationship tension and daily affect. It could be that stress related to low financial well-being impedes individuals' ability to effectively respond to everyday stressful relationship exchanges, amplifying emotional reactions to relationship tension (Neff & Karney, 2004, 2017). In contrast, greater financial well-being could attenuate reactivity to relationship tension, as individuals may be afforded additional time, energy, and resources to invest in their relationships and cope with everyday relationship tension. Thus, guided by the VSA and FSM frameworks, the first goal of the current study was to investigate the role of financial well-being in emotional reactivity to daily relationship tension among partnered individuals.

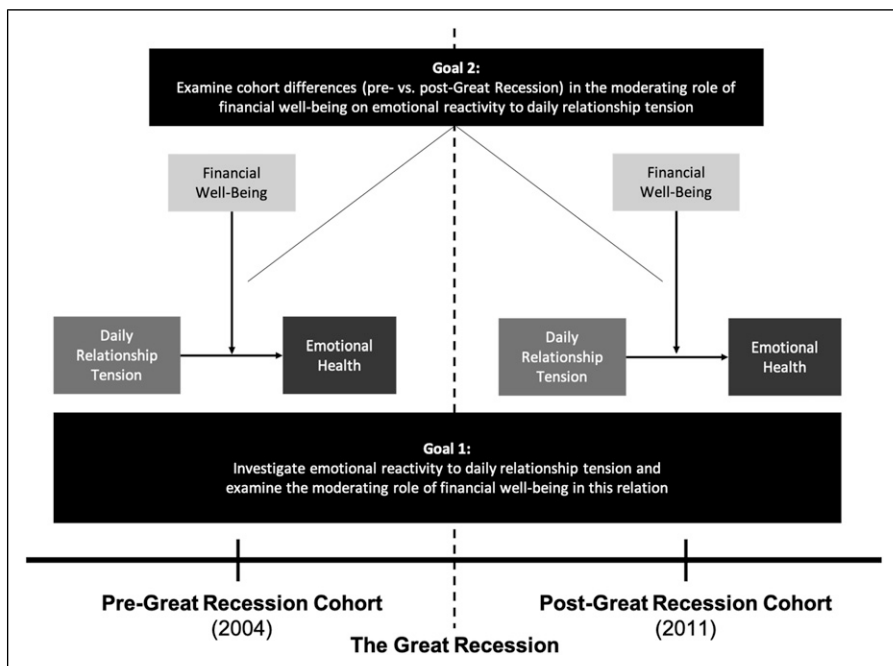
## **The Great Recession as a Sociohistorical Context for the Links Between Financial Well-Being and Reactivity to Daily Relationship Tension**

Importantly, investigating the role of financial well-being in the linkages between daily relationship tension and daily affect requires situating these associations within their historical context. That is, perceptions of financial well-being or its relevance for daily life

may shift throughout historical time, which can be marked by the occurrence of major societal events. Indeed, the life course framework (Elder et al., 2003) postulates that the occurrence of historical circumstances and events can differentially influence the social pathways and daily life of individuals, calling for work that uncovers how macrosocial processes affect microsocial phenomena that directly impact individual well-being and development (Elder & Caspi, 1988). Times of societal-level deprivation, such as an economic recession, represent an important historical context known to be related to intimate relationships and daily affect. For example, families' economic loss from the Great Depression was associated with increased marital discord and changes in personality characteristics related to emotional instability, particularly for men (Liker & Elder, 1983). However, previous work has not considered the associations between relationships and affect at the daily level, and knowledge of the relevance of financial well-being for these daily associations in the context of economic downturns is limited, making it difficult to determine how financial well-being and daily emotional reactivity to relationship tension may intersect in unique ways during different historical epochs to leave individuals more susceptible (or robust) to these linkages.

One potentially relevant historical context for understanding the linkages between financial well-being and emotional reactivity to relationship tension is the Great Recession. Scholars have noted that exposure to the Great Recession was related to elevated stress in everyday life. The Great Recession was the longest and deepest U.S. recession since World War II, with unemployment peaking at 10% and 55% of the labor force experiencing work-related disruption. From December 2007 to June 2009, poverty rates increased to over 15%, household wealth decreased on average by 20% (with a quarter of American households losing at least 75% of their net worth), the housing foreclosure rate peaked at 1.8%, and bankruptcy filings rose by 74% (Duignan, 2019; Ellen Gould & Dastrup, 2012; Pew Research Center, 2009, 2010; Kochhar, 2020). As a result of the Great Recession, many people experienced job loss and layoffs, difficulty finding a job, or working multiple jobs to make ends meet (Almeida et al., 2020), contributing to the historical trend of widening socioeconomic disparities in the United States (Glei Id, Goldman, & Weinstein, 2019). There is also evidence that daily life in the post-Great Recession period was characterized by higher exposure to, and severity of, daily stressors (Almeida et al., 2020). Using data from the Health and Retirement Study, Wilkinson (2016) showed that the occurrence of the Great Recession was associated with worsened financial situations for Americans, with changes in individuals' financial context a robust predictor of psychological health. Together, this points to the Great Recession as a stressful sociohistorical context with the potential to amplify linkages among financial well-being, intimate relationships, and daily affect.

Previous studies utilizing the VSA and FSM frameworks demonstrated the long-term consequences of recession-related adversities on psychological distress through increases in marital disagreements and also found that low-income individuals were more psychologically vulnerable to recession-related hardship (Ascigil et al., 2020). However, it is unknown whether the relevance of financial well-being for the daily connections between relationship tension and affect may have shifted in the context of the Great Recession. Better understanding of the ways the Great Recession may be related to the linkages



**Figure 1.** Goals of the current study.

between financial well-being and daily emotional reactivity to relational tension may facilitate the development of strategies to support relational and emotional health outcomes for individuals during times of major societal stress. Capitalizing on daily diary data collected before and after the Great Recession, the current study was also designed to examine cohort differences in the linkages between financial well-being and emotional reactivity to relationship tension in two adult cohorts separated by the Great Recession.

### Current Study

The current study leveraged data from the National Study of Daily Experiences from two different cohorts recruited before and after the Great Recession (2004 vs. 2011). As depicted in Figure 1, the goals of the current study were to 1) investigate emotional reactivity to daily relationship tension, examining the potential moderating role of financial well-being in this relation and 2) examine cohort differences (pre-vs. post-recession) in the moderating role of financial well-being on emotional reactivity to daily relationship tension. We hypothesized that, in general, individuals would report higher negative affect and lower positive affect on days when relationship tension occurred compared to tension-free days, with this relation being stronger among those with lower financial well-being. We also hypothesized that the moderating role of

financial well-being in emotional reactivity to daily relationship tension would be even stronger among the post-recession cohort relative to the pre-recession cohort.

## Method

Data for the current investigation come from the Midlife in the United States (MIDUS; <http://www.midus.wisc.edu>) study, a longitudinal epidemiological study of health and aging. All data are publicly available at <https://www.icpsr.umich.edu/web/ICPSR/series/203>. The MIDUS daily diary substudy, the National Study of Daily Experiences (NSDE; Almeida et al., 2009), includes data from the second wave of data collection beginning in 2004 with the core longitudinal sample of participants (NSDE 2,<sup>1</sup> pre-recession cohort) and another sample of adults who were recruited for MIDUS beginning in 2011 to “refresh” the participant pool (NSDE Refresher, post-recession cohort). Data from participants in the NSDE 2 and Refresher were utilized for the current investigation, with all individuals providing data at only one timepoint.

## Participants

Of the 2,804 participants who completed NSDE 2 and the NSDE Refresher (NSDE 2  $n = 2,022$  participants; NSDE Refresher  $n = 782$ ), individuals who were not married or cohabiting ( $n = 862$ ) were excluded from the current sample. For the remaining 1,942 participants, we utilized propensity score matching using the exact matching procedure (Randolph et al., 2014) to ensure that the two subsamples were similar in terms of age, gender, education, race, and marital status (i.e., whether married or cohabitating) for a more robust comparison between the two cohorts (see Supplement for details). Thus, the final analytic sample included 938 participants ( $n = 587$  from NSDE 2, pre-Great Recession cohort;  $n = 351$  from the NSDE Refresher, post-Great Recession cohort).

The majority of participants (91%) identified as White. The remainder identified as Black (3%), Hispanic (4%), Native American or Alaska Native Aleutian Islander/Eskimo (1%), and Asian (<1%); 3% reported their race as other or unspecified. Most of the sample (99%) was married, with the remaining 25 individuals in cohabitating relationships (<1%). Participants ranged from 33 to 75 years of age ( $M = 52.32$ ;  $SD = 10.10$ ) and reported an education ranging from some high school to doctoral-level, with the majority of participants holding a bachelor's degree. Approximately half the participants identified as women (52% women; 48% men), and almost all participants identified as heterosexual (<1% gay; 1% bisexual).

## Procedure

Details on the recruitment and study procedures for MIDUS are described elsewhere (Ryff & Krueger, 2018). Participants were originally recruited from the continental U.S. for MIDUS via random digit dialing and completed computer-assisted personal interviews at baseline. A randomly selected subset of participants was contacted approximately eight months after the baseline assessment to complete the daily diary study. NSDE participants

completed telephone interviews in the evening with trained interviewers using computer-assisted telephone interview programming for eight consecutive days (Almeida et al., 2009). The two cohorts completed identical 8-day diary study protocols, and all study protocols and procedures were approved by the Institutional Review Boards at the University of Wisconsin-Madison and The Pennsylvania State University. All participants provided written informed consent before being assessed.

## Measures

**Daily Relationship Tension.** Each day, participants reported on tension that occurred within their relationships using three items from the Daily Inventory of Stressful Events (Almeida et al., 2002). Participants answered: "Did you have an argument or disagreement with [your partner/spouse]?" "Did anything happen that you could have argued about but you decided to let pass in order to avoid a disagreement?"; and "Other than what you've already mentioned, did anything else happen to [your partner/spouse] that turned out to be stressful for you?" If participants answered yes to any of these questions, they were considered to have experienced relationship tension that day. Daily relationship tension was dummy coded (1 = *yes*, 0 = *no*) to indicate the occurrence of day-level relationship tension.

**Daily Affect.** Measures of negative and positive affect were developed for the MIDUS study (Mroczek & Kolarz, 1998; Watson et al., 1988). Participants indicated how often they experienced various negative and positive emotions during the day using a 5-point scale ranging from 0 (*None of the time*) to 4 (*All the time*). Negative affect was indexed across 14 negative emotions (e.g., "nervous," "angry," "lonely"). Positive affect was indexed across 13 positive emotions (e.g., "cheerful," "in good spirits," "satisfied"). Items were averaged within domains so that higher scores reflected greater negative and positive affect, respectively. The repeated measures reliability (Hox et al., 2010) was .90 for negative affect and .96 for positive affect.

**Financial Well-Being.** Financial well-being was assessed during a baseline telephone survey before the daily portion of the study using a single item: "How would you rate your financial situation these days?" Participants rated their perceived financial well-being using a Likert-type scale ranging from 0 (*worst possible financial situation*) to 10 (*best possible financial situation*).

## Attrition and Missing Data

There was little attrition throughout the study. In the pre-recession cohort, participants completed a mean of 7.47 (of 8) daily interviews ( $SD = 1.38$ ) and, in the post-recession cohort, participants completed a mean of 7.44 daily interviews ( $SD = 1.45$ ). Across study variables, missingness was less than 5%. Little's Missing Completely at Random test (Little, 1988) indicated that the data were not missing completely at random ( $\chi^2(12) = 68.57, p < .001$ ). We explored all key variables, but only variables related to demographic (i.e., education, work

status) and cohort status were related to missingness ( $ps < .001$ ). Because these variables were included as covariates in the model, as described below, the data were treated as missing at random, which meets the assumptions of Maximum Likelihood approaches.

### **Data Analysis**

Data analyses were not pre-registered; thus, findings from data analyses may be understood as largely exploratory. We examined descriptive statistics (means, standard deviations, and correlation) among study variables for both cohorts. Then, multivariate analyses were conducted in SAS (version 9.4, SAS Institute Inc., Cary, NC) using multilevel modeling via PROC MIXED to account for the nested structure of the data (i.e., days nested within individuals). First, unconditional models were conducted to calculate the intraclass correlation coefficients (i.e., ICC; between-person level variance/total variance). Then, two-level models were conducted to test daily relationship tension as a predictor of daily affect (within-person) and to test the moderating role of financial well-being and cohort status in this within-person link. Daily relationship tension was dummy coded (1 = *yes*, 0 = *no*) to indicate the occurrence of relationship tension that day. Negative and positive affect were tested as outcomes in separate models. Interaction terms between financial well-being and daily relationship tension were included to evaluate whether financial well-being moderated daily affective reactivity to relationship tension. Financial well-being scores were group-mean centered within the NSDE 2 and NSDE Refresher cohorts, respectively, before creating the interaction terms. Three-way interactions (i.e., Financial Well-Being X Daily Relationship Tension X Recession Cohort) were included to test whether the interactive associations among financial well-being, daily relationship tension, and daily affect varied by recession cohort (pre-recession cohort = -1; post-recession cohort = 1), accounting for all lower-order effects and two-way interactions. Significant three-way interactions were probed for pre- and post-recession cohorts for the moderating effect of financial well-being for each cohort, respectively. Significant two-way interactions between financial well-being and daily relationship tension were probed at 1 *SD* above and below the mean of financial well-being. We also conducted regions of significance (RoS) analysis to determine the levels of financial well-being at which the within-person associations between relationship tension and affect were significant using an online computational tool for interaction effects (<http://www.quantpsy.org>; Preacher et al., 2006). A random effect was included for daily relationship tension to allow individuals to vary from one another in their event-related fluctuations in affect. Maximum likelihood was used as the estimation method, and standard variance components were specified for all models. At the between-person level, the grand-mean centered person average of daily relationship tension was also included in the model to account for between-person differences in the proportion of days tension occurred as well as the corresponding two-way and three-way interactions with financial well-being and cohort status. Age (years), gender (-1 = man, 1 = woman), education (1 = no school/some grade school to 12 = Ph.D., J.D., or other terminal degrees), marital status (0 = married, 1 = not married), and the effect of day were included as covariates in the final models.



**Table 1.** Sample Demographics and Descriptive Statistics of Study Variables for Partnered Individuals in Pre-Recession (NSDE 2) and Post-Recession (NSDE Refresher) Cohorts.

	M (SD)		t/ $\chi^2$	p-value
	Pre- Recession (NSDE 2)	Post- Recession (NSDE Refresher)		
	n = 587	n = 351		
Women (%)	52.64	51.94	0.00	1.000
Age	52.63 (9.98)	51.78 (10.28)	1.38	.168
Education <sup>a</sup>	7.84 (2.26)	8.18 (2.30)	-1.90	.056
Latino (%)	3.75	4.06	0.05	.821
Black (%)	2.73	3.61	0.41	.521
Married <sup>b</sup> (%)	99.66	99.66	0.00	.997
Income	\$91,614.01 (63,255.98)	\$105,981.59 (65,068.43)	-9.07***	.004
Working (%)	57.17	59.53	0.38	.537
Relationship Tension (% of days)	10.11%	13.38%	-8.07***	<.001
Daily affect				
Negative	0.17 (0.29)	0.20 (0.32)	-3.48***	<.001
Positive	2.72 (0.75)	2.59 (0.77)	6.90***	<.001
Financial Well-Being <sup>c</sup>	6.76 (1.94)	6.32 (2.11)	8.88***	<.001

Note: M = mean; SD = standard deviation.

<sup>a</sup>1 = No School/Some Grade School (grades 1–6), 12 = Ph.D., Ed.D., M.D., D.D.S., LL.B., LL.D., J.D., or Other Professional Degree.

<sup>b</sup>Percentage of sample married relative to those cohabitating.

<sup>c</sup>0 = Worst possible financial situation, 10 = Best possible financial situation.

\*p < .05. \*\*p < .01. \*\*\*p < .001.

## Results

### Preliminary Analyses

Sample demographics and descriptive statistics for the study variables are reported in Table 1. Compared to the pre-recession cohort, those in the post-recession cohort reported significantly more relationship tension across the study days. Across both cohorts, individuals reported moderate levels of financial well-being, relatively low negative affect, and moderate levels of positive affect. Compared to the pre-recession cohort, the post-recession cohort showed significantly lower levels of financial well-being, higher levels of daily negative affect, and lower levels of daily positive affect. Table 2 shows the correlations among financial well-being, daily relationship tension, and daily affect (averaged within-person) for both the pre-recession and post-recession cohorts. Across both cohorts, the average level of daily relationship tension was significantly correlated with

**Table 2.** Correlations Among Relationship Tension, Daily Affect, and Financial Well-Being for Pre-Recession (NSDE 2) and Post-Recession (NSDE Refresher) Cohorts.

	Relationship Tension	Negative Affect	Positive Affect	Financial Well-Being
Relationship Tension	—	.21***	-.16***	-.14***
Negative Affect	.19***	—	-.46***	-.18***
Positive Affect	-.14***	-.49***	—	.25***
Financial Well-Being	-.16***	-.16***	.19***	—

Note.  $N = 938$  participants. Correlations for the pre-recession cohort are shown above the diagonal, and correlations for the post-recession cohort are shown below the diagonal.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

higher negative affect and lower positive affect. The average level of relationship tension was also significantly negatively correlated with financial well-being for the post-recession cohort. The results of the unconditional models indicated that 53% of the variation in negative affect and 74% of the variation in positive affect were due to between-person differences (i.e., ICC).

### *Emotional Reactivity to Daily Relationship Tension, Moderation by Financial Well-Being, and Cohort Differences*

**Negative Affect.** Table 3 displays the results from the multilevel models predicting daily negative affect from daily relationship tension, financial well-being, and cohort status. The random effect of relationship tension was significant, indicating that individuals varied from one another in their event-related fluctuations in negative affect. Accounting for between-person effects, the main effect of relationship tension (within-person) indicated that, on average, individuals reported significantly higher negative affect on days when relationship tension occurred compared to tension-free days.

There was a significant three-way interaction among financial well-being, relationship tension (within-person), and cohort status, indicating that the moderating effect of financial well-being differed significantly between the pre- and post-recession cohorts. Figure 2 depicts the associations between financial well-being and negative affect reactivity to daily relationship tension for each cohort. Among those in the pre-recession cohort, financial well-being significantly moderated the within-person association between relationship tension and negative affect such that the association was stronger at lower levels of financial well-being ( $Est. = -0.02$ ,  $SE = 0.01$ ,  $p = .029$ ). RoS analysis further revealed that, among the pre-Great Recession cohort, this within-person association was significant at all levels of financial well-being (i.e., scores of 10 and below; see Figure 3). Compared to individuals with higher financial well-being (1  $SD$  above the mean), individuals with lower financial well-being (1  $SD$  below the mean) scored .15 higher on negative affect on days they experienced relationship tension compared to tension-free days—a difference equal to half the standard deviation of negative affect ( $SD$

**Table 3.** Affective Reactivity to Daily Relationship Tension by Financial Well-Being and Great Recession Cohort.

Parameter	Negative Affect				Positive Affect			
	Est.	SE	95% CI	p-value	Est.	SE	95% CI	p-value
<b>Fixed effects</b>								
Intercept	0.39	0.05	[0.29, 0.49]	<.001***	2.04	0.15	[1.75, 2.32]	<.001***
Age <sup>a</sup>	0.00	0.00	[0.00, 0.00]	<.001***	0.02	0.00	[0.01, 0.02]	<.001***
Gender <sup>l,b</sup>	0.02	0.01	[0.00, 0.03]	.015*	-0.01	0.02	[-0.05, 0.03]	.746
Education <sup>2</sup>	0.00	0.00	[0.00, 0.01]	.526	-0.02	0.01	[-0.04, 0.00]	.053
Marital status <sup>3</sup>	-0.02	0.12	[-0.25, 0.20]	.836	0.48	0.32	[-0.16, 1.11]	.142
Financial well-being	-0.02	0.00	[-0.02, -0.01]	<.001***	0.06	0.01	[0.04, 0.08]	<.001***
Recession cohort <sup>4</sup>	0.00	0.01	[-0.01, 0.02]	.720	-0.02	0.02	[-0.06, 0.03]	.469
Financial Well-being X Recession Cohort	0.00	0.00	[-0.01, 0.01]	.599	-0.01	0.01	[-0.03, 0.01]	.342
Day <sup>c</sup>	-0.01	0.00	[-0.01, -0.01]	<.001***	-0.01	0.00	[-0.01, 0.00]	.008**
Day X Recession Cohort <sup>d</sup>	0.00	0.00	[0.00, 0.00]	.829	-0.01	0.00	[-0.01, 0.00]	.000***
Relationship Tension (WP)	0.13	0.01	[0.10, 0.15]	<.001***	-0.14	0.02	[-0.18, -0.10]	<.001***
Relationship Tension (WP) X Financial Well-Being	0.00	0.01	[-0.02, 0.01]	.570	-0.01	0.01	[-0.03, 0.01]	.345
Relationship Tension (WP) X Recession Cohort	-0.01	0.01	[-0.03, 0.02]	.673	0.01	0.02	[-0.03, 0.04]	.776
Relationship Tension (WP) X Financial Well-Being X Recession Cohort <sup>e</sup>	0.02	0.01	[0.00, 0.03]	.015*	0.00	0.01	[-0.02, 0.01]	.602
Relationship Tension (BP)	0.22	0.05	[0.12, 0.32]	<.001***	-0.38	0.15	[-0.66, -0.09]	.010*
Relationship Tension (BP) X Financial Well-Being	-0.01	0.03	[-0.08, 0.05]	.898	0.07	0.06	[-0.05, 0.19]	.240
Relationship Tension (BP) X Recession Cohort	-0.06	0.05	[-0.16, 0.04]	.251	0.12	0.15	[-0.17, 0.40]	.423
Relationship Tension (BP) X Financial Well-Being X Recession Cohort <sup>f</sup>	-0.05	0.02	[-0.09, 0.00]	.036*	0.06	0.06	[-0.06, 0.17]	.362

(continued)

**Table 3.** (continued)

Parameter	Negative Affect				Positive Affect			
	Est.	SE	95% CI	p-value	Est.	SE	95% CI	p-value
Random effects								
Residual Variance	0.04	0.00	[0.04, 0.04]	<.00 ***	0.14	0.00	[0.14, 0.15]	<.00 ***
Intercept Variance	0.04	0.00	[0.04, 0.05]	<.00 ***	0.37	0.02	[0.33, 0.40]	<.00 ***
Relationship Tension (WV)	0.05	0.01	[0.04, 0.06]	<.00 ***	0.04	0.01	[0.02, 0.06]	<.00 ***

Note: Est. = estimate; SE = standard error; CI = confidence interval; WV within-person effect; BP = between-person effect; effects for Relationship Tension (WV), Relationship Tension (WV) X Financial Well-Being, and Relationship Tension (WV) X Financial Well-Being X Recession Cohort were the main effects of interest.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

<sup>1</sup>Men = -1; Women = 1.

<sup>2</sup>1 = No School/Some Grade School (grades 1-6), 12 = Ph.D., Ed.D., M.D., D.D.S., LL.B., LL.D., J.D., or Other Professional Degree

<sup>3</sup>Married = 0; Not married = 1.

<sup>4</sup>Pre-Recession Cohort = -1; Post-Recession Cohort = 1.

<sup>a</sup>The absolute value of the estimate for negative affect was -0.00347 [95% CI: -0.00494, -0.00200] and was rounded to 0.00 [95% CI: 0.00, 0.00].

<sup>b</sup>The absolute value of the confidence interval for negative affect was [0.00360, 0.03272] and was rounded to [0.00, 0.03].

<sup>c</sup>The absolute value of the confidence interval for positive affect was [-0.00975, -0.00149] and was rounded to [-0.01, 0.00].

<sup>d</sup>The absolute value of the confidence interval for positive affect was [-0.01165, -0.00339] and was rounded to [-0.01, 0.00].

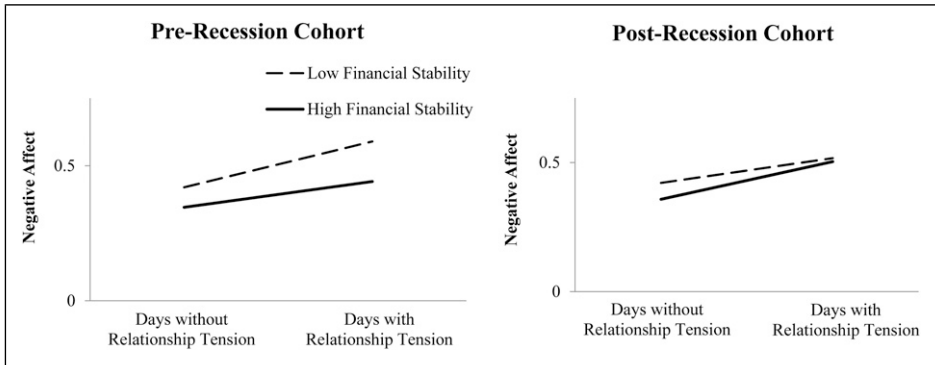
<sup>e</sup>The absolute value of the confidence interval for negative affect was [0.00299, 0.02795] and was rounded to [0.00, 0.03].

<sup>f</sup>The absolute value of the confidence interval for negative affect was [-0.09009, -0.00323] and was rounded to [-0.09, 0.00].

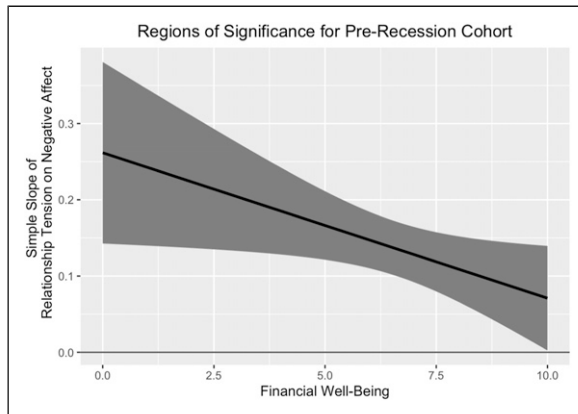
= .29). In contrast, results revealed that, among the post-recession cohort, financial well-being did not significantly moderate the within-person association between relationship tension and negative affect ( $Est. = 0.01$ ,  $SE = 0.01$ ,  $p = .201$ ). Thus, negative affect reactivity to daily relationship tension was not conditional on financial well-being among those in the post-recession cohort.

**Positive Affect.** The random effect of relationship tension was significant, indicating that individuals varied from one another in their event-related fluctuations in positive affect (see Table 3). Accounting for between-person effects, the main effect of relationship tension (within-person) indicated that, on average, individuals reported lower positive affect on days when relationship tension occurred.

There were no significant interactions in this model. Taken together, these findings suggest that event-related fluctuations in positive affect did not vary by financial well-being for either cohort.



**Figure 2.** The within-person association between the daily occurrence of relationship tension and daily negative affect at low ( $-1$  SD) versus high ( $+1$  SD) levels of financial well-being for cohorts of partnered individuals who were or were not exposed to the Great Recession.



**Figure 3.** Regions of significance plot depicting the marginal effect of relationship tension on daily negative affect (i.e., simple slope of relationship tension) for the pre-recession cohort across the possible range of financial well-being. Shaded area represents the 95% confidence interval for the marginal effect.

## Discussion

To our knowledge, this is the first study to connect daily measures of interpersonal relationship functioning and affect with measures of financial well-being and markers of historical time (though, because the current study was not pre-registered, findings may be regarded as exploratory). Using two samples of partnered individuals matched on age, gender, education, race, and marital status, one cohort assessed before and the other assessed after the Great Recession, we found that the post-recession cohort was characterized by a more stressful daily life (more daily relationship tension, higher negative

affect, and lower positive daily affect relative to the pre-recession cohort). For both cohorts, individuals reported higher negative affect and lower positive affect on days when relationship tension occurred. Further, we observed that the moderating effect of financial well-being on daily emotional reactivity to relationship tension differed between the pre-recession and post-recession cohorts for negative affect. For the pre-recession cohort, the association between daily relationship tension and greater negative affect was stronger among those with lower financial well-being. In contrast, and contrary to our hypothesis, for the post-recession cohort, daily negative affective reactivity to relationship tension did not vary by financial well-being.

### *Financial Well-Being, Relationship Tension, and Negative Affect: Differences Across Historical Time*

Affective reactivity to everyday stressful events is predictive of long-term physical and mental health outcomes, above and beyond the level of negative affect (Charles et al., 2013; Piazza et al., 2013). In fact, previous studies have shown that a unit increase in negative affective reactivity is associated with a 10% increase in the risk of chronic health conditions and 56% greater odds of reporting an affective disorder 10 years later. The life course perspective (Elder et al., 2003) highlights the relevance of macrosocial historical contexts for the occurrence of specific patterns of microsocial processes and individuals' trajectories of well-being. Thus, investigation of factors that may increase or decrease individuals' risk for poorer health and the times in which individuals are more susceptible (or robust) to these linkages across different historical epochs may elucidate ways to promote long-term well-being. Results from the current study support the incorporation of markers of historical time, such as the occurrence of major societal events, as broader contextual indicators of external stress to understand variability in emotional reactivity to daily relationship tension across levels of financial well-being. The ways relationship tension and negative affect are related on a daily basis may vary as a function of financial well-being, but the salience of financial well-being in these associations is not universal and itself appears to vary by historical context.

Consistent with the VSA model and FSM (Conger et al., 1990; Karney & Bradbury, 1995), which predict poorer relationship functioning and subsequent individual health in the context of lower financial resources, we found that, prior to the Great Recession, individuals with lower financial well-being exhibited greater daily emotional reactivity to relationship tension (approximately half a standard deviation more of negative affect). To better understand the relevance of this difference, and given the well-established literature documenting age-related decreases in negative affect (Charles et al., 2010; 2016; Scott et al., 2017), we compared this difference to the effect of age on negative affect.<sup>2</sup> We found that, on days individuals experienced tension in their relationships, the difference in negative affect between those with higher levels of financial well-being and those with lower levels of financial well-being was equivalent to losing all the advantages of age-related reductions in daily negative affect, as this difference was similar to the difference in negative affect between individuals in the current study who were 43 years apart. Given these findings, it seems that, specifically among the pre-recession cohort, financial well-

being was an important contextual factor for individuals' emotional reactions to daily relationship tension. Individuals with lower financial well-being may have experienced their financial circumstances as a chronic stressor that depleted them of emotional and tangible resources to cope with other stressors in their environments, such as negative relationship interactions, resulting in amplified reactivity to relationship tension. In contrast, individuals with greater financial well-being during this period of relative societal prosperity may have had relatively greater access to resources (e.g., time, energy, opportunities) that helped buffer them emotionally from relationship tension.

Inconsistent with theory, we found that individuals in the post-recession cohort exhibited negative affect reactivity to relationship tension but that the degree of reactivity did not vary as a function of financial well-being. One explanation for this unexpected finding is that the societal-level economic uncertainty created by the Recession dampened the protective effects of financial well-being, as individuals with higher financial well-being perceived or experienced a loss of their resources and security/status. This is consistent with [Liker and Elder's \(1983\)](#) notion that relationships become tense and more strained when individuals must adapt to stressful circumstances to which they are unaccustomed, such as experiencing the effects of major economic downturns. As such, individuals with higher financial well-being may have demonstrated greater reactivity to relationship tension similar to that of individuals with lower financial well-being.

At the same time, it is important to note that the Great Recession coincided with other historical changes that also could have affected daily processes. For instance, the rise of modernization and individualization throughout the 20<sup>th</sup> century has been connected with increases in social isolation and unpredictability in daily life ([Almeida et al., 2020](#)). These changes may have had universal impacts on perceptions of financial well-being that were especially pronounced for the post-recession cohort as they were assessed later into the century when these changes were more widespread than for the pre-recession cohort—resulting in a similar modifying effect of financial well-being for daily reactivity to relationship tension for individuals in the post-recession cohort. Theoretical models that describe the linkages among financial well-being, relationship tension, and negative affect (e.g., VSA model, FSM) should be expanded to address how these linkages exist within the broader sociohistorical context of time and to discuss historical variation in the moderating role of financial well-being, potentially incorporating additional aspects of life course theory to explain the relevance of major economic downturns and other historical changes for shifts in the meaning of financial well-being over time. Providing such additional theoretical nuance will enhance explanations for other cohort differences that may be observed in the linkages between financial well-being and negative affective reactivity to relationship tension and yield directions for future research.

### *Relationship Tension and Positive Affect*

The association between relationship tension and positive affect was consistent across financial well-being and cohort status. One reason for this may be the relatively stable levels of positive affect throughout the 8-days study protocol. Indeed, the ICC indicated that the majority of variation in positive affect existed at the between-person level rather

than at the within-person level. Consequently, the stability of positive affect over time may have limited the ability to detect cross-level interactions that might exist between relationship tension and financial well-being or cohort status to predict daily positive affect. Future research that assesses positive dimensions of daily affect over a longer period (e.g., a 14-day diary study) may capture more variability in daily functioning and help to further clarify whether the associations between relationship tension and positive, but not negative, affect are truly robust to the effects of financial well-being and socio-historical markers of time.

### *Future Directions for Integrating Daily Measures with Historical Time*

Results from the current study may have implications for examining the connections among financial well-being, relationship tension, and daily affect during the emergence of other major historical events, such as the COVID-19 pandemic. Scholars have noted that the pandemic has increased individuals' reliance on intimate partners due to being isolated at home with their families for long periods of time (Stanley & Markman, 2020; Williamson, 2020). As a result, romantic relationship quality and its implications for individual emotional well-being may be particularly salient in this context. One study found that, on average, the pandemic was associated with positive changes in individuals' attributions for romantic partners' negative behaviors but that, among individuals who experienced higher levels of relationship conflict, they demonstrated more negative attributions over time (Williamson, 2020). Although the study did not find a moderating effect of financial status on these relational attributions, this study assessed individuals' global perceptions of their partners' behaviors over 20 weeks; thus, questions remain concerning the role of financial well-being in *daily* relationship functioning and its connection to individual psychological well-being. Additionally, future work should be intentional about examining these processes among racial and ethnic minorities, who have been disproportionately affected by the COVID-19 pandemic (Abedi et al., 2021; Tai et al., 2021) and are already disproportionately impacted by socioeconomic disparities. Moreover, utilizing an intersectional lens (Levine & Breshears, 2019) to capture the heterogeneity that exists in social disadvantage across race and social class will help uncover additional nuance in the ways these factors may converge to place individuals who hold multiple marginalized identities as most vulnerable during particular socio-historical periods. Finally, future research that integrates measures of historical time with assessments of financial well-being and affective reactivity to relationship tension will require intensive, repeated data from large samples to capture these processes and detect effects and should also be cautious in interpreting significant findings, given the potential for these type of analyses to be limited by spurious interactive effects (Aguinis et al., 2013; Mathieu et al., 2012).

### *Limitations*

The current investigation has several methodological strengths, including the use of two large national subsamples of partnered individuals matched on demographic



characteristics, integration of daily data from individuals assessed prior to the Great Recession and those assessed after, and examination of both negative and positive aspects of daily affect. However, the study findings should be considered in light of its limitations. First, given that MIDUS is not a nationally representative sample of the U.S. population and that majority of the participants were White, our findings may not be generalizable to other racial and ethnic minority populations in the U.S. Additional research is needed to examine how the linkages among financial well-being, daily relationship tension, and daily affect differ by historical time using more diverse samples. Second, although participants completed measures regarding their daily interactions with their spouses/partners, we utilized a single measure of the occurrence of relationship tension, which does not account for the quantity or intensity of these interactions. Further, we did not have data from their romantic partners, which precludes the ability to assess partner effects in the associations between relationship tension and daily affect. Future work should include a comprehensive daily assessment of interactions between both romantic partners and examine these linkages in a dyadic context. Third, the measures of daily affect in the current study stem from Western conceptualizations of negative and positive emotions. Future work that utilizes other measures of daily affect may yield information about the associations among financial well-being, relationship tension, and affect that is more representative of other cultural orientations. The current measure of financial well-being was also a self-report measure based on subjective perceptions of financial status, which may have inflated associations due to shared method variance. Additional research that includes objective measures of financial status may provide greater clarity regarding the associations assessed in the current study. Fourth, the current analysis capitalized on data from separate samples from different decades to test for cohort differences. We used a matched design to compare samples with similar characteristics; however, the differences found between the cohorts could also be attributable to other factors besides the occurrence of the Great Recession. Moreover, because we examined cohort differences in the moderation of emotional reactivity to relationship tension by financial well-being, we were not able to speak to the heterogeneity that existed among those with lower financial well-being specifically due to hardship from the Great Recession. However, this may be a key area of investigation for future research. Finally, although we found a significant cohort difference in the moderating role of financial well-being in the associations between relationship tension and negative affect, we did not find an overall cohort difference in negative affective reactivity to relationship tension. Given the large sample size and the number of parameters included in each model, the cohort differences in the moderating role of financial well-being observed in the current study may be spurious. As such, the results should be interpreted with caution and viewed as an initial inquiry into this area of investigation that underscores the need for additional research and focused data collection.

### *Implications*

These limitations notwithstanding, the findings from this study have theoretical, clinical, and policy implications. First, social and family theories that consider the associations among financial well-being, relationship functioning, and individual psychological

adjustment (i.e., VSA, FSM) may need to be refined to discuss how variation in these linkages may exist across markers of historical time and individuals' experiences due to major societal events, acknowledging the contextual relevance of such events to give meaning to financial well-being and its moderating role in emotional reactivity. Such expansions would enhance future research by providing specificity concerning the individuals who may be relatively more vulnerable to poorer individual psychological health and the times during which these individuals may be most susceptible. Regarding clinical practice, given the associations between relationship tension and greater affective reactivity to relationship tension in multiple models for both cohorts, practitioners working with individuals or couples can assist partners in developing strategies (e.g., cognitive reappraisals, communication skills) to buffer the consequence of negative or hostile relationship interactions on daily affect. Further, clinicians and practitioners can assess individuals' perceptions of their financial well-being, particularly following macroeconomic crises or other major historical events, and assist them in recognizing the ways these perceptions may contribute to their emotional and relational functioning. Regarding public policy, additional attention is needed to the connections among financial well-being, romantic relationships, and daily affect. Policy initiatives and legislation aimed at promoting financial well-being or providing additional economic resources in response to societal-level financial crises may benefit both the emotional and relational experiences of romantic partners.

## **Conclusion**

This study illustrates the linkages between financial well-being and affective reactivity to daily relationship tension and the importance of considering historical context, such as the Great Recession, when examining such daily processes. The current findings suggest that the moderating effect of financial well-being in the daily linkages between relationship tension and negative affect (but not positive affect) can vary across historical time. Future work that integrates daily measures of relationship functioning and affect with measures of financial well-being and sociohistorical conceptualizations of time will advance the current understanding of how everyday relationship processes are related to emotional adjustment, which individuals are most vulnerable to negative relationship processes, and how this may change over time.

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## ORCID iDs

August I. C. Jenkins  <https://orcid.org/0000-0002-5971-9787>

Yunying Le  <https://orcid.org/0000-0002-4172-5943>

Agus Surachman  <https://orcid.org/0000-0001-7474-9450>

David M. Almeida  <https://orcid.org/0000-0002-5233-8148>

Steffany J. Fredman  <https://orcid.org/0000-0002-2053-8700>

## Open research statement

As part of IARR's encouragement of open research practices, the author(s) have provided the following information: This research was not pre-registered. The data used in the research are available. The data can be obtained at: <https://www.icpsr.umich.edu/web/ICPSR/series/203>. The materials used in the research are available. The materials can be obtained at: <https://www.icpsr.umich.edu/web/ICPSR/series/203>.

## Supplemental Material

Supplemental Material for this article is available online.

## Notes

1. The first wave of the National Study of Daily Experiences (i.e., NSDE 1) did not include assessments of positive affect. Thus, for this study, we utilized data from the second wave (i.e., NSDE 2) to test the association between relationship tension and both daily negative and positive affect for individuals prior to the Great Recession.
2. We used the age coefficient in the same model to calculate how many unit changes in age (i.e., years) it would take to approximate the coefficient for the difference in negative affect on relationship tension days between those with higher financial well-being and those with lower financial well-being (i.e., those 1 *SD* above and 1 *SD* below the mean of financial well-being, respectively; Est. =  $-.15$ ). This difference in negative affect between those with higher and lower financial well-being was equivalent to a 43-years age difference in negative affect.

## References

- Abedi, V., Olulana, O., Avula, V., Chaudhary, D., Khan, A., Shahjouei, S., Li, J., & Zand, R. (2021). Racial, economic, and health inequality and COVID-19 Infection in the United States. *Journal of Racial and Ethnic Health Disparities*, 8(3), 732–742. <https://doi.org/10.1007/s40615-020-00833-4>
- Aguinis, H., Gottfredson, R. K., & Culpepper, S. A. (2013). Best-practice recommendations for estimating cross-level interaction effects using multilevel modeling. *Journal of Management*, 39(6), 1490–1528. <https://doi.org/10.1177/0149206313478188>
- Almeida, D. M., Charles, S. T., Mogle, J., Drewelies, J., Aldwin, C. M., Spiro, A., & Gerstorf, D. (2020). Charting adult development through (historically changing) daily stress processes. *American Psychologist*, 75(4), 511–524. <https://doi.org/10.1037/amp0000597>

- Almeida, D. M., Mcgonagle, K., & King, H. (2009). Assessing daily stress processes in social surveys by combining stressor exposure and salivary cortisol. *Biodemography and Social Biology*, 55(2), 219–237. <https://doi.org/10.1080/19485560903382338>
- Almeida, D. M., Wethington, E., & Kessler, R. C. (2002). The daily inventory of stressful events: An interview-based approach for measuring daily stressors. *Assessment*, 9(1), 41–55. <https://doi.org/10.1177/1073191102091006>
- Alonso-Ferres, M., Imami, L., & Slatcher, R. B. (2020). Untangling the effects of partner responsiveness on health and well-being: The role of perceived control. *Journal of Social and Personal Relationships*, 37(4), 1150–1171. <https://doi.org/10.1177/0265407519884726>
- Ascigil, E., Selcuk, E., Gunaydin, G., & Ong, A. D. (2020). Integrating models of marital functioning to understand the mental health consequences of the great recession. *Journal of Social and Personal Relationships*, 37(7), 2118–2135. <https://doi.org/10.1177/0265407520918938>
- Birditt, K. S., Fingerhman, K. L., & Almeida, D. M. (2005). Age differences in exposure and reactions to interpersonal tensions: A daily diary study. *Psychology and Aging*, 20(2), 330–340. <https://doi.org/10.1037/0882-7974.20.2.330>
- Bolger, N., DeLongis, A., Kessler, R. C., & Schilling, E. A. (1989). Effects of daily stress on negative mood. *Journal of Personality and Social Psychology*, 57(5), 808–818. <https://doi.org/10.1037/0022-3514.57.5.808>
- Brock, R. L., Franz, M. R., O’Bleness, J. J., & Lawrence, E. (2019). The dynamic interplay between satisfaction with intimate relationship functioning and daily mood in low-income outpatients. *Family Process*, 58(4), 891–907. <https://doi.org/10.1111/famp.12402>
- Charles, S. T., Luong, G., Almeida, D. M., Ryff, C., Sturm, M., & Love, G. (2010). Fewer ups and downs: Daily stressors mediate age differences in negative affect. *Journals of Gerontology - Series B Psychological Sciences and Social Sciences*, 65(3), 279–286. <https://doi.org/10.1093/geronb/gbq002>
- Charles, S. T., Piazza, J. R., Mogle, J., Sliwinski, M. J., & Almeida, D. M. (2013). The wear and tear of daily stressors on mental health. *Psychological Science*, 24(5), 733–741. <https://doi.org/10.1177/0956797612462222>
- Charles, S. T., Piazza, J. R., Mogle, J. A., Urban, E. J., Sliwinski, M. J., & Almeida, D. M. (2016). Age differences in emotional well-being vary by temporal recall. *Journals of Gerontology - Series B Psychological Sciences and Social Sciences*, 71(5), 798–807. <https://doi.org/10.1093/geronb/gbv011>
- Conger, R. D., Elder, G. H., Lorenz, F. O., Conger, K. J., Simons, R. L., Whitbeck, L. B., Huck, S., & Melby, J. N. (1990). Linking economic hardship to marital quality and instability. *Journal of Marriage and Family*, 52(3), 643–656. <https://www.jstor.org/stable/352931>
- Duignan, B. (2019). *Great recession*. Encyclopedia Britannica. <https://www.britannica.com/topic/great-recession>
- Elder, G. H., & Caspi, A. (1988). Economic stress in lives: Developmental perspectives. *Journal of Social Issues*, 44(4), 25–45. <https://doi.org/10.1111/j.1540-4560.1988.tb02090.x>
- Elder, G. H., Johnson, M. K., & Crosnoe, R. (2003). The emergence and development of life course theory. In J. T. Mortimer, & M. J. Shanahan (Eds.), *Handbook of the life course* (pp. 3–19). Springer. [https://doi.org/10.1007/978-0-306-48247-2\\_1](https://doi.org/10.1007/978-0-306-48247-2_1)
- Ellen Gould, I., & Dastrup, S. (2012). *Housing and the great recession*. <https://furmancenter.org/files/publications/HousingandtheGreatRecession.pdf>

- Falconier, M. K., & Jackson, J. B. (2020). Economic strain and couple relationship functioning: A meta-analysis. *International Journal of Stress Management*, 27(4), 311–325. <https://doi.org/10.1037/str0000157>
- Farrell, A. K., & Stanton, S. C. E. (2019). Toward a mechanistic understanding of links between close relationships and physical health. *Current Directions in Psychological Science*, 28(5), 483–489. <https://doi.org/10.1177/0963721419855657>
- Garcia, M. A., & Umberson, D. (2019). Marital strain and psychological distress in same-sex and different-sex couples. *Journal of Marriage and Family*, 81(5), 1253–1268. <https://doi.org/10.1111/jomf.12582>
- Glei Id, D. A., Goldman, N., & Weinstein, M. (2019). *A growing socioeconomic divide: Effects of the great Recession on perceived economic distress in the United States*. <https://doi.org/10.1371/journal.pone.0214947>
- Hox, J. J., Moerbeek, M., & van de Schoot, R. (2010). *Multilevel analysis: Techniques and applications*. Routledge.
- Kanter, J. B., & Proulx, C. M. (2021). The longitudinal association between marital and psychological functioning in socioeconomically disadvantaged relationships. *Journal of Social and Personal Relationships*, 38(9), 2465–2473. <https://doi.org/10.1177/02654075211011704>
- Karney, B. R., & Bradbury, T. N. (1995). The longitudinal course of marital quality and stability: A review of theory, method, and research. *Psychological Bulletin*, 118(1), 3–34. <https://doi.org/10.1037/0033-2909.118.1.3>
- Kochhar, R. (2020). *Unemployment rose higher in three months of COVID-19 than it did in two years of the great recession*. Pew Research Center. <https://pewrsr.ch/2UADTTZ>
- Levine, A., & Breshears, B. (2019). Discrimination at every turn: An intersectional ecological lens for rehabilitation. *Rehabilitation Psychology*, 64(2), 146–153. <https://doi.org/10.1037/REP0000266>
- Liker, J. K., & Elder, G. H. (1983). Economic hardship and marital relations in the 1930s. *American Sociological Review*, 48(3), 343–359. <https://doi.org/10.2307/2095227>
- Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association*, 83(404), 1198–1202. <https://doi.org/10.1080/01621459.1988.10478722>
- Masarik, A. S., & Conger, R. D. (2017). Stress and child development: A review of the family stress model. *Current Opinion in Psychology*, 13, 85–90. <https://doi.org/10.1016/J.COPSYC.2016.05.008>
- Mathieu, J. E., Aguinis, H., Culpepper, S. A., & Chen, G. (2012). Understanding and estimating the power to detect cross-level interaction effects in multilevel modeling. *Journal of Applied Psychology*, 97(5), 951–966. <https://doi.org/10.1037/A0028380>
- Mroczek, D. K., & Kolarz, C. M. (1998). The effect of age on positive and negative affect: A developmental perspective on happiness. *Journal of Personality and Social Psychology*, 75(5), 1333–1349. <https://doi.org/10.1037/0022-3514.75.5.1333>
- Neff, L. A., & Karney, B. R. (2004). How does context affect intimate relationships? Linking external stress and cognitive processes within marriage. *Personality & Social Psychology Bulletin*, 30(2), 134–148. <https://doi.org/10.1177/0146167203255984>
- Neff, L. A., & Karney, B. R. (2017). Acknowledging the elephant in the room: How stressful environmental contexts shape relationship dynamics. *Current Opinion in Psychology*, 13, 107–110. <https://doi.org/10.1016/j.copsyc.2016.05.013>

- Netemeyer, R. G., Warmath, D., Fernandes, D., & Lynch, J. G. (2018). How am I doing? Perceived financial well-being, its potential antecedents, and its relation to overall well-being. *Journal of Consumer Research*, 45(1), 68–89. <https://doi.org/10.1093/jcr/ucx109>
- Pew Research Center (2009). *Foreclosures in the U.S.* <https://www.pewresearch.org/hispanic/2009/05/12/v-foreclosures-in-the-u-s-in-2008/>
- Pew Research Center (2010). *How the great recession has changed life in America.* <http://www.pewsocialtrends.org/2010/06/30/how-the-great-recession-has-changed-life-in-america/>
- Piazza, J. R., Charles, S. T., Sliwinski, M. J., Mogle, J., & Almeida, D. M. (2013). Affective reactivity to daily stressors and long-term risk of reporting a chronic physical health condition. *Annals of Behavioral Medicine*, 45(1), 110–120. <https://doi.org/10.1007/s12160-012-9423-0>
- Preacher, K. J., Curran, P. J., & Bauer, D. J. (2006). Computational tools for probing interactions in multiple linear regression, multilevel modeling, and latent curve analysis. *Journal of Educational and Behavioral Statistics*, 31(4), 437–448. <https://doi.org/10.3102/10769986031004437>
- Randolph, J. J., Falbe, K., Manuel, A. K., & Balloun, J. L. (2014). A step-by-step guide to propensity score matching in R. *Practical Assessment, Research, and Evaluation*, 19(18), 1–6. <https://doi.org/10.7275/n3pv-tx27>
- Ryff, C. D., & Krueger, R. F. (2018). *The Oxford handbook of integrative health science.* Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780190676384.001.0001>
- Sbarra, D. A., & Coan, J. A. (2018). Relationships and health: The critical role of affective science. *Emotion Review*, 10(1), 40–54. <https://doi.org/10.1177/1754073917696584>
- Scott, S. B., Ram, N., Smyth, J. M., Almeida, D. M., & Sliwinski, M. J. (2017). Age differences in negative emotional responses to daily stressors depend on time since event. *Developmental Psychology*, 53(1), 177–190. <https://doi.org/10.1037/dev0000257>
- Selcuk, E., Gunaydin, G., Ong, A. D., & Almeida, D. M. (2016). Does partner responsiveness predict hedonic and eudaimonic well-being? A 10-year longitudinal study. *Journal of Marriage and Family*, 78(2), 311–325. <https://doi.org/10.1111/jomf.12272>
- Smith, D. A., Breiding, M. J., & Papp, L. M. (2012). Depressive moods and marital happiness: Within-person synchrony, moderators, and meaning. *Journal of Family Psychology*, 26(3), 338–347. <https://doi.org/10.1037/a0028404>
- Stanley, S. M., & Markman, H. J. (2020). Helping couples in the shadow of COVID-19. *Family Process*, 59(3), 937–955. <https://doi.org/10.1111/FAMP.12575>
- Stanton, S. C. E., Selcuk, E., Farrell, A. K., Slatcher, R. B., & Ong, A. D. (2019). Perceived partner responsiveness, daily negative affect reactivity, and all-cause mortality: A 20-year longitudinal study. *Psychosomatic Medicine*, 81(1), 7–15. <https://doi.org/10.1097/PSY.0000000000000618>
- Sturgeon, J. A., Zautra, A. J., & Okun, M. A. (2014). Associations between financial stress and interpersonal events: A daily diary study of middle-aged adults and their life circumstances. *Psychology and Aging*, 29(4), 803–813. <https://doi.org/10.1037/a0037961>
- Tai, D. B. G., Shah, A., Doubeni, C. A., Sia, I. G., & Wieland, M. L. (2021). The disproportionate impact of COVID-19 on racial and ethnic minorities in the United States. *Clinical Infectious Diseases*, 72(4), 703–706. <https://doi.org/10.1093/CID/CIAA815>
- Tolpin, L. H., Cohen, L. H., Gunthert, K. C., & Farrehi, A. (2006). Unique effects of depressive symptoms and relationship satisfaction on exposure and reactivity to daily romantic

- relationship stress. *Journal of Social and Clinical Psychology*, 25(5), 565–583. <https://doi.org/10.1521/jscp.2006.25.5.565>
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology*, 54(6), 1063–1070. <https://doi.org/10.1037/0022-3514.54.6.1063>
- Whisman, M. A., Sbarra, D. A., & Beach, S. R. H. (2021). Intimate relationships and depression: Searching for causation in the sea of association. *Annual Review of Clinical Psychology*, 17(18), 1–26. <https://doi.org/10.1146/annurev-clinpsy-081219-103323>
- Wickrama, K. A. S., & O’Neal, C. W. (2019). Economic hardship, positive affect, and marital processes over middle years. *Journal of Social and Personal Relationships*, 36(10), 3239–3258. <https://doi.org/10.1177/0265407518817186>
- Wickrama, K. A. S., Surjadi, F. F., Lorenz, F. O., Conger, R. D., & O’Neal, C. W. (2012). Family economic hardship and progression of poor mental health in middle-aged husbands and wives. *Family Relations*, 61(2), 297–312. <https://doi.org/10.1111/j.1741-3729.2011.00697.x>
- Wilkinson, L. R. (2016). Financial strain and mental health among older adults during the great recession. *The Journals of Gerontology: Series B*, 71(4), 745–754. <https://doi.org/10.1093/GERONB/GBW001>
- Williamson, H. C. (2020). Early effects of the COVID-19 pandemic on relationship satisfaction and attributions. *Psychological Science*, 31(12), 1479–1487. <https://doi.org/10.1177/0956797620972688>