Article

The Highs and Lows of Love: Romantic Relationship Quality Moderates Whether Spending Time With One's Partner Predicts Gains or Losses in Well-Being

Personality and Social Psychology Bulletin
2020, Vol. 46(4) 572–589

DOI: 10.1177/0146167219867960
journals.sagepub.com/home/pspb
SAGE

Nathan W. Hudson[1], Richard E. Lucas[2], and M. Brent Donnellan[2]

Abstract

Previous research suggests both relationship status and relationship quality correlate with well-being. The present study extended these findings in three ways. First, we benchmarked individuals with various-quality relationships against uncoupled people to determine whether even low-quality relationships are associated with greater well-being than being unpartnered. Second, research suggests global well-being (e.g., life satisfaction) and experiential well-being (e.g., momentary affect) oftentimes have different predictors. Thus, we tested whether individuals report greater experiential well-being while with their partners. Finally, we examined whether daily time invested into one's relationship predicted well-being. Results indicated that being in a romantic relationship, interacting with one's partner, and investing greater time into the relationship all predicted greater well-being. However, these effects were moderated by relationship quality, such that being in even relatively neutral relationships and interacting therein were associated with lower well-being than being unpartnered.

Keywords

subjective well-being, life satisfaction, positive affect, negative affect, close relationships, romantic relationships, relationship quality, day reconstruction method

Received December 8, 2017; revised accepted May 23, 2019

Positive close relationships have been frequently described as a fundamental human need (Baumeister & Leary, 1995; Bowlby, 1969; Deci & Ryan, 2000). In reviewing the subjective well-being literature, Argyle (2001) wrote, "Social relationships have a powerful effect on happiness and other aspects of well-being, and are perhaps its greatest single cause" (p. 71). Similarly, Myers called the link between relationships and well-being a "deep truth" (1992, p. 154) and claimed, "Age, gender, and income. . . give little clue to someone's happiness. . ., better clues come from knowing. . . whether [people] enjoy a supportive network of close relationships" (2000, p. 65). Honing these ideas, theorists have argued that the single most important relationship for most adults is their romantic partnership (Hazan & Zeifman, 1994)—and moreover that success or failure in developing a high-quality romantic relationship has the potential to shape individuals' lifelong trajectories of well-being (Erikson, 1974).

Yet, as Lucas and Dyrenforth (2006) noted, the empirical evidence for the preeminence of social—and especially romantic—relationship involvement in predicting well-being may be overstated. For one, studies examining correlations between relationship status and well-being have generally produced small-to-medium effect sizes. For example, Lucas and Dyrenforth (2006) estimated the correlation between marital status and happiness to be $r = .23$—approximately the same magnitude as the association between income and happiness ($r = .21$; Pinquart & Sorensen, 2000). Thus, mere involvement in a romantic relationship does not appear to be a dramatically stronger predictor of well-being, compared with other relevant variables.

Does Relationship Quality Matter?

One potential explanation for the apparently modest overall association between relationship status and well-being—as many relationship theorists have noted—is that the *quality* of one's romantic relationship is paramount (Baker, McNulty,

[1]Southern Methodist University, Dallas, TX, USA
[2]Michigan State University, East Lansing, USA

Corresponding Author:
Nathan W. Hudson, Department of Psychology, Southern Methodist University, P.O. Box 750442, Dallas, TX 75275, USA.
Email: nwhudson@smu.edu

Overall, Lambert, & Fincham, 2013; Gere & Schimmack, 2013; Gustavson, Røysamb, Borren, Torvik, & Karevold, 2016; Lehmann et al., 2015). For example, relationships characterized by positive interactions, such as affection and compassion, may nurture well-being (Debrot, Schoebi, Perrez, & Horn, 2013; Reis, Maniaci, & Rogge, 2014), whereas frequent negative interactions, such as conflict or providing support, may erode well-being (Cichy, Stawski, & Almeida, 2014; Mackinnon et al., 2012). Supporting this notion, research suggests that among partnered individuals, relationship quality (e.g., relationship satisfaction) is correlated relatively strongly with measures of well-being (equivalent to approximately $r = .45$; Gere & Schimmack, 2013; see also Heller, Watson, & Ilies, 2004; Proulx, Helms, & Buehler, 2007).

In isolation, however, this finding is somewhat ambiguous. Namely, with a few exceptions (e.g., Holt-Lunstad, Birmingham, & Jones, 2008; McCabe, Cummins, & Romeo, 1996), studies of relationship quality have generally examined only partnered individuals—and thus have not directly contrasted individuals in various-quality relationships with their single peers. Thus, although these studies clearly suggest high-quality relationships are associated with greater well-being than are low-quality ones, they do not speak to the extent to which various-quality relationships predict greater or lesser well-being, compared with being unpartnered. For example, it remains unclear whether individuals in relatively low-quality romantic relationships report greater or lesser well-being than do their single peers—and if so, precisely how low relationship quality must dip to predict lower well-being. Indeed, theorists have speculated that only high-quality relationships should be associated with greater well-being and that negative relationships may inhibit well-being (e.g., Baumeister & Leary, 1995). However, studies that have explicitly tested this notion by directly contrasting individuals in negative or even lukewarm relationships with single people are rare (cf. Holt-Lunstad et al., 2008; McCabe et al., 1996).

Therefore, one goal of our study was to jointly examine the effects of relationship status and relationship quality in predicting well-being. Specifically, we examined the extent to which relationship quality *moderated* the effect of relationship status on well-being. Consequently, we were able to directly compare individuals with various-quality relationships to their unpartnered peers. This allowed us to estimate the extent to which high-quality relationships predicted greater well-being than being unpartnered. Similarly, we examined whether low-quality relationships were simply associated with *smaller gains* in well-being than were high-quality ones (e.g., any relationship is associated with greater well-being than having no relationship)—or whether low-quality relationships were associated with *lesser* well-being than being single.

Do Romantic Relationships Predict Experiential Well-Being?

A second goal of our study was to examine the associations between relationship status, relationship quality, and *experiential* well-being. Specifically, scholars have recently emphasized that *global* reports of well-being (e.g., life satisfaction, trait positive and negative affect) are not identical to experiential well-being—aggregations of actual, lived emotional experiences (Hudson, Lucas, & Donnellan, 2017; Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004; Robinson & Clore, 2002). For example, self-reported global positive and negative affect correlate only modestly with aggregated daily emotions (Anusic, Lucas, & Donnellan, 2017). This raises the possibility that global and experiential well-being may have different predictors and outcomes and/or may operate via different processes. For instance, individuals with higher income tend to report greater life satisfaction than do their poorer peers—but income is largely unrelated to daily experiences of happiness (Hudson, Lucas, Donnellan, & Kushlev, 2016; Kahneman & Deaton, 2010). Thus, wealth may have the potential to augment the sense that one's life is progressing well, but it may not necessarily spur more frequent lived experiences of positive affect.

Similar to income, recent research suggests that, despite the fact that *being involved in* a romantic relationship is associated with greater global well-being (e.g., life satisfaction; Hope, Rodgers, & Power, 1999), actually interacting with one's romantic partner may not be as strongly linked to momentary emotions. For example, one study found that people reported *less* positive affect while in the company of their romantic partners, compared with while being with their friends (Kahneman et al., 2004). This phenomenon may indicate that although romantic relationships have the potential to enhance the overall sense that one's life is progressing well, occasional hassles such as conflict or pressure to provide emotional support may tax momentary experiences of well-being (Cichy et al., 2014; Mackinnon et al., 2012).

To the best of our knowledge, however, no studies have examined the extent to which relationship quality moderates the effect of interacting with one's partner on *concurrent* experiences of well-being. Thus, a second goal of the present study was to examine the extent to which individuals in various-quality relationships reported changes in experiential well-being as a function of whether they were currently interacting with their romantic partner or not. For example, we examined whether individuals in high-quality relationships reported greater boosts in positive affect while in their presence of their romantic partner (vs. apart) compared with their peers in low-quality relationships. Moreover, we examined whether interacting with lower quality romantic partners nevertheless predicted gains in well-being (vs. being apart from them)—or whether the presence of low-quality partners actually predicted *decrements* in well-being.

Notably, in addition to answering substantive questions regarding whether romantic relationships differentially predict global versus experiential well-being, our analyses examining experiential well-being also help to partially address a methodological issue. Namely, as previously noted, there are relatively strong correlations between relationship satisfaction and global well-being. However, these estimates might be confounded by personality effects, such that individuals who are globally satisfied with their lives are likely to indicate high levels of satisfaction with all the individual components of their lives (Heller et al., 2004). Indeed, ratings of satisfaction with one's school, finances, health, sexual prospects, recreational activities, and religion also correlate (r = .31-.44) with life satisfaction (Hudson & Roberts, 2014). Thus, the extent to which relationship quality predicts well-being above and beyond a global effect of personality remains unclear.

Addressing this issue, our analyses that focused on *changes* in affect when participants switched interaction partners (i.e., with vs. apart from their partners) statistically controlled for these types of overall personality biases. For example, individuals biased toward universally greater well-being (e.g., higher positive affect, greater satisfaction with all areas of their lives) would be expected to report greater positive affect across *all* episodes—not only episodes in which their partners were present. Thus, by comparing differences in affect as a function of partners' presence versus absence, our analyses statistically control for global personality biases and provide a more refined perspective on the association between relationship quality and well-being.

Does Investing Greater Time in One's Partner Predict Well-Being?

The final goal of the present study was to examine the extent to which the *total amount of time* people spend with their partners predicts well-being. Namely, previous research suggests nonlinear associations between well-being and other variables. For example, greater income is associated with greater well-being, but the correlation may diminish at higher levels of income (Kahneman & Deaton, 2010). Similarly, the mere act of volunteering is associated with greater well-being, but the number of hours devoted to volunteering appears to be inconsequential (Son & Wilson, 2012).

Thus, it may be the case that mere involvement in a romantic relationship bolsters the sense that one's life is progressing well—and that *currently interacting* with one's partner may be pleasant—but that investing greater versus lesser amounts of daily time into one's romantic relationship may not be associated with differences in well-being. In other words, people who spend large amounts of time with their romantic partners may not report greater life satisfaction than people who spend more moderate amounts of time with their partners.

Prior research has found that self-reports of time spent with one's partner are positively associated with well-being (e.g., Greenhaus, Collins, & Shaw, 2003; Odle-dusseau, Britt, & Bobko, 2012). However, fewer studies have attempted to more objectively measure the amount of time people spend with their romantic partners and the extent to which these alternative measures are associated with well-being. Thus, in the present study, we collected extensive measures of the amount of time people spent with their romantic partners across several days and examined the extent to which it predicted well-being. Moreover, we tested whether relationship quality moderated this association.

Overview of the Present Study

The present study evaluated the associations between both global and experiential well-being and (a) relationship status, (b) whether or not individuals were *currently* interacting with their romantic partners, and (c) total amount of time individuals invested into their romantic partners. Moreover, we examined the extent to which relationship quality moderated these associations. To address these issues, we used a variant of the day reconstruction method (DRM; Kahneman et al., 2004) in which participants reported all activities in which they engaged, with whom they interacted, and both their global well-being and their in vivo affective experiences (i.e., experiential well-being) across three separate days. We used these data to test (a) whether partnered individuals reported greater well-being than did single persons, (b) whether people reported greater experiential well-being while with their partners versus apart, (c) whether total time with one's partner across all DRM episodes predicted greater well-being, and importantly, (d) whether these effects were moderated by relationship quality. We also tested whether poor-quality relationships were simply associated with *lesser gains* in well-being compared with high-quality ones—or whether poor-quality relationships were associated with *lower* well-being compared with being single.

Method

Participants

Our sample was recruited from a list of Michiganders who had previously participated in at least one wave of the Michigan State University's State of the State Survey (SOSS; Michigan State University, Institute for Public Policy and Social Research, 2015) and who had indicated they would be interested in participating in other studies. The SOSS is a quarterly, statewide telephone survey of approximately 1,000 adult Michiganders per wave, recruited via stratified random sampling (Pierce, 2016). SOSS participants can opt in to receive invitations to participate in additional, external studies. The SOSS administrative team sent participants who had

expressed interest in other studies an e-mail invitation to participate in our study, alongside a link to the study website. Thus, our sample was not random and self-selection effects may limit the generalizability of our findings. Participants were offered US$20 per wave for completing up to three waves, plus a US$15 bonus for completing all three waves (thus, maximum compensation was US$75); participants could opt to receive either Amazon.com credit or a check. All study materials were presented online.

A total of 410 participants responded to our invitation and provided at least one wave of data. This sample size enabled 99% power to detect average-sized effects (equivalent to $r \sim .21$; Richard, Bond, & Stokes-Zoota, 2003). The final sample at Time 1 was 60% female, with ages ranging from 19 to 92 years ($M = 52.61$, $SD = 14.73$). The racial composition of the sample was 86% White, 6% Black, 2% Asian, 2% Native American, and 2% Hispanic. Seventy-five percent of participants indicated they were currently involved in a romantic relationship, 82% had children, and 53% were employed. The SOSS staff sent the recruitment e-mails to preserve their participants' confidentiality. We do not have data regarding how many e-mails were sent to valid addresses; so, we cannot calculate a meaningful response rate.

At Time 1, participants provided us with their contact information and were later contacted directly by us and encouraged to provide two additional waves of data, with Time 2 and Time 3 measures collected an average of 17.60 ($SD = 4.84$) and 33.82 ($SD = 6.51$) days after Time 1, respectively. On average, participants provided 2.31 waves of data ($SD = 0.91$), with 326 participants (80%) completing at least two waves. Attrition analyses revealed that no variables, as measured at Time 1, were significantly related to waves provided, all $|r|$s $< .06$.

Measures

All study materials can be accessed on Open Science Framework (https://osf.io/xqx3q/).

Well-being

Life satisfaction. Once per wave, participants rated their life satisfaction using the five-item Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985). Items (e.g., "I am satisfied with my life") were rated on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*) and averaged to form a composite (Time 1 $\alpha = .90$).

Global affect. Once per wave, to measure global affective well-being, participants were asked to rate the extent to which they had generally felt various emotions over the past 2 weeks: happy, satisfied, angry, sad, frustrated, worried, and a sense of meaning. Each emotion was rated from 0 (*almost never*) to 6 (*almost always*). Because research indicates that positive and negative affect are separable (Watson, Clark, & Tellegen, 1988), we formed separate composites for *global positive affect* (an average of global happiness and satisfaction; Time 1 $\alpha = .84$) and *global negative affect* (an average of global anger, sadness, frustration, and worry; Time 1 $\alpha = .79$). We also separated meaning from positive affect because some have argued that hedonic well-being (e.g., positive affect) might be somewhat distinct from eudemonic well-being (e.g., a sense of purpose and meaning in life) (Ryan & Deci, 2001).

Experiential well-being. Participants' experiential well-being was measured using a variant of the DRM (Kahneman et al., 2004). Participants were first asked to reconstruct their entire prior day in terms of "episodes" that had occurred. Specifically, participants were given relatively open-ended instructions to divide their prior day into episodes, to "name" each episode, and to record each episode's start and end time. After reconstructing their entire prior day, participants were presented with each episode they had defined and were asked to (a) select all activities they had performed during the episode from a predetermined list of 21 activities (e.g., commuting, shopping, housework), (b) select with whom they were interacting during the episode from a predetermined list (e.g., romantic partner, friend, coworker), and (c) rate the extent to which they felt various emotions *during the episode*: happiness, satisfaction, anger, sadness, frustration, worry, and a sense of meaning. All emotions were rated on a scale from 0 (*not at all*) to 6 (*very much*).

As with global affect, we calculated composites within each episode for *experiential positive affect* (an average of experiential happiness and satisfaction; Time 1 $\alpha = .82$) and *experiential negative affect* (an average of experiential anger, sadness, frustration, and worry; Time 1 $\alpha = .90$). We examined *experiential meaning* separately.

Romantic relationships

Relationship status. Participants were asked to indicate their romantic relationship status using two different questions. First, they were asked to respond to, "Are you in a committed relationship" on a *yes* (1) or *no* (0) scale. Seventy-five percent of participants ($n = 307$) indicated they were in a committed relationship. Later, participants were asked to select exactly one relationship status from eight categories: "single (not dating anyone) and never married," "seeing someone casually," "in a committed partnership," "engaged," "married," "divorced or separated," "widowed," or "something else." Eight percent ($n = 32$) of the sample indicated that they were single, 3% ($n = 14$) were dating, 6% ($n = 26$) were partnered, 2% ($n = 7$) were engaged, 58% ($n = 271$) were married, 10% ($n = 48$) were divorced, and 3% were widowed ($n = 12$).

Due to the small samples in the dating, partnered, and engaged categories, as well as the ambiguity in inferring whether divorced and widowed individuals were also in a committed relationship, we did not examine different types of relationships (e.g., dating, engaged, married) separately

Table 1. Descriptive Statistics and Correlations for Well-Being and Relationship Quality Variables.

Variable	*M*	*SD*	ICC	Correlations								
				1	2	3	4	5	6	7	8	9
1. DRM positive affect	3.57	1.18	.47	—								
2. DRM meaning	2.85	1.53	.55	.66	—							
3. DRM negative affect	0.73	0.73	.46	−.39	−.16	—						
4. Global positive affect	4.20	0.94	.88	.69	.45	−.51	—					
5. Global meaning	3.94	1.30	.87	.57	.62	−.29	.66	—				
6. Global negative affect	2.42	0.96	.83	−.46	−.26	.61	−.63	−.39	—			
7. Life satisfaction	4.87	1.29	.91	.57	.38	−.48	.76	.59	−.58	—		
8. Relationship quality	5.86	1.23	.95	.42	.29	−.25	.45	.36	−.32	.52	—	
9. Daily time with partner	4.15	4.29	.13	.15	.09	−.14	.18	.12	−.16	.19	.16	—

Note. Averages were computed for each variable for each participant across all measurement occasions (i.e., up to nine measurements for experiential well-being variable; three measurements for each other variable). This table contains the descriptive statistics and correlations among these cross-time average variables. ICC = intraclass correlation for individuals across time (i.e., percentage of variance in each variable that was between-persons across the three waves); DRM = day reconstruction method.

in our primary analyses. Rather, in our primary analyses, we relied exclusively on participants' response to the question, "Are you in a committed relationship?" Of the dating individuals ($n = 14$), only one considered himself or herself in a committed relationship. Similarly, of the divorced individuals ($n = 48$), only three considered themselves in committed relationships. All partnered, engaged, and married individuals indicated they were in a committed relationship, and no single or widowed individuals indicated that they were in a committed relationship. Thus, with a few exceptions, our analyses involving relationship status primarily contrasted engaged, partnered, and married individuals (collective $n = 307$) with single, dating, divorced, and widowed persons (collective $n = 102$). Henceforth, we refer to these groups as people who "were in a relationship" and people who "were not in a relationship." As a point of clarification, we henceforth collectively refer to individuals' dating partners, fiancé(e)s, relationship partners, and spouses as their "partners." In our sample, participants who were in a relationship were more likely to be White ($r = .16$, 95% CI [0.06, 0.25]) and male ($r = .13$, 95% CI [0.03, 0.22]). In contrast, people in relationships did not differ from those not currently in relationships in terms of age ($r = .02$, 95% CI [–0.11, 0.15]).

Romantic relationship quality. At each wave, participants who were currently involved in a committed relationship rated their relationship quality using five items (e.g., "We have a good relationship"; "My relationship with my partner makes me happy"). Items were rated on a scale from *very strongly disagree* (1) to *very strongly agree* (7) and averaged to form a composite (Time 1 $\alpha = .96$).

Daily time with partner. The average daily time participants spent with their partners was computed from their DRM responses. Specifically, we summed the duration of all episodes during which participants indicated that their partners were present. This sum was then divided by the total number of waves each participant had provided to obtain the average daily time participants reported spending with their partners.

Results

Table 1 contains the descriptive statistics and intercorrelations for participants' average values of all well-being and relationship quality variables across all waves. Among partnered individuals, relationship satisfaction was relatively high ($M = 5.68$, $SD = 1.23$). Aggregated experiential DRM affect correlated moderate-to-highly with aggregated global affect (*r*s ranged from .61 [negative affect] to .69 [positive affect]), supporting the conclusion that global and experiential affect are related, albeit separable constructs (e.g., Hudson et al., 2017; Kim-Prieto, Diener, Tamir, Scollon, & Diener, 2005; Lucas, Diener, & Suh, 1996).

Analysis Strategy

We used separate analysis strategies for experiential and global well-being. Specifically, when examining experiential well-being, given the repeated measures available in the data set and the fact that, in some analyses, predictors varied across episodes (e.g., whether the partner was present or not), we used multilevel models (MLMs) that modeled affect in each episode, *e*, at wave, *w*, for person, *p*. For example, the MLM testing for differences in experiential positive affect between individuals in relationships versus not was

$$\left(\text{Experiential Positive Affect}\right)_{ewp} = b_0 + b_1\left(\text{In Relationship}\right)_p + U_{wp} + U_p + \varepsilon_{ewp}$$

In contrast, when examining global well-being, for parsimony, we computed average scores for each variable for each participant across all provided waves and used ordinary least-squares regression. For example, the model testing differences in global positive affect between individuals in relationships versus not was

$$\left(\text{Global Positive Affect}\right)_p = b_0 + b_1\left(\text{In Relationship}\right)_p + \varepsilon_p$$

In all models, well-being was standardized across all observations (see Ackerman, Donnellan, & Kashy, 2011). In models examining relationship status or the partners' presence, we used dummy codes (e.g., 1 = In Relationship, 0 = Not In a Relationship; 1 = Partner Present, 0 = Partner Absent). Thus, the metric of these parameter estimates is similar—albeit not identical to—a Cohen's *d* (e.g., the standardized difference in well-being between partnered and single individuals). To remind readers of this interpretational nuance, we use the notation b_d when reporting *d*-like parameter estimates. In contrast, in models examining daily time with one's partner, daily hours spent with one's partner was standardized across all observations (see Ackerman et al., 2011), and thus the parameter estimates are similar—albeit not identical to standardized regression coefficients (β; for example, the standardized increase in well-being per *SD* increase in time spent with partner). We use the notation b_β when reporting β-like parameter estimates.

Finally, whenever appropriate, we used interaction terms to separate the effects of *merely being in a relationship* from, for example, spending time with one's partner. For instance, the model examining the association between daily time with one's partner and global positive affect was

$$\begin{aligned}\left(\text{Global Positive Affect}\right)_p &= b_0 + b_1\left(\text{Daily Time with Partner}\right)_p \\ &+ b_2\left(\text{Not In Relationship}\right)_p + b_3\left(\text{Daily Time with Partner}\right)_p \\ &\left(\text{Not In Relationship}\right)_p + \varepsilon_p\end{aligned}$$

Due to the inclusion of the interaction term and the fact that the "Not In Relationship" variable was dummy coded with individuals not in relationships as the reference group (i.e., 0 = In Relationship, 1 = Not In Relationship), the b_1(Daily Time with Partner) coefficient captures the simple effect of spending time with one's partner, specifically *for individuals in a relationship.*

Do Individuals in Relationships Report Greater Well-Being?

For our first series of analyses, we tested whether individuals in romantic relationships reported greater well-being than did their peers who were not in relationships. As can be seen in the top halves of Tables 2 and 3, people in committed relationships reported approximately one-half standard deviation greater life satisfaction than their peers who were not in relationships (b_d = 0.55, 95% CI [0.35, 0.75]). There were no other statistically significant differences in either experiential or global well-being between individuals in relationships and those who were not (all $|b_d|$s < 0.20). Thus, notwithstanding life satisfaction, being in a relationship (vs. not in a relationship) generally did not predict any type of affective well-being (these results support Lucas and Dyrenforth's (2006) caution about the strength of associations between objective measures of relationship status and well-being outcomes).

As can be seen in the lower halves of Tables 2 and 3, however, for individuals in romantic relationships, relationship quality significantly predicted all well-being variables (simple b_βs ranged in magnitude from b_β = 0.17, 95% CI [0.10, 0.25] to b_β = 0.46, 95% CI [0.37, 0.56]). Thus, individuals in high-quality relationships had universally better well-being than their peers in low-quality relationships. Given that well-being varied as a function of relationship quality, we wanted to directly compare individuals in various-quality relationships with their unpartnered peers (e.g., to answer questions similar to the following: "Do people in lower-quality relationships have higher well-being than their unpartnered peers?"). To accomplish this goal, we estimated the parameters of the following model:

$$\begin{aligned}\left(\text{Well-Being}\right) &= b_0 + b_1\left(\text{In Relationship}\right) \\ &+ b_2\left(\text{In Relationship}\right)\left(\text{Relationship Quality}\right) + \varepsilon\end{aligned}$$

This equation uses dummy codes to estimate separate models for people in relationships and those who are not (see Bolger & Laurenceau, 2013). Including the (In Relationship) (Relationship Quality) interaction without a first-order term for (Relationship Quality) serves to (a) estimate the slope of relationship quality for partnered individuals and (b) drop the relationship quality term from the model for single people. Specifically, for individuals who were *not* in relationships (i.e., when the "In Relationship" variable equals zero), the equation simplifies to an intercept-only model. Thus, the b_0 intercept term captures the mean well-being for individuals who are not in relationships. The b_1(In Relationship) parameter captures the simple difference between individuals *with average quality relationships* versus individuals who were not in relationships. Finally, the b_2 interaction term captures how the difference between people in relationships (vs. those who are not) changes as a function of relationship quality.

As a consequence of how the model is specified, simple slope tests can be performed on the b_1 parameter at various values of relationship quality to determine whether people in relatively high- or low-quality relationships statistically significantly differed from individuals who were not in relationships. Graphs of predicted well-being generated by these

Table 2. Experiential Well-Being as a Function of Being in a Relationship and Relationship Quality.

	Experiential positive affect			Experiential meaning			Experiential negative affect		
		95% CI			95% CI			95% CI	
Predictor	*b*	LB	UB	*b*	LB	UB	*b*	LB	UB
First-order model									
Intercept	−0.11	−0.24	0.03	−0.05	−0.20	0.09	0.13	−0.00	0.27
In relationship	0.13	−0.02	0.29	0.03	−0.14	0.20	−0.10	−0.26	0.06
Relationship quality model									
Intercept	−0.10	−0.23	0.02	−0.05	−0.19	0.09	**0.13**	0.00	0.27
In relationship	0.13	−0.01	0.27	0.03	−0.13	0.19	−0.10	−0.26	0.05
Relationship quality[a]	**0.28**	0.22	0.34	**0.17**	0.10	0.25	**–0.18**	−0.25	−0.11

Note. 95% CIs for parameter estimates in boldface do not include zero. LB = lower bound; UB = upper bound.
[a]The actual regression was: (Well-Being) = $b_0 + b_1$ (In Relationship) + b_2 (In Relationship)(Relationship Quality). Unpartnered individuals did not rate their relationship quality. Thus, the slope of relationship quality was only estimated for partnered individuals. In this case, including the (In Relationship)(Relationship Quality) interaction without a first-order term for (Relationship Quality) serves to (a) estimate the slope of relationship quality for partnered individuals and (b) drop the relationship quality term from the model for unpartnered individuals.

Table 3. Global Well-Being as a Function of Being in a Relationship and Relationship Quality.

	Global positive affect			Global meaning			Global negative affect			Global life satisfaction		
		95% CI			95% CI			95% CI			95% CI	
Predictor	*b*	LB	UB	*b*	LB	UB	*b*	LB	UB	*b*	LB	UB
First-order model												
Intercept	−0.15	−0.32	0.03	−0.05	−0.23	0.12	0.02	−0.16	0.19	**–0.41**	−0.58	−0.23
In relationship	0.20	−0.01	0.40	0.07	−0.14	0.28	−0.02	−0.22	0.19	**0.55**	0.35	0.75
Relationship quality model												
Intercept	−0.14	−0.31	0.02	−0.05	−0.22	0.12	0.02	−0.16	1.19	**–0.40**	−0.57	−0.25
In relationship	0.17	−0.02	0.37	0.05	−0.15	0.25	−0.01	−0.21	0.20	**0.53**	0.34	0.71
Relationship quality[a]	**0.44**	0.34	0.54	**0.33**	0.23	0.44	**–0.30**	−0.40	−0.19	**0.46**	0.37	0.56

Note. 95% CIs for parameter estimates in boldface do not include zero. LB = lower bound; UB = upper bound.
[a]The actual regression was: (Well-Being) = $b_0 + b_1$ (In Relationship) + b_2 (In Relationship)(Relationship Quality). Unpartnered individuals did not rate their relationship quality. Thus, the slope of relationship quality was only estimated for partnered individuals. In this case, including the (In Relationship)(Relationship Quality) interaction without a first-order term for (Relationship Quality) serves to (a) estimate the slope of relationship quality for partnered individuals and (b) drop the relationship quality term from the model for unpartnered individuals.

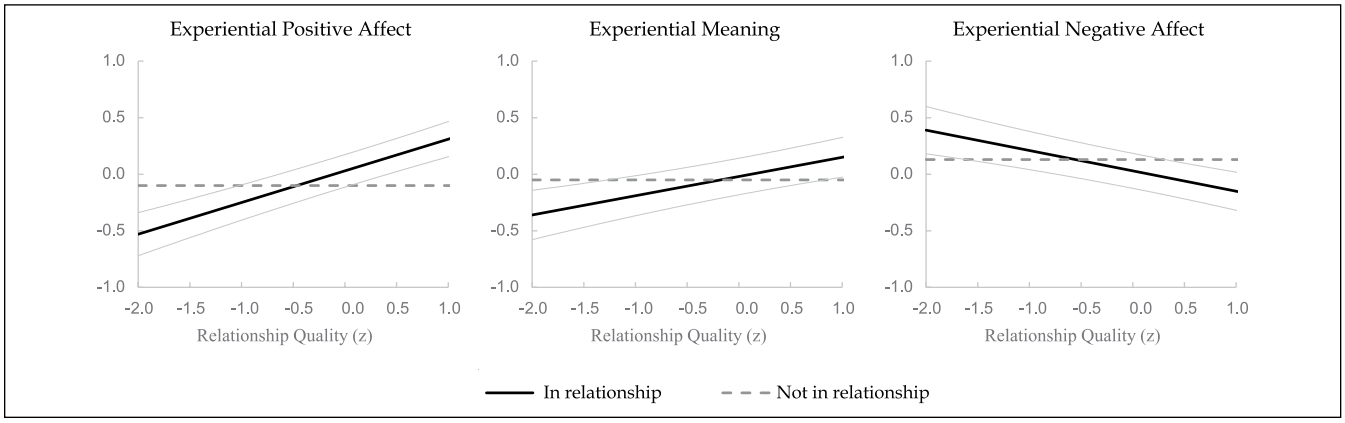

Figure 1. Standardized experiential well-being as a function of being in a relationship and relationship quality.
Note. The solid line represents how partnered individuals' well-being varies as a function of relationship quality. Individuals who were not in relationships did not provide ratings of relationship quality. The dashed line therefore represents the predicted sample mean well-being for individuals not in relationships (which does not vary as a function of relationship quality) and is depicted as a point of comparison. The 95% confidence bands are plotted around the "in relationship" line, allowing easy comparison of partnered individuals with various-quality relationships to their peers who are not in a relationship.

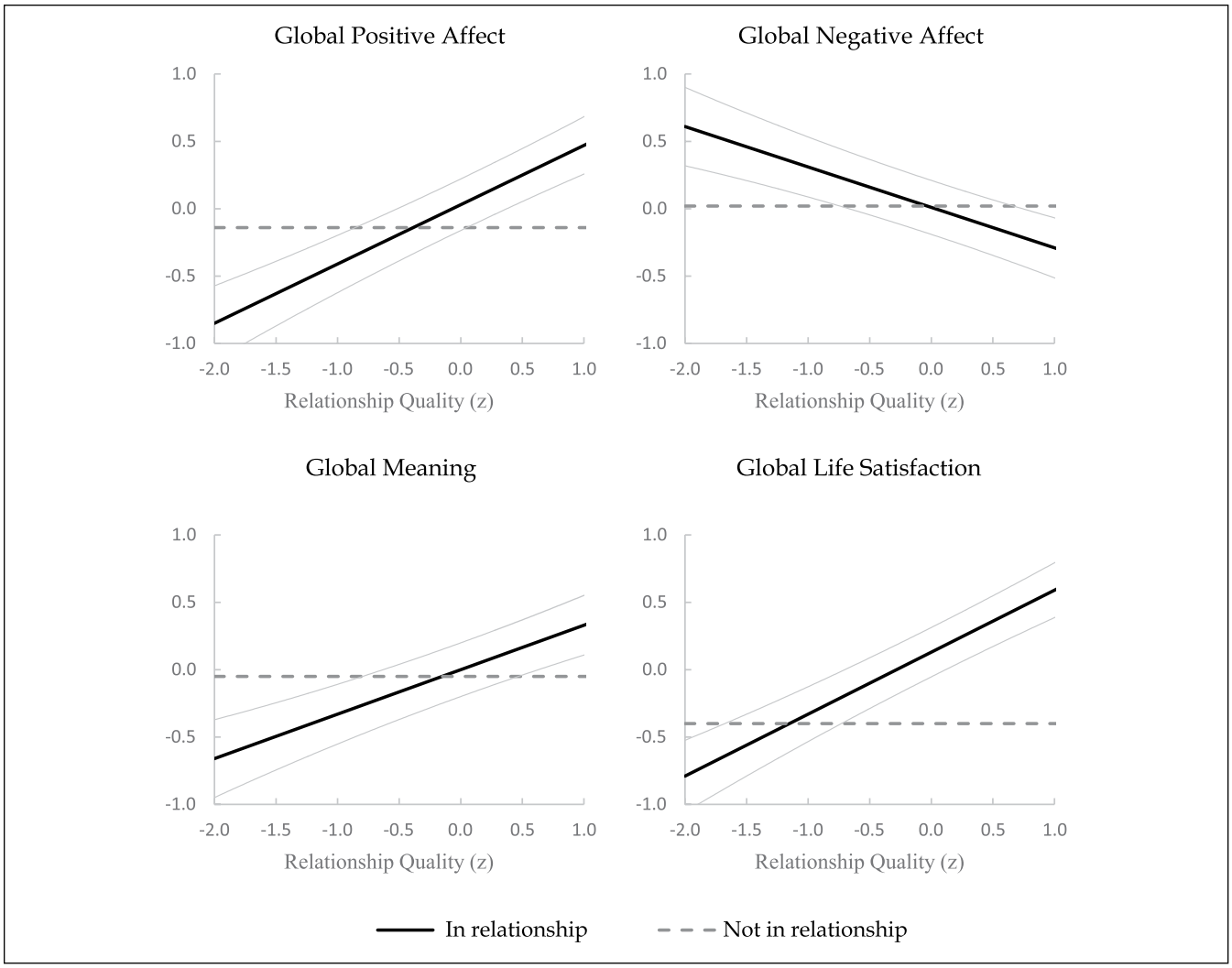

Figure 2. Standardized global well-being as a function of being in a relationship and relationship quality.
Note. The solid line represents how partnered individuals' well-being varies as a function of relationship quality. Individuals who are not in relationships did not provide ratings of relationship quality. The dashed line therefore represents the predicted sample mean well-being for individuals not in relationships (which does not vary as a function of relationship quality) and is depicted as a point of comparison. The 95% confidence bands are plotted around the "in relationship" line, allowing easy comparison of partnered individuals with various-quality relationships to their peers who are not in a relationship.

models are depicted in Figures 1 and 2. The solid black lines in the figures represent predicted well-being for individuals who were in relationships. Ninety-five percent confidence bands are depicted. Individuals who were not in romantic relationships did not provide ratings of their relationship quality. Thus, our models estimated only mean levels of well-being for these individuals. The predicted mean well-being for individuals not in relationships is depicted in the figures as a dashed gray line—and it does not vary as a function of relationship satisfaction. Areas where the dashed gray line does not fall within the confidence band for the solid black line indicate statistically significant differences in well-being between people in relationships versus those who were not. As can be seen by examining Figures 1 and 2, compared with their peers who were not in relationships, individuals in relationships sometimes reported better or worse well-being, contingent upon the quality of their relationship.

For instance, simple slopes analyses revealed that, compared with their peers who were not in relationships, individuals in high-quality romantic relationships (1 *SD* above the mean; those who reported a maximal 7 out of 7 in relationship quality) reported higher well-being: greater experiential positive affect (simple b_d = 0.28, 95% CI [0.22, 0.34]), experiential meaning (simple b_d = 0.17, 95% CI [0.10, 0.25]), global positive affect (simple b_d = 0.61, 95% CI [0.40, 0.82]), global meaning (b_d = 0.38, 95% CI [0.17, 0.61]), and life satisfaction (simple b_d = 1.00, 95% CI [0.79, 1.20]). Similarly, such individuals reported lower experiential negative affect (simple b_d = –0.18, 95% CI [–0.25, –0.11]) and global negative affect (simple b_d = –0.31, 95%

CI [–0.53, –0.08]) than did their peers who were not in relationships.

In contrast, individuals in relatively low-quality romantic relationships (1 *SD* below the mean; this corresponds to a score of 4.63 on the original 1-7 scale and represents people who felt approximately neutrally about their romantic relationship) reported *lower* well-being than did their peers who were not in relationships: less experiential positive affect (simple b_d = −0.15, 95% CI [–0.30, 0.00]), experiential meaning (simple b_d = −0.14, 95% CI [–0.32, 0.03]), global positive affect (b_d = −0.26, 95% CI [–0.48, –0.04]), global meaning (simple b_d = −0.27, 95% CI [–0.51, –0.05]), and greater global negative affect (simple b_d = 0.30, 95% CI [0.07, 0.52]) (the simple slopes for experiential positive affect and experiential meaning were not statistically significant at z = −1; however, the simple differences crossed the threshold for statistical significance at z = −1.03 and z = −1.23, respectively). Although there were not statistically significant differences in experiential negative affect or life satisfaction as a function of relationship status at 1 *SD* below the mean of relationship quality (respective simple b_ds: b_d = 0.08, 95% CI [–0.09, 0.25], b_d = 0.06, 95% CI [–0.14, 0.27]), regions of significance analyses revealed that participants in slightly low-quality relationships (~1.65 *SD*s below the mean or lower; original scale score of ~3.43 or lower out of 7) were also predicted to report statistically significantly higher experiential negative affect (simple b_d = 0.19, 95% CI [0.004, 0.39]) and lower life satisfaction (simple b_d = −0.24, 95% CI [–0.49, –0.00]) than their noncommitted counterparts.

These findings suggest that merely being in a committed relationship does not necessarily predict greater well-being. Indeed, although high-quality relationships were associated with relatively large increments in well-being—people in relationships 1 *SD* above the mean in quality were predicted to report a full standard deviation higher life satisfaction than their peers who were not in relationships—people in relatively poorer quality relationships were predicted to report *poorer* well-being than were their peers who were not in relationships (Holt-Lunstad et al., 2008; McCabe et al., 1996). Critically, our tests of "poorer-quality relationships" were conducted at 1 *SD* below the mean in relationship quality—which corresponds to a scale score of approximately 4.5 out of 7 on the original metric. Thus, even people who reported feeling *neutrally* about their relationships (e.g., they reported neither satisfaction nor dissatisfaction) were predicted to have relatively lower well-being (on most of the well-being measures) than were their peers who were not in romantic relationships (and those with slightly lower relationship quality—z = −1.65/original scale score = 3.43—were predicted to report worse well-being across all well-being measures, compared with their noncommitted peers). Therefore, these analyses suggest that relationships need not necessarily be *bad* to predict lowered well-being; rather, people in even *relatively neutral* relationships (approximately 3.5-4.5 on a scale from 1 to 7) reported lower well-being than their peers who were not in relationships.

That said, it is important to note that the scaling on our relationship quality measure—including its "neutral" midpoint—is ultimately arbitrary (see Blanton & Jaccard, 2006). Thus, it is possible that social processes, such as impression management or self-enhancement, might affect the extent to which different points on the relationship satisfaction scales (e.g., "agree" vs. "neutral" vs. "disagree") map onto people's actual feelings about their relationships. In other words, we suggest caution in absolutely interpreting the "neutral" point on our relationship quality measure as reflecting individuals with truly neutral (i.e., lukewarm or ambivalent) feelings about their relationships.

Do People Report Greater Experiential Well-Being While Interacting With Their Partners?

For our next analyses, we evaluated whether people in romantic relationships reported greater experiential well-being while currently interacting with their partners, as opposed to while separated from them. Although our prior analyses answered the question "Are people who *have* a romantic partner happier than people who do not?", these analyses addressed the question "Are people who have a romantic partner happier *while in their presence*, as opposed to while apart?"

For these analyses, we used MLMs to model affect in each episode as a function of whether the partner was present or not (as noted in the "Analysis Strategy" section, we used interaction terms to separate the effects of merely having a partner from those of spending time with one's partner). We also used dummy codes to control for all activities participants reported engaging in during each episode to ensure that any differences in reported affect as a function of partners' presence were not attributable to systematic differences in the activities performed with partners (vs. apart). As can be seen in the middle third of Table 4, on average people reported greater positive affect (b_d = 0.06, 95% CI [0.03, 0.10]) and meaning (b_d = 0.07, 95% CI [0.03, 0.10])—but not less negative affect (b_d = 0.00, 95% CI [–0.03, 0.04])—while with their partners versus while apart.

Moreover, as can be seen in the lower third of Table 4, relationship quality significantly moderated the effect of partner presence on experiential well-being (*b*s ranged from b = 0.08, 95% CI [0.05, 0.11] to b = 0.10, 95% CI [0.06, 0.13]). Thus, as depicted in Figure 3, individuals in relatively high-quality relationships were predicted to experience especially large boosts to experiential well-being while in their partners' presence. In contrast, people in relatively poor-quality relationships reported *worse* experiential well-being while with their partners than while apart. For example, although there were not statistically significant differences at 1 *SD* below the mean in relationship quality (simple b_d =

Table 4. Experiential Well-Being as a Function of Whether Partner Is Currently Present and Relationship Quality.

	Experiential positive affect			Experiential meaning			Experiential negative affect		
		95% CI			95% CI			95% CI	
Predictor	*b*	LB	UB	*b*	LB	UB	*b*	LB	UB
First-order model									
Intercept	−0.04	−0.12	0.04	−0.06	−0.15	0.02	−0.07	−0.10	−0.03
Partner present	**0.15**	0.12	0.19	**0.10**	0.07	0.12	**–0.07**	−0.10	−0.04
Activities controlled[a]									
Intercept	−0.07	−0.15	0.01	−0.12	−0.20	−0.03	0.06	−0.03	0.14
Partner present	**0.06**	0.03	0.10	**0.07**	0.03	0.10	0.00	−0.03	0.04
Relationship quality model[a]									
Intercept	−0.07	−0.14	0.00	−0.11	−0.19	−0.03	0.04	−0.03	0.12
Partner present	**0.06**	0.02	0.09	**0.06**	0.03	0.10	0.01	−0.02	0.05
Relationship quality (RQ)	**0.23**	0.17	0.29	**0.14**	0.07	0.21	**–0.14**	−0.21	−0.08
Partner Present × RQ	**0.10**	0.06	0.13	**0.08**	0.05	0.11	**–0.09**	−0.13	−0.06

Note. 95% CIs for parameter estimates in boldface do not include zero. All models also included a dummy code for "Not Partnered" (0 = Partnered; 1 = Not Partnered) and the "Not Partnered × Partner Present" interaction term. Thus, the "Partner Present" coefficients represent the simple slopes specifically for partnered individuals. LB = lower bound; UB = upper bound.
[a]These models controlled for all activities being performed during the episode.

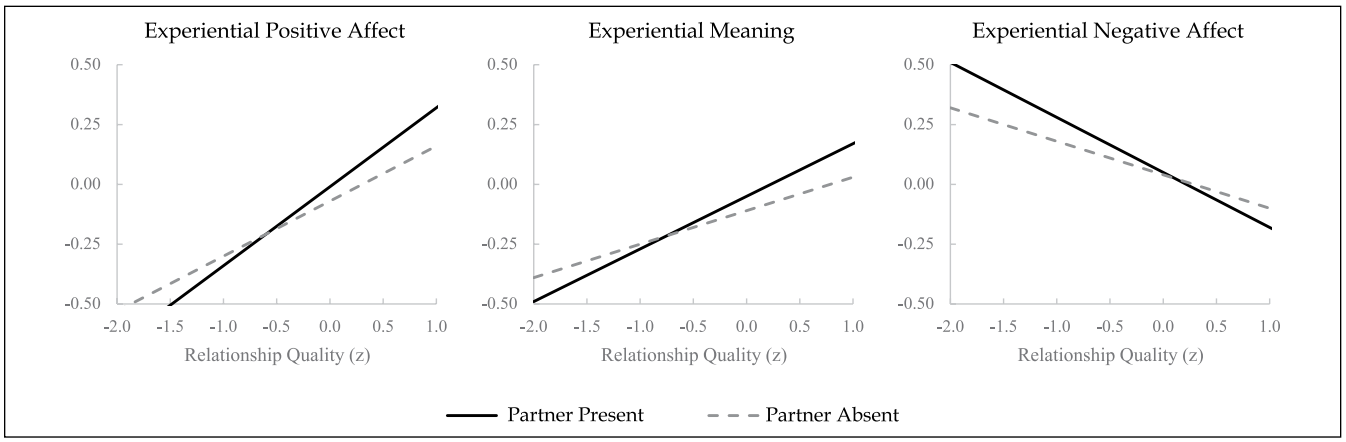

Figure 3. Standardized experiential well-being as a function of partners' presence versus absence and relationship quality.
Note. The "partner present" terms in our model capture the difference between the two lines depicted in each panel.

−0.04, 95% CI [–0.09, 0.01]), regions of significance analyses revealed that people with relationship quality 1.19 *SD*s below the mean in relationship quality or lower (original scale score of 4.40 out of 7 or lower) were predicted to report statistically significantly *less* positive affect while around their partners, as opposed to while apart (simple b_d at 1.19 *SD*s below $M = -0.06$, 95% CI [–0.11, –0.00]). Similarly, people in relatively low-quality relationships (1 *SD* below the mean) experienced greater negative affect while with their partners than while around them (simple $b_d = 0.11$, 95% CI [0.06, 0.16]). In fact, this was true of even moderately lukewarm relationships: At even only 0.25 *SD*s below the mean in relationship quality (original scale score = 5.55), being with one's partner predicted greater negative affect than being apart (simple $b_d = 0.04$, 95% CI [0.00, 0.08]). Thus, it appears that people who reported anything less than "strongly agreeing" that their relationship was high quality (original scale score = 6) experienced more negative affect while around their partners than while separated from them. It appears that only individuals who "strongly agreed" (6) or "very strongly agreed" (7) that their relationship was high quality did not experience boosts in negative affect while around their partners.

To summarize, on average, people reported greater experiential well-being while interacting with their partners than while apart from them. This phenomenon, however, was moderated by relationship quality, such that people in even moderately neutral romantic relationships—even as moderately poor as only one- quarter standard deviation below the mean in quality (5.55 out of 7 on the original metric)—were

Table 5. Global Well-Being as a Function of Total Time With Partner and Relationship Quality.

	Global positive affect			Global meaning			Global negative affect			Global life satisfaction		
		95% CI			95% CI			95% CI			95% CI	
Predictor	*b*	LB	UB	*b*	LB	UB	*b*	LB	UB	*b*	LB	UB
First-order model												
Intercept	−0.01	−0.12	0.10	−0.02	−0.13	0.09	0.05	−0.06	0.16	0.08	−0.03	0.19
Time with partner	**0.18**	0.07	0.29	**0.12**	0.01	0.23	**–0.16**	−0.27	−0.05	**0.19**	0.08	0.29
Activities controlled[a]												
Intercept	0.03	−0.15	0.21	−0.09	−0.27	0.08	0.00	−0.18	0.18	0.10	−0.08	0.27
Time with partner	**0.21**	0.09	0.33	0.11	−0.01	0.23	**–0.19**	−0.31	−0.07	**0.21**	0.09	0.32
Relationship quality model[a]												
Intercept	−0.03	−0.22	0.17	−0.07	−0.27	0.13	0.06	−0.14	0.27	0.09	−0.08	0.27
Time with partner	0.12	−0.00	0.25	0.08	−0.05	0.20	−0.12	−0.24	0.01	**0.12**	0.01	0.23
Relationship quality (RQ)	**0.38**	0.28	0.48	**0.26**	0.15	0.36	**–0.27**	−0.37	−0.16	**0.41**	0.32	0.51
Time With Partner × RQ	**0.11**	0.00	0.21	−0.02	−0.12	0.09	**–0.15**	−0.26	−0.04	**0.11**	0.02	0.21

Note. 95% CIs for parameter estimates in boldface do not include zero. All models also included a dummy code for "Not Partnered" (0 = Partnered; 1 = Not Partnered) and the "Not Partnered × Partner Present" interaction term. Thus, the "Partner Present" coefficients represent the simple slopes specifically for partnered individuals. LB = lower bound; UB = upper bound.
[a]These models controlled for total time allotted to all activities.

predicted to report *poorer* well-being on some measures while in their partners' company, as opposed to while apart.

Does Investing Greater Time in One's Partner Predict Global Well-Being?

For our final analyses, we examined whether the *total daily time* that individuals invested in their romantic partners predicted global well-being. Whereas our experiential analyses answered the question "Are people happier *while currently with* their partners?", these analyses addressed the question "Are people *who invest more time* with their partners globally happier?"

The top third of Table 5 contains the zero-order standardized regression coefficients (i.e., correlations) predicting each global well-being variable from daily time with one's partner. The middle third of Table 5 contains the same analyses, controlling for total daily time devoted to each of the activities included in our DRM measure. Even when controlling time invested in each activity, people who spent greater total daily time with their romantic partners reported greater global positive affect (b_β = 0.21, 95% CI [0.09, 0.33]) and life satisfaction (b_β = 0.21, 95% CI [0.09, 0.32]) and less negative affect (b_β = −0.19, 95% CI [–0.31, –0.07]) than those who spent less time with their partners. When controlling activities, total time with one's partner was not statistically significantly related to global meaning (b_β = 0.11, 95% CI [–0.01, 0.23]).

Last, relationship quality significantly moderated the associations between total daily time with one's partner and all global well-being variables, except global meaning (b_βs ranged from b_β = 0.11, 95% CI [+0.00, 0.21] to b_β = 0.15, 95% CI [0.04, 0.26]). Thus, individuals with average-quality relationships (z = 0; original scale score = 5.86) tended to experience only greater life satisfaction as a function of total time invested in their partners (see the "Time with Partner" parameters in the lower third of Table 5). In contrast, as depicted in Figure 4, for individuals with high relationship quality (1 *SD* above the mean; original scale score of 7 out of 7), total daily time with partner predicted greater global positive affect (simple b_β = 0.23, 95% CI [0.08, 0.38]) and life satisfaction (simple b_β = 0.23, 95% CI [0.10, 0.37]) and lower global negative affect (simple b_β = −0.26, 95% CI [–0.42, –0.11]). Finally, for below-average quality relationships, total time with partner was unrelated to global well-being. In fact, even in the lowest quality relationships in the sample (3.93 *SD*s below the mean; original scale score of 1 out of 7), total time with partner was not significantly related to any global well-being variable, except negative affect (simple b_β = 0.47, 95% CI [0.01, 0.93]).

Exploratory Analyses of Finer Grained Relationship Categories

Our primary analyses described above contrasted individuals who were in a relationship with persons who were not. These analyses relied exclusively upon participants' response to a question in our survey that read, "Are you in a committed relationship?" However, later in the survey, we also asked individuals to more specifically identify their relationship status as being single, dating, partnered, engaged, married, divorced, or widowed. As described in the "Method" section, only four dating, divorced, or widowed individuals said "yes" when asked whether they were in a committed relationship.

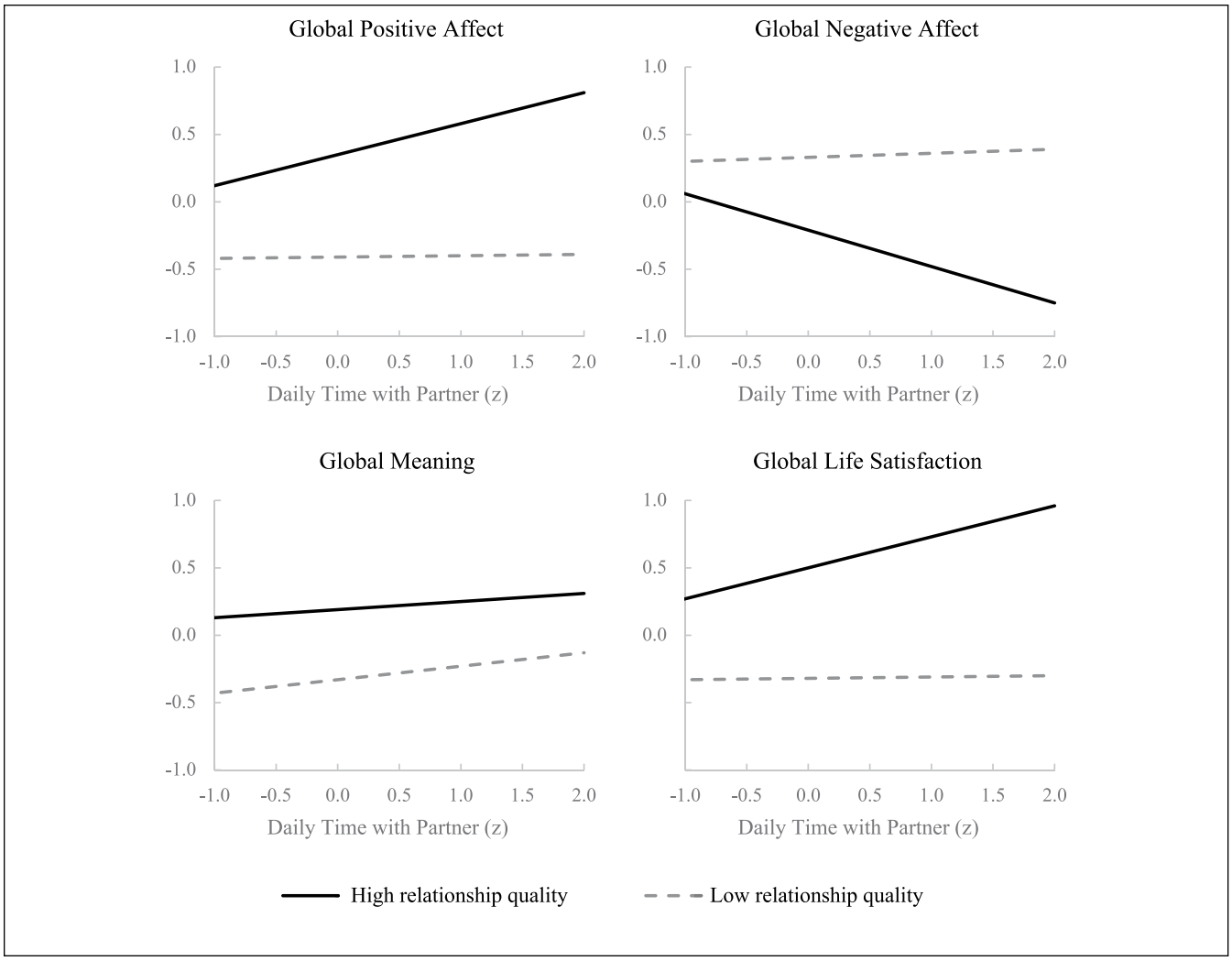

Figure 4. Standardized global well-being as a function of total daily time with partner and relationship quality.
Note. Lines for high and low relationship quality are plotted at 1 *SD* above and below the mean of relationship quality, respectively. The average daily time with partner was 4.15 hr with an *SD* of 4.29 hr. Thus, the horizontal axis ranges from zero daily hours with partner (–0.97 *SD*s; the sample minimum) to 12.73 daily hours with partner (+2 *SD*s; the sample maximum was 17.00 hr [+2.99 *SD*s]).

Thus, dating, divorced, and widowed individuals were largely lumped together with single individuals in our primary analyses as "not being in a relationship." In contrast, the people who were "in a relationship" in our prior analyses were mostly married, partnered, or engaged (along with one dating individual and three divorcees).

As a follow-up, exploratory analysis, we examined the extent to which well-being varied as a function of each of these individual finer grained relationship statuses. In these analyses, we regressed well-being onto dummy codes for all relationship statuses simultaneously (with single individuals serving as the reference group). Thus, the parameter estimates captured the standardized difference in well-being between dating and single individuals, between partnered and single individuals, between engaged individuals and single individuals, and so on. The parameter estimates from these analyses are presented in Tables 6 and 7.

Sample sizes for dating (n = 14), partnered (n = 26), engaged (n = 7), divorced (n = 48), and widowed (n = 12) individuals were too small to meaningfully interpret the parameter estimates. Naturally, most parameter estimates were not statistically significant due to a lack of statistical power. And even the general trends (e.g., well-being appeared to be similar among dating, partnered, engaged, and married individuals) should be interpreted with caution due to high levels of sampling error with such small samples. Notably, divorced individuals—who largely reported not being in new relationships—indicated statistically significantly greater experiential positive affect (b_d = 0.37, 95% CI [0.09, 0.66]) and meaning (b_d = 0.41, 95% CI [0.10, 0.72]) than did their never-married single peers. This may suggest that divorced

Table 6. Experiential Well-Being as a Function of Relationship Type and Relationship Quality.

	Experiential positive affect			Experiential meaning			Experiential negative affect		
		95% CI			95% CI			95% CI	
Predictor	*b*	LB	UB	*b*	LB	UB	*b*	LB	UB
First-order model									
Intercept	−0.27	−0.48	−0.07	−0.25	−0.47	−0.02	0.13	−0.08	0.35
Dating (n = 14)	0.14	−0.30	0.58	0.19	−0.29	0.66	−0.02	−0.47	0.43
Partnered (n = 26)	0.29	−0.06	0.64	0.25	−0.13	0.63	−0.06	−0.42	0.30
Engaged (n = 7)	0.43	−0.18	1.04	0.48	−0.18	1.14	0.01	−0.62	0.65
Married (n = 271)	**0.30**	0.08	0.66	0.21	−0.03	0.46	−0.11	−0.34	0.12
Divorced (n = 48)	**0.37**	0.09	0.66	**0.41**	0.10	0.72	0.02	−0.27	0.32
Widowed (n = 12)	0.18	−0.28	0.63	0.14	−0.35	0.64	−0.16	−0.63	0.31
Relationship quality (RQ) model									
Intercept	−0.27	−0.46	−0.08	−0.25	−0.47	−0.03	0.13	−0.08	0.35
Dating	0.16	−0.26	0.58	0.20	−0.27	0.67	−0.01	−0.47	0.44
Dating × RQ	0.10	−0.36	0.56	0.08	−0.46	0.61	0.04	−0.47	0.55
Partnered	0.29	−0.04	0.61	0.25	−0.12	0.61	−0.07	−0.42	0.28
Partnered × RQ	0.24	−0.04	0.52	0.02	−0.30	0.34	−0.22	−0.54	0.09
Engaged	0.47	−0.11	1.06	0.53	−0.13	1.18	−0.10	−0.73	0.53
Engaged × RQ	0.16	−0.25	0.57	0.17	−0.29	0.63	−0.37	−0.83	0.09
Married	**0.29**	0.08	0.50	0.21	−0.03	0.45	−0.11	−0.33	0.12
Married × RQ	**0.28**	0.21	0.35	**0.18**	0.10	0.26	**–0.16**	−0.24	−0.09
Divorced	0.37	0.10	0.63	**0.41**	0.11	0.71	0.03	−0.26	0.32
Divorced × RQ	0.47	−0.11	1.06	0.02	−0.67	0.71	−0.56	−1.26	0.14
Widowed	0.17	−0.25	0.59	0.14	−0.34	0.61	−0.16	−0.62	0.30

Note. 95% CIs for parameter estimates in boldface do not include zero. LB = lower bound; UB = upper bound.

Table 7. Global Well-Being as a Function of Being Partnered and Relationship Quality.

	Global positive affect			Global meaning			Global negative affect			Global life satisfaction		
		95% CI			95% CI			95% CI			95% CI	
Predictor	*b*	LB	UB	*b*	LB	UB	*b*	LB	UB	*b*	LB	UB
First-order model												
Intercept	−0.15	−0.36	0.06	−0.20	−0.42	0.01	0.04	−0.16	0.25	−0.31	−0.52	−0.11
Dating (n = 14)	−0.19	−0.76	0.37	0.26	−0.30	0.83	0.04	−0.53	0.60	−0.33	−0.88	0.21
Partnered (n = 26)	0.01	−0.43	0.45	0.32	−0.12	0.76	0.01	−0.43	0.45	0.09	−0.33	0.51
Engaged (n = 7)	0.02	−0.75	0.79	0.13	−0.65	0.90	0.69	−0.08	1.46	0.03	−0.71	0.78
Married (n = 271)	**0.25**	0.01	0.49	0.23	−0.01	0.48	−0.09	−0.33	0.15	**0.54**	0.31	0.78
Divorced (n = 48)	0.13	−0.22	0.48	0.32	−0.03	0.67	0.07	−0.28	0.42	−0.05	−0.39	0.29
Widowed (n = 12)	−0.02	−0.62	0.58	0.21	−0.40	0.82	−0.33	−0.94	0.27	0.24	−0.34	0.82
Relationship quality (RQ) model												
Intercept	−0.15	−0.35	0.04	−0.20	−0.41	0.00	0.04	−0.16	0.25	−0.31	−0.50	−0.13
Dating	−0.13	−0.67	0.42	0.32	−0.24	0.89	0.10	−0.46	0.66	−0.27	−0.79	0.24
Dating × RQ	0.32	−0.30	0.93	0.27	−0.36	0.90	0.27	−0.36	0.90	0.28	−0.30	0.85
Partnered	−0.01	−0.42	0.40	0.32	−0.11	0.74	0.02	−0.41	0.45	0.09	−0.30	0.48
Partnered × RQ	0.32	−0.18	0.81	0.00	−0.51	0.50	−0.10	−0.62	0.40	−0.01	−0.47	0.46
Engaged	0.14	−0.65	0.94	0.04	−0.77	0.85	0.23	−0.58	1.05	0.26	−0.48	1.01
Engaged × RQ	0.21	−0.36	0.79	−0.15	−0.74	0.44	**–0.82**	−1.41	−0.23	0.41	−0.13	0.95
Married	0.22	−0.01	0.44	0.21	−0.02	0.44	−0.07	−0.30	0.16	**0.51**	0.29	0.72
Married × RQ	**0.45**	0.33	0.56	**0.37**	0.26	0.49	**–0.31**	−0.43	−0.20	**0.51**	0.40	0.61
Divorced	0.09	−0.24	0.43	0.29	−0.05	0.64	0.10	−0.24	0.45	−0.08	−0.40	0.23
Divorced × RQ	1.48	−0.47	3.44	0.94	−1.06	2.95	−1.17	−3.19	0.84	1.40	−0.43	3.24
Widowed	−0.02	−0.59	0.54	0.21	−0.37	0.79	−0.33	−0.92	0.25	0.24	−0.29	0.77

Note. 95% CIs for parameter estimates in boldface do not include zero. LB = lower bound; UB = upper bound.

individuals experience more positive daily emotions than do never-married single people. However, given the small sample size of divorced individuals, the probability that this statistically significant effect reflects a true population effect (i.e., its *positive predictive value*) is low, and our study has likely dramatically overestimated the true parameter' size (see Button et al., 2013). Thus, we would hesitate to meaningfully interpret even the statistically significant effects for divorced individuals.

Discussion

Positive close relationships have been described as a fundamental need that is critical to determining individuals' lifelong trajectories of well-being (Argyle, 2001; Baumeister & Leary, 1995; Erikson, 1974), yet prior research suggests that merely being in a romantic relationship only modestly predicts life satisfaction (Lucas & Dyrenforth, 2006). Potentially reconciling this contradiction, theorists have suggested that the *quality* of the relationship may be paramount (e.g., Baumeister & Leary, 1995). However, few studies have directly compared individuals in various-quality relationships with their single peers to determine whether, for example, poor-quality relationships are beneficial or harmful, compared with not having a partner. To fill this gap in the literature, our study evaluated the extent to which (a) having a romantic relationship, (b) currently interacting with one's partner, (c) investing increasing amounts of time into one's relationship predicted both global and experiential well-being, and (d) the extent to which each of these associations were moderated by relationship quality.

In terms of main effects, our results replicated prior findings that, on average, (a) individuals in committed relationships reported modestly greater life satisfaction than did their noncoupled peers (Helliwell, 2003; Lucas & Dyrenforth, 2006), (b) participants reported greater experiential well-being while with their partners versus apart (Flood & Genadek, 2016), and (c) greater time invested in one's partner predicted greater global well-being (Greenhaus et al., 2003; Odle-dusseau et al., 2012). The more novel results from the current study are the indications that each of these associations was moderated by relationship quality.

Relationship Status

With respect to relationship status, we found that, on average, individuals in committed relationships reported approximately one-half standard deviation greater life satisfaction than did their noncommitted peers (which translates into approximately $r = .24$). Individuals in relationships did not, however, report greater positive affect or lesser negative affect, compared with individuals who were not in relationships. These findings seem to support the notion that, on average, involvement in a romantic relationship is only a moderate predictor of well-being that does not substantially outperform other equally modest predictors, such as income (Lucas & Dyrenforth, 2006; Pinquart & Sorensen, 2000). This fits with the notion that well-being has multiple determinants—and thus it is unlikely that any one determinant would be especially strong (Ahadi & Diener, 1989).

More importantly, however, we found that relationship quality significantly moderated the effect of being in a committed relationship. Specifically, individuals in high-quality relationships were predicted to report greater well-being (across all measures) than were their peers who were not in relationships. Moreover, the effect sizes were, in some cases, substantial. For example, individuals in high-quality relationships were predicted to report up to a full standard deviation greater life satisfaction, compared with their peers who were not in relationships. Conversely, individuals in even relatively neutral relationships (i.e., people who were neither satisfied nor dissatisfied with their relationships) were predicted to report *worse* well-being than were noncoupled individuals (Holt-Lunstad et al., 2008; McCabe et al., 1996). These findings seem to suggest that relationship quality is a critical consideration when understanding how relationships predict well-being. Although ours is certainly not the first study to suggest associations between relationship quality and well-being (e.g., (Baker et al., 2013; Gere & Schimmack, 2013; Gustavson et al., 2016), very few studies have directly benchmarked individuals in various-quality relationships against their single peers (cf. Holt-Lunstad et al., 2008; McCabe et al., 1996). Thus, our findings highlight, for example, that even moderately poor-quality relationships are associated with worsened well-being. In other words, relationships do not necessarily even need to be *that bad* to predict worsened well-being. Indeed, our statistical tests comparing people in "relatively poor-quality relationships" with their unpartnered peers were conducted at 1 *SD* below the mean in relationship quality—which corresponded to an original scale score of 4.63 out of 7: "neither agreeing nor disagreeing" that one's relationship is high quality. Thus, even people who reported feeling *neutrally* about their relationships—who reported being neither satisfied nor dissatisfied—were predicted to experience worse well-being than their peers who were not in relationships.

Interacting With One's Partner

On average, we replicated that participants reported slightly higher experiential (i.e., momentary) well-being while interacting with their partners, as opposed to while apart from them (e.g., Flood & Genadek, 2016). Notably, however, the effect sizes were small—with participants reporting, on average, less than one-tenth standard deviation greater positive affect while interacting with their romantic partners. More important and novel, we found that relationship quality significantly moderated this effect, such that individuals in high-quality romantic relationships reported especially large gains in experiential well-being while interacting with their romantic partners.

Conversely, interacting with romantic partners in relatively low-quality relationships—as moderately low as even only one-quarter standard deviation below the mean—was associated with *worse* momentary well-being on some measures. Critically, one-quarter standard deviation below the mean in relationship quality corresponded to an original scale score of approximately 5.5 out of 7—and thus represents people who *agreed* (albeit less-than-enthusiastically) that their relationships were high quality. In other words, our findings suggest that interacting with even a good-but-not-great-quality romantic partner may be *draining* (as opposed to merely *less beneficial* than interacting with a high-quality partner). Thus, as with our relationship status findings, relationship quality is paramount to understanding well-being: Interacting with one's romantic partner has the potential to predict greater or lesser momentary well-being, completely contingent upon the quality of the relationship. Moreover, the threshold for relationship interactions being associated with poorer experiential well-being is surprisingly low: Even people who "agree" (but do not "strongly agree") that their relationship is high quality may experience elevated negative affect while interacting with their partners.

Total Daily Time Invested Into One's Relationship

Finally, we examined the extent to which total daily time invested in one's partner predicted global well-being. It may have been the case, for example, that *having* a romantic partner is associated with greater well-being—but that the amount of time invested into one's romantic partner is immaterial. Indeed, a similar phenomenon has been observed with respect to volunteering (Son & Wilson, 2012).

Contradicting this notion, however, we found that, on average, greater time invested in romantic relationships was associated with greater well-being (Greenhaus et al., 2003; Odle-dusseau et al., 2012). These findings suggest that, unlike volunteering, investing greater amounts of time into one's romantic relationship is associated with higher levels of well-being, above and beyond merely having a romantic partner. Moreover, as with our other findings, this effect was moderated by relationship quality, such that time invested in high-quality relationships was especially predictive of well-being. In contrast, total time invested in low-quality relationships was unrelated to well-being. Thus, spending increasingly great amounts of time with low-quality partners did not predict variation in life satisfaction, for example.

Implications and Limitations

The single biggest implication of our study is that the associations between well-being and having a romantic partner, interacting with one's partner, and investing increasing amounts of time into one's relationship appear to depend entirely on relationship quality. Although prior studies have found relatively strong correlations between relationship quality and well-being (e.g., Baker et al., 2013; Gere & Schimmack, 2013; Gustavson et al., 2016), these findings were somewhat ambiguous. Namely, given that such studies have rarely benchmarked individuals in various-quality relationships against individuals not in relationships, it remained unclear whether relatively low-quality relationships were simply *less beneficial* than high-quality ones, or whether they might instead have deleterious effects on well-being. Our findings suggest that relatively low-quality relationships were associated with worse well-being, compared with individuals not in relationships. Moreover, this was true of even *moderately* low-quality relationships. For example, for individuals who only "agreed" (but not "strongly agreed") that their relationships were high quality, interacting with their partners was associated with *elevated* levels of negative affect. Similarly, people who felt merely relatively neutral about their romantic relationship—neither agreeing nor disagreeing that their relationship was high quality—reported lower well-being across most measures included in our study, compared with their peers who were not in romantic relationships. Thus, our findings suggest that romantic relationships do not even have to be *bad* to predict lessened well-being—relationships that are simply *neutral* (i.e., neither good nor bad) appear to also predict worsened well-being.

That said, one limitation of our study is that our data were strictly correlational. Thus, we cannot strongly infer causality and conclude, for example, that high-quality relationships *cause* gains in well-being. For example, it may be the case that individuals with poor well-being select into relatively low-quality relationships. Even the finding that interacting with high-quality partners is associated with gains in experiential well-being could be explained by reverse-causality: Feeling positive emotions while interacting with one's partner might lead to building a high-quality relationship. Similarly, a variety of third variables might explain our findings. For example, individuals in relationships might be older, wealthier, and/or have different personality traits than their single peers. Thus, a variety of confounds may render the link between relationship status and well-being spurious. In our study, only gender and race were correlated with relationship status (White males were most likely to be in relationships). In exploratory analyses requested by reviewers, controlling for race and gender did not affect our pattern of results. Nevertheless, it remains possible that people in relationships may differ from those who are not in relationships in a variety of important ways. Future research should continue to identify and eliminate as many potential confounds as possible.

A second implication of our study is that involvement in a romantic relationship and relationship quality appear to have similar associations with global and experiential well-being. Similarly, we found that relationship involvement and quality predicted both hedonic well-being (e.g., positive/negative affect) and eudemonic well-being (e.g., experiences of meaning)—although the effect sizes were

generally smaller for eudemonic well-being. Thus, high-quality relationships appear to be associated with the generalized sense that one's life is progressing well, in addition to greater daily experiences of positive affect and meaning and fewer experiences of negative affect. This stands in contrast to other predictors of well-being, which occasionally appear to have differential associations with global and experiential well-being and/or hedonic and eudemonic well-being. For example, individuals with greater income tend to report greater life satisfaction than do their poorer peers—but they do not report more frequent experiences of happiness (Hudson et al., 2016; Kahneman & Deaton, 2010).

One limitation of our study, however, is that we measured experiential well-being via DRM instead of experience sampling methods (ESM). Although DRM and ESM measures track one another closely, especially once aggregated across a day (Bylsma, Taylor-Clift, & Rottenberg, 2011; Kahneman et al., 2004; Tweten, Anusic, Lucas, & Donnellan, 2016), DRM ultimately entails some level of retrospective reporting and thus may be suboptimal compared with ESM (cf. Robinson & Clore, 2002). Future research could replicate our findings with ESM. In addition to providing potentially unique information beyond DRM about participants' emotions, ESM may also provide unique information about the time participants spend with their partners.

Relatedly, our experiential findings may be partially attributable to order effects. In our study, participants were always asked about their global well-being prior to being asked to recount their experiences from their prior day. Being asked about their global well-being prior to reconstructing their prior day may have had unexpected effects on participants' recollections—including potentially reducing variability in their affective responses and biasing their experiential reports to be more similar to their global reports. This possibility cannot explain the within-person variance in experiential affect observed in our study (e.g., why individuals reported greater positive affect, while with their partners vs. while apart). But it may partially confound our between-persons experiential findings (e.g., individuals in romantic relationships reported greater experiential positive affect than did their peers who were not in romantic relationships). Future research should counterbalance the order of global and experiential well-being measures to rule out this possibility.

A final implication of our study is that the association between relationship quality and well-being is likely smaller than portrayed in the existing literature—especially once personality biases are addressed. Specifically, we replicated prior research that relationship quality is relatively strongly correlated with global well-being for partnered individuals (an average of $|\beta| = 0.38$; see also Baker et al., 2013; Gere & Schimmack, 2013; Gustavson et al., 2016). However, this correlation likely partially reflects individual differences in propensity to rate *all* aspects of one's life universally more positively or negatively, in addition to a meaningful, unique association between relationship quality and well-being (Heller et al., 2004). Supporting this reasoning, in within-person analyses that examined *differences* in well-being while interacting with one's partner versus not—which control for baseline biases to globally rate all aspects of one's life positively—relationship quality was only moderately associated with *greater* happiness while interacting with one's partner versus apart (average $|\beta| = 0.09$). Thus, it appears that relationship quality has a relatively small association with well-being, above and beyond personality.

That said, our study was limited in that we focused on only one type of relationship: romantic relationships. Although theorists have suggested that romantic relationships may be preeminent in determining well-being (e.g., Hazan & Zeifman, 1994), individuals who are not involved in romantic relationships may be able to fulfill their relational needs in a variety of ways (e.g., friendships; see DePaulo, 2005). Future research should offer a more detailed investigation of the social lives of single individuals. Moreover, a variety of factors (e.g., age, personality, socioeconomic status) might moderate the links between relationships and well-being, and thus, future research might consider testing them.

In a similar vein, both groups of participants in our study—those who were in relationships and those who were not—contained a heterogeneous mix of different types of people. For example, our sample of individuals currently not in a relationship included a small number of divorcees—who may have reported greater well-being than their single, never-married peers. However, our samples for these smaller subgroups were too small to draw meaningful statistical comparisons. Thus, future research might collect much larger samples and examine well-being among finer grained relationship statuses (e.g., dating, engaged, married, separated, divorced).

Conclusion

In conclusion, relationships—particularly romantic ones—have been described as a crucial component of well-being (Baumeister & Leary, 1995; Erikson, 1974)—and even its "greatest single cause" (Argyle, 2001, p. 71). Although our study bolsters the empirical and theoretical consensus that romantic relationships are associated with well-being (Argyle, 2001; Erikson, 1974; Myers, 2000), it also reinforces that the effect sizes are not large (Lucas & Dyrenforth, 2006). Moreover, our findings also underscore the notion that the quality of the relationship is an important consideration: Merely being in a romantic relationship does not necessarily predict well-being. Indeed, reporting even relatively neutral feelings (i.e., neither good nor bad) toward one's relationship predicts *worse* well-being, compared with not having a partner. Rather, involvement in a *very high-quality* relationship is what seems to matter for increasing well-being.

Acknowledgment

The authors thank Ivana Anusic and Stevie Yap for their assistance with data collection and management.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research was supported by a grant from the National Institutes of Health National Institute on Aging (AG040715).

ORCID iD

Nathan W. Hudson https://orcid.org/0000-0001-6869-2910

Supplemental Material

Supplemental material is available online with this article.

References

Ackerman, R. A., Donnellan, M. B., & Kashy, D. A. (2011). Working with dyadic data in studies of emerging adulthood: Specific recommendations, general advice, and practical tips. In F. D. Fincham & M. Cui (Eds.), *Romantic relationships in emerging adulthood: Advances in personal relationships* (pp. 67-97). New York, NY: Cambridge University Press.

Ahadi, S., & Diener, E. (1989). Multiple determinants and effect size. *Journal of Personality and Social Psychology*, *56*, 398-406.

Anusic, I., Lucas, R. E., & Donnellan, M. B. (2017). The validity of the day reconstruction method in the German socio-economic panel study. *Social Indicators Research*, *130*, 213-232.

Argyle, M. (2001). *The psychology of happiness*. New York, NY: Routledge.

Baker, L. R., McNulty, J. K., Overall, N. C., Lambert, N. M., & Fincham, F. D. (2013). How do relationship maintenance behaviors affect individual well-being? A contextual perspective. *Social Psychological and Personality Science*, *4*, 282-289.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, *117*, 497-529.

Blanton, H., & Jaccard, J. (2006). Arbitrary metrics in psychology. *American Psychologist*, *61*, 27-41.

Bolger, N., & Laurenceau, J. P. (2013). *Intensive longitudinal methods: An introduction to diary and experience sampling research*. New York, NY: Guilford Press.

Bowlby, J. (1969). *Attachment*. New York, NY: Basic Books.

Button, K. S., Ioannidis, J. P. A., Mokrysz, C., Nosek, B. A., Flint, J., Robinson, E. S. J., & Munafò, M. R. (2013). Power failure: Why small sample size undermines the reliability of neuroscience. *Nature Reviews Neuroscience*, *14*, 365-376.

Bylsma, L. M., Taylor-Clift, A., & Rottenberg, J. (2011). Emotional reactivity to daily events in major and minor depression. *Journal of Abnormal Psychology*, *120*, 155-167.

Cichy, K. E., Stawski, R. S., & Almeida, D. M. (2014). A double-edged sword: Race, daily family support exchanges, and daily well-being. *Journal of Family Issues*, *35*, 1824-1845.

Debrot, A., Schoebi, D., Perrez, M., & Horn, A. B. (2013). Touch as an interpersonal emotion regulation process in couples' daily lives the mediating role of psychological intimacy. *Personality and Social Psychology Bulletin*, *39*, 1373-1385.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*, 227-268.

DePaulo, B. M. (2005). Singles in society and in science. *Psychological Inquiry*, *16*, 57-83.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, *49*, 71-75.

Erikson, E. H. (1974). *Dimensions of a new identity*. New York, NY: W.W. Norton.

Flood, S. M., & Genadek, K. R. (2016). Time for each other: Work and family constraints among couples: Time for each other. *Journal of Marriage and Family*, *78*, 142-164.

Gere, J., & Schimmack, U. (2013). When romantic partners' goals conflict: Effects on relationship quality and subjective well-being. *Journal of Happiness Studies*, *14*, 37-49.

Greenhaus, J. H., Collins, K. M., & Shaw, J. D. (2003). The relation between work–family balance and quality of life. *Journal of Vocational Behavior*, *63*, 510-531.

Gustavson, K., Røysamb, E., Borren, I., Torvik, F. A., & Karevold, E. (2016). Life satisfaction in close relationships: Findings from a longitudinal study. *Journal of Happiness Studies*, *17*, 1293-1311.

Hazan, C., & Zeifman, D. (1994). Sex and the psychological tether. In K. Bartholomew & D. Perlman (Eds.), *Attachment processes in adulthood: Advances in personal relationships* (Vol. 5, pp. 151-178). Philadelphia, PA: Jessica Kingsley.

Heller, D., Watson, D., & Ilies, R. (2004). The role of person versus situation in life satisfaction: A critical examination. *Psychological Bulletin*, *130*, 574-600.

Helliwell, J. F. (2003). How's life? Combining individual and national variables to explain subjective well-being. *Economic Modelling*, *20*, 331-360.

Holt-Lunstad, J., Birmingham, W., & Jones, B. Q. (2008). Is there something unique about marriage? The relative impact of marital status, relationship quality, and network social support on ambulatory blood pressure and mental health. *Annals of Behavioral Medicine*, 35, 239-244.

Hope, S., Rodgers, B., & Power, C. (1999). Marital status transitions and psychological distress: Longitudinal evidence from a national population sample. *Psychological Medicine*, *29*, 381-389.

Hudson, N. W., Lucas, R. E., & Donnellan, M. B. (2017). Day-to-day affect is surprisingly stable: A 2-year longitudinal study of well-being. *Social Psychological and Personality Science*, *8*, 45-54.

Hudson, N. W., Lucas, R. E., Donnellan, M. B., & Kushlev, K. (2016). Income reliably predicts sadness, but not happiness: A replication and extension of Kushlev, Dunn, & Lucas (2015). *Social Psychological and Personality Science*, *7*, 828-836.

Hudson, N. W., & Roberts, B. W. (2014). Goals to change personality traits: Concurrent links between personality traits, daily

behavior, and goals to change oneself. *Journal of Research in Personality*, *53*, 68-83.

Kahneman, D., & Deaton, A. (2010). High income improves evaluations of life but not emotional well-being. *Proceedings of the National Academy of Sciences of the United States of America*, *107*, 16489-16493.

Kahneman, D., Krueger, A. B., Schkade, D. A., Schwarz, N., & Stone, A. A. (2004). A survey method for characterizing daily life experience: The day reconstruction method. *Science*, *306*, 1776-1780.

Kim-Prieto, C., Diener, E., Tamir, M., Scollon, C., & Diener, M. (2005). Integrating the diverse definitions of happiness: A time-sequential framework of subjective well-being. *Journal of Happiness Studies*, *6*, 261-300.

Lehmann, V., Tuinman, M. A., Braeken, J., Vingerhoets, A. J. J. M., Sanderman, R., & Hagedoorn, M. (2015). Satisfaction with relationship status: Development of a new scale and the role in predicting well-being. *Journal of Happiness Studies*, *16*, 169-184.

Lucas, R. E., Diener, E., & Suh, E. (1996). Discriminant validity of well-being measures. *Journal of Personality and Social Psychology*, *71*, 616-628.

Lucas, R. E., & Dyrenforth, P. S. (2006). Does the existence of social relationships matter for subjective well-being? In K. D. Vohs & E. J. Finkle (Eds.), *Self and relationships: Connecting intrapersonal and interpersonal processes* (pp. 245-273). New York, NY: Guilford Press.

Mackinnon, S. P., Sherry, S. B., Antony, M. M., Stewart, S. H., Sherry, D. L., & Hartling, N. (2012). Caught in a bad romance: Perfectionism, conflict, and depression in romantic relationships. *Journal of Family Psychology*, *26*, 215-225.

McCabe, M. P., Cummins, R. A., & Romeo, Y. (1996). Relationship status, relationship quality, and health. *Journal of Family Studies*, *2*, 109-120.

Michigan State University, Institute for Public Policy and Social Research. (2015). *State of the State Survey 69* [Data file and code book]. Retrieved from http://ippsr.msu.edu/soss/

Myers, D. G. (1992). *The pursuit of happiness: Discovering the pathway to fulfillment, well-being, and enduring personal joy*. New York, NY: Harper Collins.

Myers, D. G. (2000). The funds, friends, and faith of happy people. *American Psychologist*, *55*, 56-67.

Odle-dusseau, H. N., Britt, T. W., & Bobko, P. (2012). Work-family balance, well-being, and organizational outcomes: Investigating actual versus desired work/family time discrepancies. *Journal of Business and Psychology*, *27*, 331-343.

Pierce, G. L. (2016). *Methodological report: Michigan State University State of the State Survey 1-70 longitudinal data*. East Lansing: Institute for Public Policy and Social Research, Michigan State University.

Pinquart, M., & Sorensen, S. (2000). Influences of socioeconomic status, social network, and competence on subjective well-being in later life: A meta-analysis. *Psychology and Aging*, *15*, 187-224.

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

Reis, H. T., Maniaci, M. R., & Rogge, R. D. (2014). The expression of compassionate love in everyday compassionate acts. *Journal of Social and Personal Relationships*, *31*, 651-676.

Richard, F. D., Bond, C. F., & Stokes-Zoota, J. J. (2003). One hundred years of social psychology quantitatively described. *Review of General Psychology*, *7*, 331-363.

Robinson, M. D., & Clore, G. L. (2002). Belief and feeling: Evidence for an accessibility model of emotional self-report. *Psychological Bulletin*, *128*, 934-960.

Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, *52*, 141-166.

Son, J., & Wilson, J. (2012). Volunteer work and hedonic, eudemonic, and social well-being. In K. A. Cerulo (Ed.), *Sociological forum* (Vol. 27, pp. 658-681). Hoboken, NJ: John Wiley.

Tweten, C., Anusic, I., Lucas, R. E., & Donnellan, M. B. (2016, January). *A direct comparison of the experience sampling method (ESM) and the day reconstruction method (DRM)*. Poster presented at the Society for Personality and Social Psychology, San Diego, CA.

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*, 1063-1070.