# Women in Very Low Quality Marriages Gain Life Satisfaction Following Divorce

Kyle J. Bourassa and David A. Sbarra University of Arizona Mark A. Whisman University of Colorado Boulder

Although marital dissolution is associated with increased risk for poor mental and physical health outcomes, many people report improvements in functioning after divorce. To study the hypothesis that women in lower quality marriages would report the best outcomes upon separation/divorce, we investigated the combined effects of marital quality, gender, and marital status for predicting changes in life satisfaction (LS). Participants (N = 1,639; 50.3% men) were drawn from a nationally representative sample (Midlife in the United States Study), which included assessments of marital quality, marital status, and LS, at 2 time points (T1 and T2), roughly 10 years apart. Hierarchical linear regression analyses revealed an interaction between marital quality, marital status, and gender when predicting residual change in LS. Divorced women evidenced a negative association between marital quality and later LS, whereas continuously married women had a positive association between marital quality and later LS. In addition, women in higher quality marriages that become divorced showed the lowest LS, and women in lowest quality marriages show the highest LS among women with similar levels of marital quality. There was no association between marital quality and later LS for divorced or continuously married men. This work extends prior findings regarding gender differences in marital quality to postdivorce well-being, and suggests women in the lowest quality marriages may gain LS following divorce.

Keywords: divorce, marriage, marital quality, gender differences, life satisfaction

Marital separation and divorce are taxing events that are associated with a range of poor social, psychological, and physical health outcomes (Lorenz, Wickrama, Conger, & Elder, 2006; Sbarra, Emery, Beam, & Ocker, 2014; Sbarra, Hasselmo, & Nojopranoto, 2012). On average, relative to married adults, people who divorce face increased psychological stress (Booth & Amato, 1991), lower life satisfaction (Lucas, 2005), report more medical visits (Canady & Broman, 2003), and demonstrate an increased risk for all-cause mortality (Sbarra, Law, & Portley, 2011). In many instances, these negative outcomes may be viewed as a loss of the salubrious health benefits people enjoy when married (Carr & Springer, 2010), coupled with added stress of the divorce process itself (Sbarra & Hazan, 2008).

This article was published Online First April 13, 2015.

Kyle J. Bourassa and David A. Sbarra, Department of Psychology, University of Arizona; Mark A. Whisman, Department of Psychology and Neuroscience, University of Colorado Boulder.

This study was supported in part by Grants (AG#036895; AG#028454) from the National Institute on Aging to the second author. Midlife in the United States (MIDUS) is the main research activity of the John D. and Catherine T. MacArthur Foundation Network on Successful Midlife Development. For the present analyses, the authors had access to all publicly available data and are responsible for all data analysis and findings reported in this article.

Correspondence concerning this article should be addressed to Kyle J. Bourassa, 1503 E. University Boulevard, Building #68, Room. 312, Tucson, AZ 85721-0068. E-mail: kylebourassa@email.arizona.edu

Recent research, however, suggests that the risk for poor outcomes following the end of marriage is not evenly distributed (Sbarra, Hasselmo, & Bourassa, in press). Some people-for example, those with a history of depression (Sbarra et al., 2014)—are at much greater risk for poor outcomes following a separation or divorce. Much of the research in this area focuses on the prediction of stress and distress, with findings that speak to who is at risk for poor outcomes and why this might be the case. Although this line of work is important, the body of knowledge about how people cope with and adjust to divorce is incomplete without comparable studies focused on the prediction of positive outcomes. Who gains in psychological well-being and life satisfaction when marriages come to an end? The lack of research addressing this question is conspicuous, given that most adults are resilient in the face of marital separation and divorce (Hetherington & Kelly, 2003; Mancini, Bonanno, & Clark, 2011). Thus, the present study focuses on the predictors of improved outcomes that follow from the end of marriage. Specifically, using data from a nationally representative sample of adults in the United States, we examine how marital satisfaction prior to divorce is associated with changes in life satisfaction following the event and whether the effects of interest differ between men and women.

#### **Divorce and Prior Marital Quality**

One key factor shaping how people respond to divorce is marital quality prior to the separation (Amato & Hohmann-Marriott, 2007; Gustavson, Nilsen, Ørstavik, & Røysamb, 2014). Coyne and DeLongis (1986) point to evidence that poor quality marriages might be harmful to those involved. This is broadly consistent with a

contextual approach to life transitions, which suggests that leaving a highly stressful social role (e.g., a low quality marriage) can lead to positive outcomes (Wheaton, 1990). In support of this perspective, Amato and Hohmann-Marriott (2007) found, for example, that people who ended highly distressed marriages saw improved happiness after divorce, whereas those who divorced from higher quality marriages evidenced lower happiness. In contrast, a study of Norwegian adults did not find an association between relationship problems and later life satisfaction at a 15-year follow-up among divorced men and women when analyzed as a single group (Gustavson, Røysamb, von Soest, Helland, & Mathiesen, 2012). It is possible, however, that these null findings masked gender differences between divorced men and women. For example, a second study by the same research group found that divorce moderated the association between marital satisfaction and later life satisfaction among Norwegian mothers (Gustavson et al., 2014). Women in lower quality marriages who divorced were generally more satisfied at follow-up than those in higher quality marriages who divorced, whereas still-married women showed a positive association.

## Marital Status, Marital Quality, and Gender

Another variable important for understanding adjustment to marital dissolution is gender. The available literature suggests that men and women may respond differently to variability in marital quality and changes in marital status, such that that women are affected more than men by variability in marital quality (Kiecolt-Glaser & Newton, 2001; Waite & Gallagher, 2000; for an exception, see Robles, Slatcher, Trombello, & McGinn, 2014), whereas men, relative to women, appear to demonstrate worse health outcomes following changes in marital status (Sbarra et al., 2011). Some studies argue that men and women's well-being are affected equally by marital quality (Williams, 2003). Other work, however, has found that men and women's marital adjustment predicted both their own and their partner's later life satisfaction, but this association was stronger for women (BE, Whisman, & Uebelacker, 2013). In this context, although people who are married are generally healthier and happier than those that are not (Drefahl, 2012; Holt-Lunstad, Birmingham, & Jones, 2008), women in lower quality marriages generally do not evidence the same levels of well-being as men in similar marriages (Proulx, Helms & Buehler,

Theoretical explanations for the differential impact of marital quality on men and women have focused on differences in the cultural experience of marriage. Bernard (1982) suggested that women invest more into their relationships, resulting in a "his and her" marriage, in which women are more sensitive to changes in marital quality (cf., Kiecolt-Glaser & Newton, 2001). Differential cultural socialization of men and women leads women to more commonly assume communal-oriented roles (Helgeson, 1994) and more interdependent self-construals (Cross & Madson, 1997; Impett & Peplau, 2006) that result in greater sensitivity to changes in relationship quality. In addition, women's traditional expected gender roles can create more onerous conditions in low quality marriages—such as increases in childcare or daily household duties—that result in negative outcomes<sup>1</sup> (Gove & Tudor, 1973; Impett & Peplau, 2006). In contrast, men are believed to be less affected by variability in marital quality and more broadly impacted by changes in marital status (Bernard, 1982; Kiecolt-Glaser & Newton, 2001).

From the perspective of contextualized life transitions and theories on gender socialization within relationships (i.e., communal orientation and interdependent self-construal), the available research suggests that women in lower quality marriages gain the least—and may suffer the most—from poor quality marriages, and it follows that they would benefit the most when these relationships end in separation and divorce. This may be particularly true for dimensions of well-being, such as life satisfaction, that are negatively affected when the relationship needs of people with communal orientations and interdependent self-construals are not met (Helgeson, 1994; Impett & Peplau, 2006). Currently, however, there is mixed evidence regarding whether divorced men and women demonstrate a differential association between marital quality and later life satisfaction (BE et al., 2013; Gustavson et al., 2012; Williams, 2003).

# The Present Study

To explore the association of marital disruption, marital quality, and levels of life satisfaction (LS), we used data from the nationally representative Midlife in the United States (MIDUS) study. The two waves of data collection in the MIDUS study, separated by 10 years, present a rich opportunity to explore the questions of interest. Based on prior theory and findings regarding differences between men's and women's response to divorce across varying levels of marital quality, we hypothesized a three-way interaction effect among initial marital quality, gender, and marital status predicting changes in LS. From the theoretical perspective outlined above, we expected that women in lower quality marriages that ultimately end in divorce would report higher later LS across time compared to women ending higher quality marriages. For women who remained married, however, we hypothesized a positive association between marital quality and LS. Additionally, based on previous findings regarding the association between marital quality and life satisfaction (BE et al., 2013; Williams, 2003), we predicted divorced and continuously married men would show a positive association between marital quality and later LS, but we did not expect this association would be moderated by marital status.

#### Method

# **Participants**

As reported elsewhere (Sbarra et al., 2014), the original MIDUS sample included 7,108 participants (men = 47.76%), who were 46.4 years old on average (SD = 13). MIDUS study details are described more rigorously in previous studies (e.g., Brim, Ryff, & Kessler, 2004). In short, the MIDUS study used a random-digit dialing procedure of noninstitutionalized English speaking people between the ages of 25 and 74 in the United States in 1995 and 1996. People selected were asked to complete a survey assessing

<sup>&</sup>lt;sup>1</sup> It is important to note that these theories are based on broad trends in the United States. This does not preclude more independent women or interdependent men on a continuous scale, but reflect generally observed patterns of behavior.

a variety of measures via telephone, including questions about mental health, physical health, marital status and satisfaction, and life satisfaction. This resulted in a final nationally representative sample of randomly selected individuals (n=3,487). This sample was augmented by several additional samples, including an oversample from five metropolitan centers (n=757), a subsample of siblings (n=950) of participants already included in the overall sample, and a sample twin-pairs (n=1,914) recruited independently of the original sample.

Figure 1 outlines the inclusion/exclusion process that resulted in the final sample for the present study. All members of the sibling subsample were excluded, since they were selected due to their relationship to previously selected individuals (Kessler, Gilman, Thornton, & Kendler, 2004). In the case of the twin sample, one randomly selected twin was also excluded. These two exclusions ensured participant's data were independent. These procedures resulted in 5,200 remaining people, of whom 3,250 (men = 54.74%) reported being married at the first assessment² (Time 1: T1). These 3,250 participants were then screened further to include only those who were married at T1 and completed the second assessment (Time 2: T2). The T2 follow-up assessment was collected between 2004 and 2006 and T1 respondents were contacted for an additional 30-min phone interview.

A total of 1,897 people were married at T1 and completed the T2 assessment. To ensure the effects were as free of effects from intervening marriages or divorces as possible, 87 participants with more than one change in marital status between T1 and T2 (assessed by asking participants "How many times have you been married altogether?" at T1 and T2) were excluded from the analyses because there was no assessment of the marital quality of the

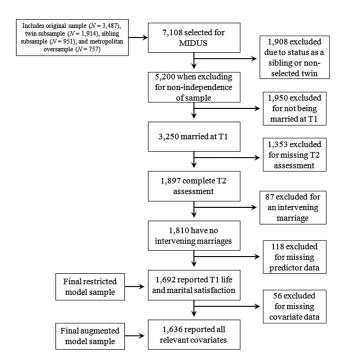


Figure 1. Flowchart of selected and excluded participants for the present study from the 7,108 people who were selected for participation in the original Midlife in the United States (MIDUS) study.

more proximal marriage. Further, 118 participants had not provided a report of either their LS or marital satisfaction at T1 and were excluded, resulting in a final sample of 1,692 (50.9% = men) for the restricted sample. Finally, an additional 56 people did not provide an assessment of a covariate at T1 used in the model. This resulted in a final sample of 1,636 people (men = 51.1%) for the augmented model, with men and women in two distinct subgroups: those who were married at T1 and remained married at T2, and those who were married at T1 and became divorced between T1 and T2. Further, each of these two groups contained both men and women, resulting in groups resembling a traditional  $2 \times 2$  interaction design (i.e., Gender  $\times$  Marital Status).

Participants who completed the T2 assessment differed from those who did not insofar as a greater percentage were male ( $\chi 2$  [1, N=2,346] = 23.90, p<.001) and they had a higher household income (d=0.16) and more education (d=0.21) at T1; these differences were first reported in Sbarra et al. (2014). Participants had been married an average of 23.42 years (SD=13.18) at T1, and those who divorced between T1 and T2 separated from their partner, on average, 2.5 years after the T1 assessment. Thus, any differences between divorced and continuously married individuals at T2 reflect changes that, on average, persist long after the date of separation, suggesting that any associations between predictor and outcome variables remain robust over time. Table 1 shows descriptive statistics for the continuously married and divorced men and women on the variables of interest and relevant covariates from the current study.

#### Measures

**Demographic variables.** The MIDUS study assessed a variety of demographic variables, including marital status, age, race, gender, household income, education, and year in which the current marriage began. Race was coded as a categorical variable (white = 0, nonwhite = 1) with nonwhite including those participants endorsing *Black and/or African Americans*, *Native Americans*, *Asian or Pacific Islanders*, and those choosing *Other*. Education was coded using 12 categories (1–12) ranging from no formal schooling to an advanced graduate degree.

**Depression.** The presence or absence of a depressive episode was measured by the World Health Organization Composite International Diagnostic Interview-Short Form (CIDI-SF; Kessler, Andrews, Mroczek, Ustun, & Wittchen, 1998). The CIDI-SF assesses the presence of a major depression episode (MDE) in the prior 12 months (see Kessler, DuPont, Berglund, & Wittchen, 1999). The CIDI-SF has a stem-branch structure. During a telephone interview, participants were first asked about the presence of sad/depressed affect that was particularly intense and was experienced every day or nearly every day for at least a 2-week period. Participants were also asked about the presence of anhedonia, defined as the near complete loss of interest in more activities almost every day or every day for a 2-week period. The diagnosis of an MDE requires a period of at least two weeks of either depressed mood or anhedonia most of the day, nearly every day, and a series of at least four other associated symptoms typically found to accompany depression (e.g., loss of appetite,

<sup>&</sup>lt;sup>2</sup> Participants were included regardless of whether they reported this was their first or a subsequent marriage.

Table 1
Demographic Characteristics Across Relevant MIDUS I and MIDUS II Variables for Divorced and Continuously Married Men
and Women

	Divorced women $(n = 67)$	Divorced men $(n = 42)$	Married women $(n = 763)$	Married men $(n = 820)$
Marital quality <sup>A,B</sup>	5.88 ± 1.30*	6.05 ± 1.26*	6.38 ± 1.02*	6.56 ± .89*
LS <sup>B</sup>	$7.76 \pm 1.15$	$7.71 \pm 1.16$	$8.01 \pm 1.17$	$7.92 \pm 1.05$
LS at T2 <sup>B</sup>	$7.45 \pm 1.26^*$	$7.45 \pm 1.43^*$	$8.02 \pm 1.15^*$	$7.89 \pm 1.14$
$Age^{A,B}$	$38.91 \pm 8.29^*$	$43.29 \pm 10.40^*$	$46.49 \pm 11.98^*$	$49.22 \pm 11.99^*$
Household income <sup>A</sup>	$72.69 \pm 63.30^*$	$100.61 \pm 53.60$	$86.18 \pm 64.68$	$91.13 \pm 63.31$
Extraversion	$3.16 \pm .53$	$3.16 \pm .55$	$3.22 \pm .57$	$3.17 \pm .54$
Agreeableness <sup>A</sup>	$3.48 \pm .55$	$3.30 \pm .49^*$	$3.58 \pm .43^*$	$3.33 \pm .54^*$
Openness to experience <sup>A</sup>	$2.98 \pm .47$	$3.06 \pm .48$	$2.95 \pm .52^*$	$3.04 \pm .48^*$
Conscientiousness	$3.43 \pm .45$	$3.42 \pm .34$	$3.51 \pm .43^*$	$3.41 \pm .42^*$
Neuroticism <sup>A</sup>	$2.37 \pm .62$	$2.27 \pm .78$	$2.29 \pm .65^*$	$2.10 \pm .64^*$
Years married <sup>B</sup>	$15.73 \pm 10.62^*$	$19.50 \pm 12.31^*$	$25.02 \pm 13.15$	$25.66 \pm 12.91^*$
Education <sup>A</sup>	$6.72 \pm 2.49$	$7.29 \pm 2.75$	$6.92 \pm 2.29^*$	$7.46 \pm 2.57^*$
% Depressed <sup>A</sup>	14.9	14.3	11.0*	6.5*
% Race <sup>B</sup>	16.4	9.5	5.8	4.8

Note. Data are means  $\pm$  standard deviations unless otherwise noted. All variables are measured at Midlife in the United States (MIDUS) I (T1) unless noted. T2 = MIDUS II. LS = life satisfaction across domains; Household income = absolute dollar values divided by 10,000; Years of marriage = average years of marriage; Education = 12 categories of education ranging from 1 (no formal education) to 12 (advanced graduate degree); % Depressed = amount with positive result for major depression screening. Depression was coded 0 = not depressed; race was coded 0 = White, 1 = Nonwhite. Two independent t-tests were used to compare men to women, and divorced adults to still married adults. Significant differences between genders are indicated with an t-A and differences between marital status is indicated with t-B. Significant differences from the mean between each group and the mean of the other groups is indicated with a t-A t-D t-

sleep problems, irritability). The CIDI-SF has demonstrated strong sensitivity and specificity (Kessler et al., 1998).

**Big 5 personality traits.** Participants indicated the degree to which 30 adjectives described them, which was used as a measure of the Big 5 personality traits (Chapman, Fiscella, Kawachi, & Duberstein, 2010; Lachman & Weaver, 1997). Four to seven items were used to measure each of the five major personality traits: Extraversion, Agreeableness, Neuroticism, Conscientiousness, and Openness to Experience. Responses ranged from 1 (*a lot*) to 4 (*not a lot at all*) with scores reversed so that higher scores indicate higher levels of the personality trait. The internal consistency of these scales ranged from .58 to .80, though all scales other than Conscientiousness had internal consistencies above .74.

Marital quality. The Marital Quality scale was created using the sum of two marital relationship subscales. Each was composed of six T1 items intended to reflect participants' perceived positive marital interactions (marital support; e.g., How much do they [your spouse] really understand the way you feel about things?) and perceived negative marital interactions (marital strain; e.g., How much do they criticize you?), respectively. The two scales were used to measure perceived frequency of positive and negative marital interactions. The response options were recoded as necessary, such that higher scores reflected higher marital quality (more support and less strain). Support and strain scales were created using the arithmetic average and summed to create an overall scale of marital quality. The marital support ( $\alpha = .90$ ) and marital strain subscales ( $\alpha = .87$ ) showed adequate internal reliability in the sample and were highly correlated (r = .66). The resulting full marital quality scale ( $\alpha = .92$ ) also showed adequate reliability.

**Life satisfaction (LS).** The MIDUS study included the measure of LS based on perceived satisfaction in specific life domains (Prenda & Lachman, 2001). A single composite LS score was created by averaging participants' scores of their satisfaction with life, work, children, and health. In the case that participants did not

have some aspect of the items (e.g., they did not have children or a job), the score was calculated using the mean of the remaining items. All LS items were scored on an 11-point Likert-type scale ranging from 0 (e.g., the worst possible life overall) to 10 (e.g., the best possible life overall), and items were recoded so that higher scores on the composite score reflect greater LS. An additional item, asking about satisfaction in one's relationship with one's spouse/partner, was excluded to prevent confounding the measure of LS with the assessment of marital quality. The LS items were collected at both MIDUS I and MIDUS II and showed adequate internal consistency at both T1 ( $\alpha$  = .61) and T2 ( $\alpha$  = .63).

# **Data Analysis**

We specified a series of hierarchical linear regression models accounting for two-way and three-way interaction effects predicting change in LS from baseline to follow-up. The moderators of interest were gender, marital quality at T1, and marital status at T2. We tested all associations in a restricted model that included only the main effects of these variables, the relevant two-way interactions, and the focal Gender × Marital Quality × Marital Status three-way interaction. We then tested an augmented model, which also included a series of potentially relevant covariates to examine if the addition of these variables weakened the associations of interest. Age, education level, household income, years married, and race were included as standard demographic controls; depression status at T1 was included due to its possible effect on marital quality and life satisfaction. Finally, we included Big 5 personality traits (Extraversion, Neuroticism, Openness to Experience, Agreeableness, and Conscientiousness) because they are associated with both relationship quality (Robins, Caspi, & Moffitt, 2002; Whisman, Uebelacker, Tolejko, Chatav, & McKelvie, 2006) and life satisfaction (Hayes & Joseph, 2003).

We ran an additional post hoc analysis to better estimate the effect of attrition on the results. The MIDUS data had differential attrition for divorced adults when compared to those who remained married between T1 and T2 (Radler & Ryff, 2010), and combining the T1 and T2 MIDUS samples resulted in considerable missing data. To address these issues, we used multiple imputation (MI; Rubin, 1987; Schafer, 1999) and created five imputed data sets with complete marital status and LS data at T2; these two variables were imputed based on participants' scores on T1 marital satisfaction, LS, the five dimensions of personality, age, household income, years married, and depression. The primary goal for the MI analyses was to explore if the effect of interest remained significant after accounting for missing data from T1 to T2.

#### **Results**

Table 1 displays the descriptive statistics and Table 2 presents a correlation table of the variables used in this study. Relative to continuously married adults, divorced adults were significantly younger, were married for a shorter period of time, and had lower levels of LS at T1 and T2. Divorced adults were also significantly less satisfied with their marriage at T1 and more racially diverse,

with a larger proportion of Black/African Americans and Asians or Pacific Islanders. Relative to women, men were significantly older, and scored lower on Agreeableness and Neuroticism and higher on Openness to Experience. They also had significantly higher income, were more educated, and were less likely to be depressed. It is also notable that in the overall sample, both men and women show stability in LS from T1 to T2 (r = .45 and r = .54, respectively) and their T1 marital quality was correlated with their T1 LS (r = .36 and r = .40, respectively) and T2 LS (r = .21 and r = .30, respectively), though the correlation between T1 marital quality and T2 LS does not account for participants' prior LS levels at T1.

We first tested the three-way restricted model predicting LS at T2. This model included the effects of LS at T1, gender, marital quality at T1, and marital status at T2, as well as the two-way interactions, and finally the Gender  $\times$  Marital Quality  $\times$  Marital Status interaction. After accounting for the variance explained by the component terms and two-way interactions, the three-way interaction explained unique variance in LS at T2, B = -0.61, 95% confidence interval (CI) [-0.93, -0.29], SE = 0.16, p < .001 (Table 3, Model 1). The three-way interaction term explained an additional 0.6% of unique variation in LS at T2.

Table 2
Correlation Table of All Relevant Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
					Correla	tions amo	ng womer	1						
Mar. Quality (1)	1.0													
LS (2)	.40*	1.0												
LS at T2 (3)	.30*	.54*	1.0											
Age (4)	02	.09*	.15*	1.0										
Income (5)	.08*	.11*	.13*	14*	1.0									
Extraversion (6)	.14*	.31*	.20*	00	.07*	1.0								
Agree. (7)	.14*	.25*	.17*	.06*	02	.51*	1.0							
Openness (8)	.10*	.23*	.20*	04*	.12*	.54*	.37*	1.0						
Consci. (9)	.19*	.28*	.22*	.01	.12*	.29*	.26*	.30*	1.0					
Neuroticism (10)	20*	38*	33*	14*	09*	21*	12*	21*	24*	1.0				
Years married (11)	03*	.07*	.12*	.95*	16*	00	.07*	02	.06*	11*	1.0			
Education (12)	.04	.06*	.13*	13*	.36*	.00	04*	.22*	.14*	13*	22*	1.0		
Depression (13)	12*	26*	16*	10*	.02	09*	.05	05	10*	.26*	$07^{*}$	06*	1.0	
Race (14)	$08^{*}$	01	01	$08^{*}$	$06^{*}$	.03	04	.06*	04	02	$10^{*}$	03	00	1.0
					Corre	lations am	ong men							
Mar. Quality (1)	1.0													
LS (2)	.36*	1.0												
LS at T2 (3)	.21*	.45*	1.0											
Age (4)	.12*	.16*	.14*	1.0										
Income (5)	.00	.10*	.11*	$07^{*}$	1.0									
Extraversion (6)	.16*	.25*	.21*	01	.01	1.0								
Agree. (7)	.18*	.18*	.16*	.09*	$05^{*}$	.57*	1.0							
Openness (8)	.18*	.15*	.10*	$09^{*}$	.10*	.49*	.41*	1.0						
Consci. (9)	.19*	.24*	.21*	.06*	.09*	.24*	.26*	.27*	1.0					
Neuroticism (10)	25*	32*	18*	13*	.00	15*	09*	14*	20*	1.0				
Years married (11)	.12*	.15*	.13*	.94*	$09^{*}$	.01	.10*	08*	.07*	12*	1.0			
Education (12)	01	.08*	.15*	03	.35*	$09^{*}$	13*	.15*	.09*	$09^{*}$	09*	1.0		
Depression (13)	08*	19*	08*	$10^{*}$	$05^{*}$	05	.05	.02	03	.25*	09*	05*	1.0	
Race (14)	.02	02	02	$09^{*}$	$08^{*}$	.09*	.07*	.07*	01	03	12*	$06^{*}$	.02	1.0

Note. All variables are measured at Midlife in the United States (MIDUS) I (T1) unless noted. T2 = MIDUS II; LS = life satisfaction across domains; Household income = absolute dollar values divided by 10,000; Mar. Quality = marital quality, Agree. = agreeableness; Consci. = conscientiousness; % Depressed = amount with positive result for major depression screening. \* p < .05.

Table 3
Unstandardized Regression Coefficients From Models Predicting Life Satisfaction From Marital Quality, Marital Status, and Gender

	Outcome: LS at MIDUS II					
		1	22			
Model	В	95% CI	В	95% CI		
Intercept	3.64**	[3.08, 4.20]	2.96**	[2.13, 3.76]		
Marital quality	0.05	[-0.03, 0.13]	0.01	[-0.07, 0.09]		
Gender	$-0.71^{*}$	[-1.38, -0.04]	-1.18**	[-1.79, -0.43]		
Marital status	-1.42	[-2.99, 0.14]	$-1.82^*$	[-3.36, -0.27]		
LS	0.49**	[0.45, 0.54]	0.43**	[0.38, 0.48]		
Mar_Qual × Gender	0.13*	[0.02, 0.23]	0.20**	[0.09, 0.28]		
Mar_Qual × Mar_Status	0.18	[-0.07, 0.44]	0.24	[-0.00, 0.49]		
Gender × Mar_Status	3.58**	[1.62, 5.55]	4.32**	[2.29, 6.19]		
$Mar_Qual \times Gender \times Mar_Status$	-0.61**	[-0.93, -0.29]	-0.71**	[-1.02, -0.38]		
Age			0.01	[-0.01, 0.02]		
Extraversion			$0.11^{*}$	[0.00, 0.23]		
Agreeableness			0.03	[-0.09, 0.14]		
Neuroticism			-0.06	[-0.14, 0.02]		
Conscientiousness			0.17**	[0.04, 0.29]		
Openness to experience			-0.04	[-0.15, 0.08]		
Years married			0.00	[-0.01, 0.01]		
Household income			0.01	[-0.00, 0.00]		
Race			0.03	[-0.03, 0.13]		
Depression			0.04	[-0.14, 0.21]		
Education level			0.04**	[0.02, 0.07]		

To test the specific study hypotheses, we first examined the association of marital quality and LS moderated by marital status among women. As hypothesized, marital status moderated the association between T1 marital quality and T2 LS, B=-0.43, 95% CI [-0.62, -0.23], SE=0.34, p<.001. We decomposed the simple slopes for divorced and continuously married women to examine the direction of the associations between T1 marital quality and T2 LS. As hypothesized, divorced women had a significant negative association between marital quality and LS, B=-0.25, 95% CI [-0.43, -0.06], SE=0.09, p=.008, whereas married women had a significant positive association, B=0.18, 95% CI [0.11, 0.25], SE=0.04, p<.001. Women who ended low quality marriages reported higher levels of LS at T2; women who remained married reported high levels of T2 LS when they also reported high levels of marital quality at T1.

We were further interested in the level of T1 marital quality at which women who divorce experience significant increases (or decreases) in T2 LS compared to continuously married women. To answer this question, we examined the two-way Marital Status × Marital Quality interaction among women with marital quality as the moderator. Using the Johnson-Neyman stepdown technique (Hayes, 2013) revealed that women who divorced and reported T1

marital quality scores lower than 4.04 points (roughly 2 SDs below the mean of all women; 1.40 SDs below the mean for divorced women) evidenced significant increases in their T2 LS; women who divorced and reported marital quality higher than 5.62 points (roughly 0.70 a SD below the mean for all women; 0.17 a SD below the mean for divorced women) evidenced significant decreases in T2 LS. Said differently, above 5.62 points of marital quality, divorced women evidence significantly lower LS than married women, whereas below 4.04 points of marital quality, divorced women evidence significantly higher LS than married women.

We tested the next study hypothesis by examining if the association of marital quality and LS was moderated by marital status among men in the three-way interaction. As predicted, the two-way interaction of T1 marital quality and marital status was not significant, B = 0.18, 95% CI [-0.07, 0.44], SE = 0.13, p = .154, suggesting that divorced and still married men did not significantly differ in their association between marital quality and later LS. We then used a linear regression to examine the association between T1 marital quality and T2 LS for men. Contrary to our hypothesis, when combined as a group, divorced and continuously married men did not evidence a significant positive association (main

effect) between T1 marital quality and T2 LS, B = 0.07, 95% CI [-0.01, 0.16], SE = 0.04, p = .076, despite the large sample (n = 862).

The Gender  $\times$  Marital Quality  $\times$  Marital Status three-way interaction effect remained significant after accounting for the additional covariates of interest in the augmented model,  $B=-0.71,\,95\%$  CI [ $-1.03,\,-0.40$ ],  $SE=0.16,\,p<.001$  (see Table 3, Model 2). In this augmented model, the three-way interaction term explained an additional 0.8% of unique variation in LS at T2. All substantive findings were replicated when including the relevant covariates and the results are visualized in Figure 2.

Having established the existence of the Gender × Marital Quality × Marital Status interaction effect, we next explored whether the sample attrition and missing data from T1 to T2 may have biased these results. To do this, we ran the restricted and augmented models in each of the five imputed samples and examined the pooled estimates for the three-way interaction of interest. The MI approach increased the sample size from 1,692 in the restricted and 1,636 in the augmented models to an average (across the five imputed data sets) of 2,675 and 2,514, respectively. More specifically, the imputed samples averaged 208 (47.3% men) separated/divorced and 2,797 (62.2% men) continuously married participants. The substantive results were replicated for both the restricted, B = -0.42, SE = 0.12, 95% CI [-0.66, -0.18], and augmented models, B = -0.53, SE = -0.530.13, 95% CI [-0.78, -0.29], suggesting that participant attrition and missing data did not alter the substantive results of the present study.

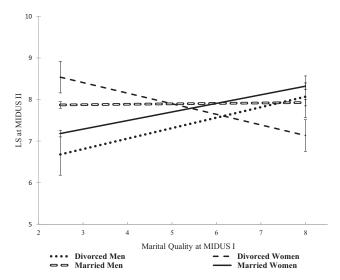


Figure 2. Life satisfaction (LS) at Midlife in the United States (MIDUS) II (T2) as a function of marital quality and gender at MIDUS I (T1) and marital status at MIDUS II (T2). The figure illustrates the combined effects of marital quality, marital status, and gender. Covariates include levels of LS, age, Extraversion, Agreeableness, Neuroticism, Conscientiousness, Openness to Experience, household income, race, depression, and education level from MIDUS I. Confidence intervals are derived from average standard errors across the regression line.

## Discussion

Using a nationally representative sample of adults in midlife, we replicated prior findings demonstrating that psychological adjustment to divorce depends, in part, on marital quality prior to the separation (Amato & Hohmann-Marriott, 2007). We extended this prior work in several ways, finding that men and women have different associations between divorce and later LS as a function of marital quality, and that this three-way interaction explains an additional 0.8% of variation in later LS (in the augmented model). Men evidenced a nonsignificant association between marital quality and later LS, whereas for women who remain married, marital quality was positively associated with later LS. In contrast, for women who became divorced, marital quality was negatively associated with later LS. Women in the lowest quality marriages who became divorced evidenced higher levels of later LS than women in lower quality marriages who remained married. In the current sample, 15% of the divorced women were in this marital quality range, exhibiting higher LS than women who remained in marriages of comparable quality. In contrast, women in higher quality marriages who divorced evidenced lower levels of later LS compared to women in higher quality marriages who remained married. In the current sample, 65% of divorced women fell within this range, evidencing lower LS than continuously married women in higher quality marriages.

These results are both consistent and inconsistent with prior work regarding outcomes for divorced or continuously married men and women. For married men and women, the findings comport well with prior research findings that marital quality predicts positive outcomes (Kiecolt-Glaser & Newton, 2001; Proulx et al., 2007), and that this effect is generally stronger for women than men (Waite & Gallagher, 2000). These findings are inconsistent, however, with some elements of Amato and Hohmann-Marriott's (2007) work, which found that people in highly distressed marriages generally reported more happiness after divorce regardless of gender. In addition, neither still married nor divorced men evidenced an association between marital quality and later LS. Although prior studies have found this association for married men (BE et al., 2013; Williams, 2003), both studies had shorter time periods between assessments, and this association may not be present over a longer period. Taken together, these results suggest that, although people who separate from their partner are at risk for a variety of negative outcomes (Amato, 2010), this effect does not hold for everyone, particularly women in the lowest quality marriages.

This study's findings fit well with a contextual approach to life transitions, suggesting that poor quality marriages might be harmful (Coyne & DeLongis, 1986) and that people leaving a low quality marriage may have positive outcomes (Wheaton, 1990). Those in the poorest quality relationships may face a variety of negative stressors (e.g., physical or verbal abuse) from which divorce provides a clear relief. In comparison to the stressors faced within the marriage, those outside of it may not seem as negative or overwhelming. These findings also support the idea that women and men may experience marriage and divorce differently. Past research suggests that women are more likely to assume communal orientations and interdependent self-construals (Cross & Madson, 1997; Helgeson, 1994; Impett

& Peplau, 2006). By investing more into their close relationships, women are, a number of studies suggest, more negatively affected than men by lower quality marriages and therefore benefit more than men when leaving these relationships.

The findings from this study may be considered meaningful in light of the number and frequency of divorces in the United States in any given year. Only 50-55% of first marriages last beyond 20 years (Copen, Daniels, Vespa, & Mosher, 2012). Understanding who is at greater and lesser risk for adverse outcomes during marriage and following divorce is essential to better address people's psychological needs. This is particularly true when applied to indexes of psychological well-being, such as life satisfaction. Those with higher levels of LS generally live longer, healthier lives (Deiner & Chan, 2011) and report better quality of life and less distress (Strine, Chapman, Balluz, Moriarty, & Mokdad, 2008). This study's findings suggest that greater care must be given to consider the context of marriage when people face divorce. Clinicians and researchers would be ill-served by assuming that divorce is a negative stressful event for all people, particularly women in the lowest quality marriages. Future research providing evidence of what characterizes the lowest quality marriages (e.g., verbal or physical abuse) could better inform clinicians regarding indicators of these types of marriages and the potential outcomes of divorce. In addition, future work should address prior marital quality and cultural expectations of marriage (i.e., communal orientation and interdependent self-construals) as potential indicators of future postdivorce well-being, which may predict those who are more or less likely to require intervention.

The results of the present study should be understood in the context of its limitations. First, in order to increase the size of this sample, divorced and separated adults were combined into a single group. Although this is an acceptable practice (Sbarra et al., 2009), and has been used in prior studies (Sbarra et al., 2014), this aggregation may have masked important differences between those who have divorced and those who have separated from their partner. Second, the unbalanced nature of the samples of divorced to continuously married people in the analyses likely attenuated the effect size of the interaction, since the group with the strongest effect—divorced adults—was a small proportion of the total sample. In a more balanced sample, we would expect the effect size to be larger.<sup>3</sup> The nature of the inclusion and exclusion criteria of the study sample also affected the representativeness of the sample. Although we included all participants that we could in our analyses, it is possible participants were excluded in such a way that violated the representative nature of the original MIDUS sample. Third, the theoretical basis for the current study rested on differences in communal orientation and interdependent self-construals by gender, and although women generally adopt these perspectives more than men (Helgeson, 1994; Impett & Peplau, 2006), these constructs were not measured in the current study. Future studies could benefit from moderating outcomes using measures designed to assess communal orientation and interdependent self-construals to evaluate whether these constructs hold predictive value as proposed here. Finally, using LS as the outcome, although linked to meaningful outcomes, is a selfreport measure and is susceptible to reporter bias. People's perception of their life prior to divorce could have meaningful impact on how they interpret their postdivorce life satisfaction. This is particularly meaningful for men, whose change following divorce is most closely linked to health outcomes (Kiecolt-Glaser & Newton, 2001; Sbarra et al., 2011), and as a result, examining health outcomes could provide a more sensitive postdivorce measure for men. In addition, the LS measure had only acceptable internal reliability. Using well-validated measures in future research, such as the Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), would help ensure the validity of future results.

#### Conclusion

By examining changes in marital status, participants' gender, and marital quality in a nationally representative sample, the current study extends prior findings regarding differences between men and women during marriage and following divorce. Whereas there was not a significant association between marital quality and LS for men, continuously married women showed a consistent significant positive association between early marital quality and later LS. Divorced women, however, showed a significant negative association between marital quality and later LS, such that women in higher quality marriages that become divorced showed the lowest LS among women with higher marital quality. In addition, women in lowest quality marriages showed the highest LS among women with lower marital quality, and this characterized 15% of the divorced women in the sample. The findings further support the existence of gender differences in the importance of marital quality following divorce and extend previous research regarding positive outcomes following divorce. Though divorce is stressful and associated with negative outcomes, these findings suggest that for some people—specifically women in the lowest-quality marriages—LS can improve following divorce.

# References

Amato, P., & Hohmann-Marriott, B. (2007). A comparison of high- and low-distress marriages that end in divorce. *Journal of Marriage and Family*, 69, 621–638. http://dx.doi.org/10.1111/j.1741-3737.2007.00396.x

Amato, P. R. (2010). Research on divorce: Continuing trends and new developments. *Journal of Marriage and Family*, 72, 650–666. http://dx.doi.org/10.1111/j.1741-3737.2010.00723.x

BE, D., Whisman, M. A., & Uebelacker, L. A. (2013). Prospective associations between marital adjustment and life satisfaction. *Personal Relationships*, 20, 728–739. http://dx.doi.org/10.1111/pere.12011

Bernard, J. (1982). The future of marriage. New Haven, CT: Yale University Press.

Booth, A., & Amato, P. (1991). Divorce and psychological stress. *Journal of Health and Social Behavior*, 32, 396–407. http://dx.doi.org/10.2307/2137106

 $<sup>^3</sup>$  If the sample were closer in the proportion of married to divorced people, as it would be in a case-controlled study rather than our sample, the effect size would have been larger. For example, with a ratio of 1:3.5 rather than our study's proportion of 1:14.5, the interaction explained 1.5% and 1.8% of the variance in the restricted and augmented models respectively, over twice the effect in the original sample; we estimated these effect sizes via 100 random subsamples (n=376 married, n=107 divorced) of continuously married people drawn from the original sample.

- Brim, O. G., Ryff, C. D., & Kessler, R. C. (Eds.). (2004). *How healthy are we? A national study of well-being at midlife*. Chicago, IL: University of Chicago Press.
- Canady, R., & Broman, C. (2003). Marital disruption and health: Investigating the role of divorce in differential outcomes. *Sociological Focus*, 36, 241–255. http://dx.doi.org/10.1080/00380237.2003.10570726
- Carr, D., & Springer, K. (2010). Advances in families and health research in the 21st century. *Journal of Marriage and Family*, 72, 743–761. http://dx.doi.org/10.1111/j.1741-3737.2010.00728.x
- Chapman, B. P., Fiscella, K., Kawachi, I., & Duberstein, P. R. (2010).
  Personality, socioeconomic status, and all-cause mortality in the United States. *American Journal of Epidemiology*, 171, 83–92. http://dx.doi.org/10.1093/aje/kwp323
- Copen, C. E., Daniels, K., Vespa, J., & Mosher, W. D. (2012). First marriages in the United States: Data from the 2006–2010 National Survey of Family Growth. *National Health Statistics Reports*, 49, 1–21. http://198.246.124.29/nchs/data/nhsr/nhsr049.pdf
- Coyne, J. C., & DeLongis, A. (1986). Going beyond social support: The role of social relationships in adaptation. *Journal of Consulting and Clinical Psychology*, 54, 454–460. http://dx.doi.org/10.1037/0022-006X.54.4.454
- Cross, S. E., & Madson, L. (1997). Models of the self: Self-construals and gender. *Psychological Bulletin*, 122, 5–37. http://dx.doi.org/10.1037/ 0033-2909.122.1.5
- Diener, E., & Chan, M. (2011). Happy people live longer: Subjective well-Being contributes to health and longevity. *Applied Psychology: Health and Well-Being*, *3*, 1–43.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49, 71– 75. http://dx.doi.org/10.1207/s15327752jpa4901\_13
- Drefahl, S. (2012). Do the married really live longer? The role of cohabitation and socioeconomic status. *Journal of Marriage and Family*, 74, 462–475. http://dx.doi.org/10.1111/j.1741-3737.2012.00968.x
- Gove, W. R., & Tudor, J. F. (1973). Adult sex roles and mental illness. AJS; American Journal of Sociology, 78, 812–835. http://www.jstor.org/ stable/277660510.1086/225404
- Gustavson, K., Nilsen, W., Ørstavik, R., & Røysamb, E. (2014). Relationship quality, divorce, and well-being: Findings from a three-year longitudinal study. *The Journal of Positive Psychology*, 9, 163–174. http:// dx.doi.org/10.1080/17439760.2013.858274
- Gustavson, K., Røysamb, E., von Soest, T., Helland, M. J., & Mathiesen, K. S. (2012). Longitudinal associations between relationship problems, divorce, and life satisfaction: Findings from a 15-year population-based study. *The Journal of Positive Psychology*, 7, 188–197. http://dx.doi.org/10.1080/17439760.2012.671346
- Hayes, A. F. (2013). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach. New York, NY: Guilford Press.
- Hayes, N., & Joseph, S. (2003). Big 5 correlates of three measures of subjective well-being. *Personality and Individual Differences*, 34, 723– 727. http://dx.doi.org/10.1016/S0191-8869(02)00057-0
- Helgeson, V. S. (1994). Relation of agency and communion to well-being: Evidence and potential explanations. *Psychological Bulletin*, 116, 412–428. http://dx.doi.org/10.1037/0033-2909.116.3.412
- Hetherington, E. M., & Kelly, J. (2003). For better or for worse: Divorce reconsidered. New York, NY: Norton & Company.
- 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. http://dx.doi.org/10.1007/s12160-008-9018-y
- Impett, E. A., & Peplau, L. A. (2006). "His" and "her" relationships: A review of the empirical evidence. In A. Vangelisti & D. Perlman (Eds.), The Cambridge handbook of personal relationships (pp. 273–292). New

- York, NY: Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511606632.016
- Kessler, R. C., Andrews, G., Mroczek, D., Ustun, T. B., & Wittchen, H.-U. (1998). The World Health Organization Composite International Diagnostic Interview Short Form (CIDI-SF). *International Journal of Methods in Psychiatric Research*, 7, 171–185. http://dx.doi.org/10.1002/mpr.47
- Kessler, R. C., DuPont, R. L., Berglund, P., & Wittchen, H. U. (1999). Impairment in pure and comorbid generalized anxiety disorder and major depression at 12 months in two national surveys. *American Journal of Psychiatry*, 156, 1915–1923.
- Kessler, R. C., Gilman, S. E., Thornton, L. M., & Kendler, K. S. (2004). Health, well-being, and social responsibility in the MIDUS twin and sibling subsamples. In O. G. Brim, C. D. Ryff, & R. C. Kessler (Eds.), How healthy are we? A national study of well-being at midlife (pp. 124–152). Chicago, IL: The University of Chicago Press.
- Kiecolt-Glaser, J. K., & Newton, T. L. (2001). Marriage and health: His and hers. *Psychological Bulletin*, 127, 472–503. http://dx.doi.org/ 10.1037/0033-2909.127.4.472
- Lachman, M. E., & Weaver, S. L. (1997). The Midlife Development Inventory (MIDI) Personality Scales: Scale construction and scoring. Waltham, MA: Brandeis University.
- Lorenz, F. O., Wickrama, K. A. S., Conger, R. D., & Elder, G. H., Jr. (2006). The short-term and decade-long effects of divorce on women's midlife health. *Journal of Health and Social Behavior*, 47, 111–125. http://dx.doi.org/10.1177/002214650604700202
- Lucas, R. E. (2005). Time does not heal all wounds: A. longitudinal study of reaction and adaptation to divorce. *Psychological Science*, 16, 945– 950. http://dx.doi.org/10.1111/j.1467-9280.2005.01642.x
- Mancini, A. D., Bonanno, G. A., & Clark, A. E. (2011). Stepping off the hedonic treadmill. *Journal of Individual Differences*, 32, 144–152. http://dx.doi.org/10.1027/1614-0001/a000047
- Prenda, K. M., & Lachman, M. E. (2001). Planning for the future: A life management strategy for increasing control and life satisfaction in adulthood. *Psychology and Aging*, 16, 206–216. http://dx.doi.org/ 10.1037/0882-7974.16.2.206
- Proulx, C., Helms, H., & Buehler, C. (2007). Marital quality and personal well-being: A meta-analysis. *Journal of Marriage and Family*, 69, 576–593. http://dx.doi.org/10.1111/j.1741-3737.2007.00393.x
- Radler, B. T., & Ryff, C. D. (2010). Who participates? Accounting for longitudinal retention in the MIDUS national study of health and wellbeing. *Journal of Aging and Health*, 22, 307–331. http://dx.doi.org/ 10.1177/0898264309358617
- Robins, R. W., Caspi, A., & Moffitt, T. E. (2002). It's not just who you're with, it's who you are: Personality and relationship experiences across multiple relationships. *Journal of Personality*, 70, 925–964. http://dx.doi.org/10.1111/1467-6494.05028
- Robles, T. F., Slatcher, R. B., Trombello, J. M., & McGinn, M. M. (2014).
  Marital quality and health: A meta-analytic review. *Psychological Bulletin*, 140, 140–187. http://dx.doi.org/10.1037/a0031859
- Rubin, D. B. (1987). Multiple imputation for nonresponse in surveys. New York: Wiley. http://dx.doi.org/10.1002/9780470316696
- Sbarra, D. A., Emery, R., Beam, C. R., & Ocker, B. L. (2014). Marital dissolution and major depression in midlife: A propensity score analysis. *Clinical Psychological Science*, 20, 1–9.
- Sbarra, D. A., Hasselmo, K., & Bourassa, K. J. (in press). Divorce and Health: Beyond Individual Differences. *Current Directions in Psychological Science*.
- Sbarra, D. A., Hasselmo, K., & Nojopranoto, W. (2012). Divorce and death: A case study for health psychology. Social and Personality Psychology Compass, 6, 905–919. http://dx.doi.org/10.1111/spc3.12002
- Sbarra, D. A., & Hazan, C. (2008). Coregulation, dysregulation, selfregulation: An integrative analysis and empirical agenda for understanding adult attachment, separation, loss, and recovery. *Personality and*

- Social Psychology Review, 12, 141–167. http://dx.doi.org/10.1177/1088868308315702
- Sbarra, D. A., Law, R. W., Lee, L. A., & Mason, A. E. (2009). Marital dissolution and blood pressure reactivity: Evidence for the specificity of emotional intrusion-hyperarousal and task-rated emotional difficulty. *Psychosomatic Medicine*, 71, 532–540. http://dx.doi.org/10.1097/PSY .0b013e3181a23eee
- Sbarra, D. A., Law, R. W., & Portley, R. M. (2011). Divorce and death: A meta-analysis and research agenda for clinical, social, and health psychology. *Perspectives on Psychological Science*, 6, 454–474. http://dx .doi.org/10.1177/1745691611414724
- Schafer, J. L. (1999). Multiple imputation: A primer. *Statistical Methods in Medical Research*, 8, 3–15. http://dx.doi.org/10.1191/096228099671525676
- Strine, T. W., Chapman, D. P., Balluz, L. S., Moriarty, D. G., & Mokdad, A. H. (2008). The associations between life satisfaction and healthrelated quality of life, chronic illness, and health behaviors among U.S. community-dwelling adults. *Journal of Community Health: The Publi*cation for Health Promotion and Disease Prevention, 33, 40–50. http:// dx.doi.org/10.1007/s10900-007-9066-4

- Waite, L. J., & Gallagher, M. (2000). *The case for marriage: Why married people are happier, healthier, and better off financially.* New York, NY: Broadway Books.
- Wheaton, B. (1990). Life transitions, role histories, and mental health. American Sociological Review, 55, 209–223. http://www.jstor.org/stable/ 2095627.10.2307/2095627
- Whisman, M. A., Uebelacker, L. A., Tolejko, N., Chatav, Y., & McKelvie, M. (2006). Marital discord and well-being in older adults: Is the association confounded by personality? *Psychology and Aging*, 21, 626–631. http://dx.doi.org/10.1037/0882-7974.21.3.626
- Williams, K. (2003). Has the future of marriage arrived? A contemporary examination of gender, marriage, and psychological well-being. *Journal* of *Health and Social Behavior*, 44, 470–487. http://www.jstor.org/stable/ 1519794.10.2307/1519794

Received July 28, 2014
Revision received January 30, 2015
Accepted February 5, 2015