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ABSTRACT

We compared psychological resources between heterosexual never-married and married adults and their group-specific role in positive and negative affect after controlling for social resources. Although never-married respondents scored slightly lower than married adults on social resources and affective well-being, the two groups were comparable on psychological resources. Moderated regression analysis indicated that psychological resources were more strongly related to negative affect for never-married than married adults. In addition, never-married respondents with lower personal mastery scored higher on negative affect than did married adults, and higher levels of self-sufficiency contributed to lower negative affect for never-married adults but to higher negative affect among married individuals. Psychological resources appear to have a differential role in shaping negative affect between never-married and married individuals.

KEY WORDS: marital status • never-married adults • negative affect • positive affect • psychological resources

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A vast body of research documents that marriage is typically viewed as a central social relationship that yields important health benefits. Those who are married are reported to experience better well-being when compared to those who never married, were previously married, cohabit, or date casually (e.g., Kamp Dush & Amato, 2005; Lucas & Dyrenforth, 2005; Pinquart, 2003; Soons & Liefbroer, 2008). Historically, "singles" (i.e., never-married adults) have been overlooked as a distinct group by relationship researchers who have focused on the concomitants and consequences of marital status (DePaulo & Morris, 2005). When included in relationship research, never-married adults have often been combined with those who are divorced or widowed (Koropeckyj-Cox, 2005). Recently, however, several researchers drew attention to the need for systematic research on the life circumstances and well-being of never-married adults to increase understanding of the extent to which, and the explanations for why, never-married adults may be at a higher risk for compromised mental health relative to their married counterparts (e.g., Byrne & Carr, 2005; Clark & Graham, 2005; Williams & Nida, 2005). In answer to this call, the present study focuses on the role of psychological resources in explaining the affective well-being (i.e., positive and negative affect) experienced by never-married adults. Specifically, it compares the psychological (and social) resources and affective well-being of never-married versus married adults and examines the relative role of psychological resources in affective well-being across these two groups.

Hobfoll (2002) describes psychological resources as entities that hold value in their own right for individuals (e.g., a sense of control over one's life). Control-related constructs are the most commonly studied psychological resources in empirical research (Skinner, 1996), perhaps because the extent to which individuals feel in control of their lives can affect the ways in which individuals perceive, react to, and resolve problems (Turner & Roszell, 1994). As such, we focused on three psychological resources in particular: personal mastery, agency, and self-sufficiency. These three variables are known to be linked to personal control, personal autonomy, and resiliency and, collectively, have been found to be related to superior well-being (Feeney, 2007; Helgeson, 1994; Hobfoll, 2002). Personal mastery has been described as the degree to which individuals believe that they have control over the events that occur in their life (Pearlin & Schooler, 1978), and has been found to play a protective role in the development of depression (Jang, Haley, Small, & Mortimer, 2002). Agency refers to a tendency to focus on the self rather than others (Bakan, 1966), and has been associated with increased psychological well-being, including less depression and anxiety (for a review see Helgeson, 1994). Similarly, self-sufficiency can be characterized by a sense of autonomy or the ability to regulate behaviors internally rather than through external validation (Ryff, 1989). Individuals who possess a sense of self-sufficiency or autonomy tend to experience better psychological well-being (Deci & Ryan, 2000; Tower & Krasner, 2006).

To date, little attention has been centered on differences in the levels of psychological resources between never-married and married adults, and the few studies that have performed such comparisons have yielded conflicting

results. Some studies report that, relative to married adults, never-married adults have fewer psychological resources such as personal mastery and self-esteem (e.g., Cotten, 1999; Kessler & Essex, 1982). Other research has found little by way of clear and systematic differences in the psychological resources of never-married versus married adults. For example, Turner, Lloyd and Roszell (1999) found that never-married adults scored higher on personal mastery but lower on self-esteem than their married peers. In contrast to the dearth of research on psychological resources, differences in the social resources of never-married and married adults have been the focus of several studies. In general, studies have found lower social resources among never-married adults relative to their married peers. For example, relative to married adults, never-married adults are less likely to have a confidante and are more likely to have lower levels of social interactions and perceived support (Turner & Marino, 1994; Wyke & Ford, 1992). Never-married adults – relative to married individuals – are also more likely to report lower social integration, less perception of support from friends or family members, and fewer total numbers of persons that are available for advice or sharing feelings (Cotten, 1999).

The present study

Rook and Zettel (2005) suggest that because never-married adults are likely to have fewer close family ties due to the absence of a spouse, and the greater likelihood of having no children, it is plausible and even likely that these individuals will develop and rely more heavily on other resources to maintain or enhance their well-being. Thus, it is likely that never-married adults rely more on psychological resources that promote personal control and autonomy. Our focus in the present study was on the relative strength of the relationship between psychological resources and affective well-being for never-married versus married individuals. We examined differences between never-married and married adults in the level of three psychological resources (i.e., mastery, agency, and self-sufficiency) and compared the nature and strength of the relationship between these psychological resources and affective well-being across these two groups after controlling for the established role of social resources. This approach is important because theoretical developments and empirical research show that social resources alone do not contribute to superior well-being – psychological resources also are vital to overall well-being (e.g., Hobfoll, 2002; Jang et al., 2002).

Past research on never-married adults has almost exclusively used married adults as the comparison group (DePaulo & Morris, 2005). Thus, we used married adults as the reference group in our examination of the role of psychological resources in never-married adults' affective well-being. As indicators of affective well-being, we used assessments of positive and negative affect. Positive and negative affect have been identified as the two dominant and distinctive dimensions of self-reported mood (Tellegen, Watson, & Clark, 1999; Watson, Clark, & Tellegen, 1988). Watson et al. (1988)

define positive affect as the extent to which an individual feels enthusiastic, active, and alert. Negative affect, in contrast, is defined as reflecting subjective distress and unpleasurable engagement; it encompasses a range of aversive mood states including anger, contempt, and disgust. Low positive and high negative affect have been identified as major distinguishing characteristics of depression and anxiety (Tellegen, 1985) and are differentially related to the reported frequency of pleasant and unpleasant events (Watson & Pennebaker, 1989).

Our first goal was to compare never-married and married adults on the psychological resources of personal mastery, agency, and self-sufficiency. We used a nationally-representative sample of never-married and married adults who resided in the United States and participated in the original National Survey of Midlife Development in the United States to examine these differences. Because empirical evidence is inconsistent on the extent to which levels of psychological resources differ across these two groups, we did not test a directional hypothesis regarding differences on psychological resources between never-married and married individuals. We also compared the two groups on social resource variables (i.e., social integration and perceptions of support from family members and from friends) in order to replicate previous research. Consistent with past studies (e.g., Turner & Marino, 1994; Wyke & Ford, 1992), we expected that never-married adults would have lower levels of social resources compared with their married counterparts. In light of these established differences between never-married and married individuals on social resources, and in order to examine the group differences in the role of psychological resources in affective well-being net of the differences in social resources, we treated social resources as control variables when testing for differences in the strength of the relationship between psychological resources and affective well-being between never-married and married respondents. We also compared never-married and married respondents on positive and negative affect. Past studies have generally indicated lower well-being in the former group, with never-married adults reporting more loneliness, less life satisfaction, less happiness, and poorer mental health (e.g., Cotten, 1999; Dion, 2005; Lucas & Dyrenforth, 2005).

Our second goal was to compare the role of psychological resources in positive and negative affect across never-married versus married adults. Inasmuch as never-married adults are likely to have fewer close family ties available to them, it is plausible that higher psychological resources would be more strongly linked to affective well-being in this group than in married adults (Rook & Zettel, 2005). Thus, we propose that, other things being equal, psychological resources would be more strongly linked to affective well-being among never-married adults compared with married persons. Specifically, we hypothesized that although psychological resources would be associated with higher positive affect and lower negative affect in general, this relationship would be moderated by marital status such that the relationship between psychological resources and affective well-being would be significantly stronger for never-married respondents than for married respondents. Some indirect support for this hypothesis comes from Cotten's

(1999) study which found that lower levels of psychological resources, such as mastery and self-esteem, were linked to more symptoms of depression for both never-married and married participants, but that this relationship was somewhat stronger for never-married individuals. However, Cotten did not directly test the difference in the strength of the association between never-married and married participants and thus it remains unclear if the magnitude of the relationships was significantly different across the two groups. We expected the interactive role of marital status and psychological resources in contributing to affective well-being to be robust, prevailing even after we controlled for differences on sociodemographic factors and social resources between the never-married and married groups.

Method

The present data were collected in 1995–1996 as part of the original National Survey of Midlife Development in the United States (MIDUS I; Brim et al., 2003). The survey was designed to assess a wide variety of patterns, predictors, and outcomes related to physical health, psychological well-being, and social responsibility during the middle adulthood and later years. MIDUS I is based on a nationally-representative US sample of 4,242 individuals between the ages of 25 and 74. Data were collected using telephone and mail questionnaires. Characteristics of MIDUS I that make it especially well-suited for our study include the use of probability sampling, the large sample size, availability of self-reported data on sexual orientation, and assessment of psychological resources, social resources, and affective well-being.

Sample

To be eligible for inclusion in the present analyses, MIDUS I respondents had to: (i) be at least 40 years of age; (ii) describe themselves as heterosexual adults who were either currently married or who were never married and not currently involved in a cohabiting relationship; and (iii) have complete data on all study variables. We only included adults aged 40 and over because historical trends show that the median age for marriage has been rising steadily since the 1970s (United States Census Bureau, 2004) and the vast majority of adult women and men who ever marry do so by age 39 (United States Census Bureau, 2005). By limiting our sample to respondents who were 40 years or older, we attempted to increase the likelihood that our sample included those never-married individuals who were less likely to marry in the future and thus were likely to have a stronger commitment to remain unmarried. A total of 105 never-married respondents and 1,486 married respondents in MIDUS I met these criteria, with a mean age of 54 years (SD = 9.4; range = 40–74 years). Of this group, 57.5% was male (n = 915) and 90.4% individuals (N = 1,439) described their race as White. The majority of the sample (62%, N = 986) had received at least some college education.

Measures

Psychological resources. Three psychological resource variables were included in this study. *Self-sufficiency* (Lachman & Weaver, 1997) was measured via four items (e.g., "I would rather deal with my problems by myself") using a 4-point scale ranging from "not at all" to "a lot." *Personal mastery* (Lachman & Weaver, 1997) was measured via four items (e.g., "I can do just about anything I really set my mind to"), each accompanied by a 7-point scale ranging from "strongly disagree" to "strongly agree." *Agency* was measured using five adjectives (e.g., assertive) rated for their level of self-description (Lachman & Weaver, 1997) on a 4-point scale ranging from "not at all" to "a lot." Items for each variable were summed so that higher scores reflected more self-sufficiency, personal mastery, and agency. Cronbach's alpha values for the three psychological resource variables were α = .71 for personal mastery, α = .69 for self-sufficiency, and α = .81 for agency.

Affective well-being. We used two measures of affective well-being. *Negative affect* (Mroczek & Kolarz, 1998) was assessed using six items where respondents indicated the amount of time, ranging from 1 (all of the time) to 5 (none of the time), during the preceding 30 days that they had felt so sad nothing could cheer them up, nervous, restless or fidgety, hopeless, that everything was an effort, and worthless. Responses to the items were summed such that higher scores indicated more negative affect. *Positive affect* (Mroczek & Kolarz, 1998) was assessed using six items where respondents indicated the amount of time, ranging from 1 (all of the time) to 5 (none of the time), during the preceding 30 days that they had felt cheerful, in good spirits, extremely happy, calm and peaceful, satisfied, and full of life. Responses were summed such that higher scores represented more positive affect. Cronbach's alpha values for positive and negative affect were .92 and .87, respectively.

Social resources. Three indicators of social resources were included as covariates in the regression analyses. *Social integration* (Keyes, 1998) was measured via three items (e.g., "My community is a source of comfort") rated on a 7-point scale ranging from "strongly disagree" to "strongly agree." *Perceived kin (non-spouse) support* and *perceived friend support* were each measured using four items (Schuster, Kessler, & Aseltine, 1990) rated on 4-point scales ranging from "never" to "often." Items in both scales were identical except for the frame of reference (e.g., "Not including your spouse or partner, how much do members of your family [how much do your friends] really care about you?" and "Not including your spouse or partner, how much can you rely on members of your family [how much can you rely on your friends] for help if you have a serious problem?"). Items for each variable were summed so that higher scores reflected more of each type of social resource. The three social resource variables demonstrated internal consistency: α = .74 for social integration, α = .83 for perceived kin support, and α = .88 for perceived friend support.

Sociodemographic variables. Respondents' gender, age, educational level, and number of children were also treated as statistical controls in the regression analyses. Never-married participants were younger than married participants (Ms = 52.1 vs. 54.2, respectively; $t[1599] = 2.24, p < .05$). Never-married respondents were also significantly less likely to report having a child (20%; $n = 21$; biological or nonbiological) than their married counterparts (96%; $n = 1426$; $\chi^2[\text{df} = 1; N = 1591] = 22.62, p < .001$). The two groups did not differ on gender or educational level.

Results

Table 1 provides means on psychological resources, social resources, and affective well-being for never-married and married respondents. Analyses of variance were used to compare the two groups on these variables ($\alpha = .01$). Using this criterion, we found no significant differences between never-married and married respondents on the psychological resources. Consistent with past research, never-married adults scored significantly lower than married participants on two social resource variables: social integration and perceived family support. The magnitude of these differences, however, was very small. The two groups were comparable on levels of perceived friend support. Also in keeping with past research, compared to married respondents, never-married respondents scored slightly but significantly lower on positive affect and higher on negative affect. Bivariate correlations computed separately for never-married and married respondents to examine the relationship between psychological and social resources and their links to affective well-being are presented in Table 2.

TABLE 1
Means on study variables for never-married and married respondents

	Never married (n = 105)		Married (n = 1486)			
	M	**(*SD*)**	***M***	**(*SD*)**	***F*(1,1589)**	**η^2**
Psychological resources						
Personal mastery	5.58	(1.2)	5.82	(1.0)	5.50	.003
Agency	2.60	(0.7)	2.75	(0.7)	4.79	.003
Self-sufficiency	3.17	(0.6)	3.07	(0.7)	2.77	.002
Social resources						
Social integration	12.67	(5.1)	14.71	(4.2)	16.80***	.010
Perceived kin support	3.65	(0.8)	3.93	(0.6)	16.43***	.010
Perceived friend support	3.17	(0.7)	3.21	(0.7)	<1	.000
Affective well-being						
Positive affect	3.16	(0.8)	3.43	(0.7)	11.88***	.007
Negative affect	1.61	(0.7)	1.47	(0.6)	8.14**	.005

Note. Higher scores represent higher levels of each variable. Asterisks denote significant mean differences: ** $p < .01$; *** $p < .001$

TABLE 2
Correlations among major study variables for never-married (above-diagonal) and married (below-diagonal) respondents

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Positive affect (1)	–	–.44	.41	.15	–.20	.40	.36	.31
Negative affect (2)	–.63	–	–.50	–.09	–.09	–.46	–.29	–.23
Personal mastery (3)	.32	–.25	–	.22	–.08	.27	.29	.20
Agency (4)	.17	–.14	.31	–	–.16	.23	.29	.19
Self-sufficiency (5)	–.08	.14	.03	–.05	–	–.20	–.26	–.10
Social integration (6)	.29	–.26	.20	.14	–.14	–	.45	.18
Kin support (7)	.23	–.17	.21	.13	–.13	.34	–	.38
Friend support (8)	.22	–.16	.11	.08	–.08	.25	.35	–

Note. $p < .05$ and $p < .001$ were treated as statistically significant in the long-term single and married groups, respectively, in order to adjust for differences in group size. For never-married adults, $| r | > .201$ was significant at $p < .05$ or better; for married respondents, $| r | > .113$ was significant at $p < .001$ or better.

Moderated regression analyses

We used SPSS (version 15.0) to perform moderated regression analyses using weighted-effects coding to compare the relative role of psychological resources in positive and negative affect in never-married versus married adults. Moderated regression analyses are used to examine significant differences across groups in the extent to which specific predictors are related to an outcome variable (Newsom, Prigerson, Schulz, & Reynolds, 2003). Weighted-effects coding is used in instances when group sizes are unequal such as in the current study (Newsom et al., 2003), and involves proportional coding based on the number of cases in each group; dummy coding weights are assigned such that groups are weighted proportionally to yield codes for the total sample that sum to zero.

Separate moderated regression models were tested with (i) negative affect and (ii) positive affect as criterion variables. In each model, marital status (never-married adults versus married adults) was dummy coded using weighted effects coding to control for differences in group size. To minimize multicollinearity that can result between interaction terms and the original variables that compose the interaction, the interaction terms were calculated by first centering each continuous variable (subtracting the mean from each individual's score per variable) and then multiplying the resulting centered terms with the dummy-coded marital status variable to compute each interaction term (Judd & McClelland, 1989). Consistent with recommendations for the introduction of predictor variables (Cohen & Cohen, 1983; Newsom et al., 2003), predictor variables were introduced into the models in steps such that sociodemographic control variables – gender, age, education level, and number of children – were introduced first (step 1), followed by the social resource covariates of social integration, perceived family support, and perceived friends' support (step 2), marital status and centered values for the psychological resources of personal mastery, agency, and self-sufficiency

(step 3; a test of the "main effects"), and finally (step 4), the interaction terms of each psychological resource (using centered variables) and marital status (using weighted effects dummy coding). A significant interaction term for any psychological resource with marital status, regardless of its individual ("main") effects, indicates that the relationship between that psychological resource and affective well-being varies significantly across never-married and married respondents (Cohen & Cohen, 1983; Newsom et al., 2003). The results of the moderated regression analyses for positive and negative affect are presented in Table 3.

Positive affect regression model. As Table 3 indicates, on step 1 the sociodemographic factors explained approximately 3% of the variance in positive affect. Age and gender were independently associated with more positive affect such that older participants and men reported more positive affect; education level was unrelated to positive affect. On step 2, we found that, as a set, the social resource variables accounted for over 12% additional variance in positive affect. Higher levels of social integration, perceived family support, and perceived support from friends were all associated with greater positive affect. When marital status and the psychological resource variables were entered on step 3 of the model, they collectively accounted for an additional 6.7% variance in positive affect. After controlling for the psychological resource variables as well as the predictors entered on steps 1 and 2, marital status was not uniquely associated with positive affect. Among the psychological resources, scores on personal mastery were independently associated with positive affect such that higher scores on personal mastery predicted greater positive affect. Finally, step 4 tested whether the relationship between psychological resources and positive affect was significantly different for never-married versus married respondents. The introduction of the three interactions (i.e., each psychological resource with marital status) did not significantly increase the amount of variance explained in positive affect. Thus, we can conclude that, for positive affect, the contribution of psychological resources such as personal mastery, agency, and self-sufficiency does not vary across never-married and married adults.

Negative affect regression model. The model with negative affect as the criterion variable demonstrated that the sociodemographic factors as a set accounted for almost 5% of the variability in negative affect (see Table 3). Younger individuals, women, and those with less education reported more negative affect. The social resource variables introduced in step 2, as a set, accounted for more than 8% additional variance in negative affect. Lower social integration and less perceived support from one's family and friends were all linked with greater negative affect. On step 3, marital status and the psychological resource variables collectively accounted for an additional 4.9% of variability in negative affect. Lower personal mastery and higher self-sufficiency were independently associated with greater negative affect; marital status and agency were not uniquely associated with negative affect. In contrast with the findings for positive affect, the interaction terms for

TABLE 3
Moderated regression analyses predicting psychological well-being

	Positive Affect			Negative Affect		
	β	s.e.	t	β	s.e.	t
Step 1:	$F(5,1585) = 10.02, p < .001$ $R^2 = .031$			$F(5,1585) = 16.45, p < .001$ $R^2 = .049$		
Age	.16	.00	6.33**	–.14	.00	–5.69**
Gender	–.06	.04	–2.59*	.11	.03	4.42**
Education	.01	.02	0.33	–.12	.01	–4.69**
Number of biological children	–.02	.01	–0.92	.01	.01	0.29
Number of nonbiological children	–.03	.02	–1.12	.05	.02	2.05
Step 2:	$\Delta F(3,1582) = 76.25, p < .001$ $\Delta R^2 = .122$			$\Delta F(3,1582) = 51.65, p < .001$ $\Delta R^2 = .085$		
Social integration	.22	.00	8.68**	–.21	.00	–8.10**
Perceived friend support	.12	.03	4.70**	–.09	.02	–3.28**
Perceived kin support	.14	.03	5.49**	–.09	.02	–3.54**
Step 3	$\Delta F(4,1578) = 33.73, p < .001$ $\Delta R^2 = .067$			$\Delta F(4,1578) = 23.66, p < .001$ $\Delta R^2 = .049$		
Marital status	–.06	.07	–2.37	.05	.05	1.81
Personal mastery	.25	.02	10.10**	–.21	.01	–8.45**
Agency	.04	.03	1.86	–.01	.02	–0.53
Self-sufficiency	–.05	.03	–2.22	.09	.02	3.66**
Step 4:	$\Delta F(3,1575) < 1, p > .69$ $\Delta R^2 = .001$			$\Delta F(3,1575) = 8.51, p < .001$ $\Delta R^2 = .013$		
Marital status × personal mastery	.02	.05	0.94	–.10	.04	–4.05**
Marital status × agency	–.01	.09	–0.58	.02	.07	0.66
Marital status × self-sufficiency	–.02	.11	–1.02	–.08	.09	–3.20**

Note. * $p < .01$; *** $p < .001$. Higher scores = being older, female, better educated; having more biological and nonbiological children; being never-married; scoring higher the psychological and social resources and positive and negative affect.

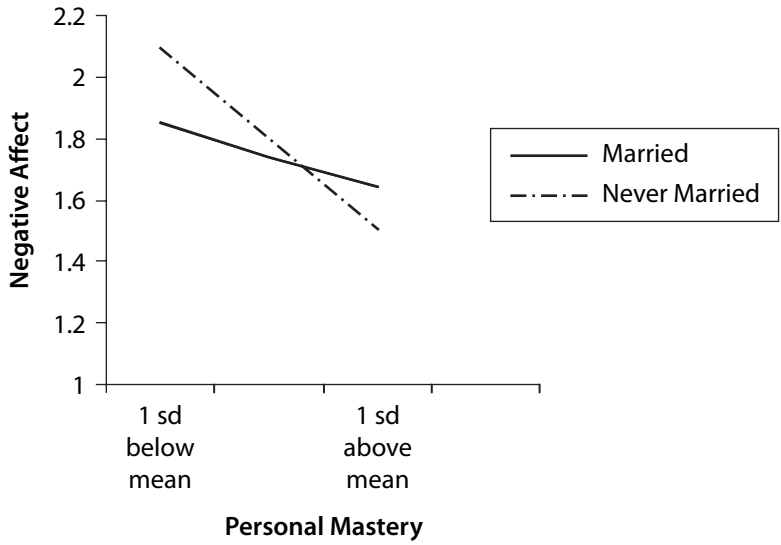
marital status and the psychological resource variables introduced on step 4 in the model for negative affect collectively yielded a significant improvement in the amount of explained variance ($\Delta R^2 = .013$).

Two specific interaction terms involving psychological resources achieved statistical significance: marital status by personal mastery and marital status by self-sufficiency. To explicate the operation of these interaction effects, we performed two follow-up analyses recommended by Baron and Kenny (1986). First, we performed separate regression analyses for never-married and married respondents to examine the relative strength of the relationship between the psychological resources and negative affect. We built a regression model for never-married respondents using sociodemographic variables (step 1), social resources (step 2), and psychological resources (step 3). After controlling for sociodemographic factors and social resources, we found that the psychological resource variables collectively explained 22.7% of the variance in negative affect for never-married respondents, $\Delta F(3,93) = 13.37$, $p < .001$. In this group, lower personal mastery ($\beta = -.47$, $p < .001$) and lower self-sufficiency ($\beta = -.26$, $p < .01$) were associated with greater negative affect.

The parallel model for married respondents indicated that 4.2% of unique variance could be attributed to the psychological resource variables, $\Delta F(3,1474) = 24.70$, $p < .001$. Lower personal mastery ($\beta = -.19$, $p < .001$) but higher self-sufficiency ($\beta = .11$, $p < .001$) were associated with greater negative affect for married respondents.

These follow-up analyses show that psychological resources explained more variance in negative affect for never-married adults than married adults. In addition, the strength of the relationship between personal mastery and negative affect was stronger for never-married respondents than married respondents and the direction of the relationship between self-sufficiency and negative affect was opposite for the two groups. To further explore these interactions, we performed a test of simple slopes for never-married versus married respondents in predicting negative affect, first using personal mastery and then self-sufficiency (as suggested by Baron & Kenny, 1986). Newsom et al. (2003) point out that a simple slope test involves assessing the relation between one of the predictors (in our case, personal mastery or self-sufficiency) and the criterion (negative affect) at a particular value of the other predictor (marital status), the moderator variable. If the interaction between the predictor and moderator is significant, these slopes will be nonparallel. Figures 1 and 2 present the simple slopes predicting negative affect for never-married and married respondents; regression lines are plotted at values +1 *SD* around the mean on personal mastery and self-sufficiency, respectively. The simple slope estimates for the two groups indicated that personal mastery was a stronger predictor of negative affect for never-married adults ($b = -.29$, $t = -9.04$, $p < .001$) than for married adults ($b = -.10$, $t = -11.22$, $p < .001$). As the non-parallel lines in Figure 1 indicate, at higher levels of personal mastery, never-married and married adults were fairly similar on negative affect. However, among those who scored lower on personal mastery, never-married adults were more

FIGURE 1
Plot of Simple Slopes for the Marital Status × Personal Mastery Interaction



Note: Personal mastery simple slopes: for never-married respondents, b = –.29, $p < .001$ and for married respondents, b = –.10, $p < .001$

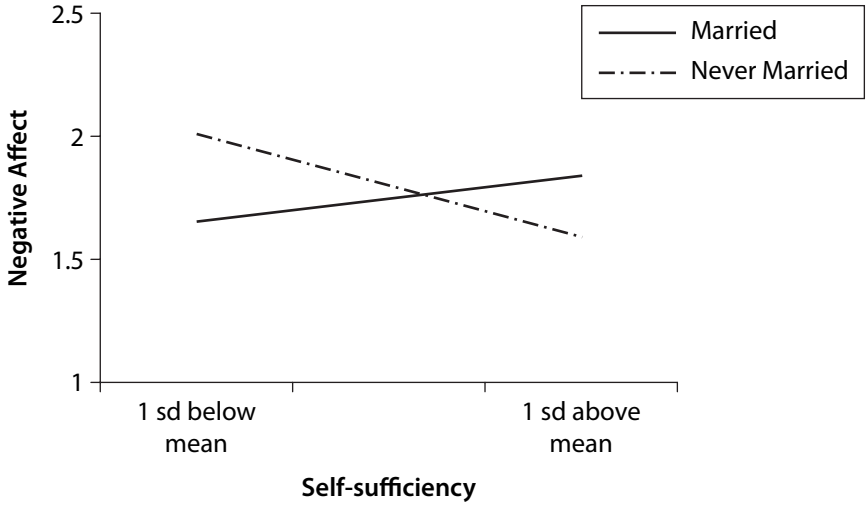
vulnerable to experiencing negative affect (i.e., they scored higher on negative affect) compared to their married counterparts.

In terms of self-sufficiency, whereas higher levels of self-sufficiency predicted lower negative affect among never-married adults (b= –.21, $t = –2.21$, $p < .05$), they predicted higher negative affect in married adults (b = .09, $t = 14.48$, $p < .001$). As the intersecting lines in Figure 2 indicate, at lower levels of self-sufficiency, never-married adults experienced more negative affect than did married respondents. At higher levels of self-sufficiency, however, the trend was reversed and never-married adults experienced lower negative affect than did married respondents.

Discussion

Our study focused first on the comparison of mean levels of psychological resources between never-married and married adults. Second, we examined the relative role of these psychological resources (net of the contribution of sociodemographic factors and social resources) in positive and negative affect across never-married and married individuals. We found no significant differences between the never-married and married respondents on the psychological resources we studied. As indicated earlier, few studies have systematically examined potential differences in psychological resources between never-married adults and married adults and the findings from this

FIGURE 2
Plot of Simple Slopes for the Marital Status × Self-Sufficiency Interaction



Note: Self-sufficiency simple slopes: for never-married respondents, b = –.21, $p < .05$ and for married respondents, b = .09, $p < .001$

small body of research are conflicting. Our findings are consistent with Turner et al.'s (1999) findings that reported little systematic difference between never-married adults and married adults and refute those of Cotten (1999) who found that never-married adults report lower levels of psychological resources than their married counterparts. One explanation for why our results are divergent with those of Cotten may be the large difference in age between the never-married respondents (mean age = 40 years) and married respondents (mean age = 52 years) in Cotten's study, which may have rendered the two groups less easily comparable, particularly given that our and others' (see Mroczek, 2001) results show that age is positively related to positive affect and negatively related to negative affect. In contrast, in our study the mean age for both groups was in the range of 52 and 54 years. Based on our results, we concur with De Paulo and Morris' (2005) caveat cautioning against broad generalizations about never-married persons being disadvantaged relative to their married peers at least within the domain of psychological resources.

Consistent with past research (e.g., Cotten, 1999; Turner & Marino, 1994; Wyke & Ford, 1992), however, our findings did indicate that never-married respondents reported lower levels of social integration and perceived less support from family members relative to married respondents, while levels of support from friends did not vary significantly between the two groups. Also consistent with past research (e.g., Cotten, 1999; Lucas & Dyrenforth, 2005; Mookherjee, 1997), we found lower levels of positive affect and higher levels of negative affect among never-married adults compared with their

married peers. It is important to note, however, that the magnitude of the significant mean differences was very small and, once the other variables were partialled out, marital status was not significantly related to positive or negative affect.

We also found that, after controlling for sociodemographic factors and social resources (both of which collectively accounted for a significant proportion of variance in positive and negative affect), psychological resources contributed significantly to positive and negative affect. Most interestingly, however, we found that, as hypothesized, the strength of the association between psychological resources and negative affect (but not positive affect) was significantly different for never-married versus married respondents. Follow-up analyses indicated that psychological resources contributed much more strongly (nearly four times as much) to the explained variance in negative affect for never-married respondents than for married respondents. More specifically, personal mastery and self-sufficiency played different roles in negative affect levels experienced by these two groups. Group-wise analyses showed that higher personal mastery was more strongly related to lower negative affect among never-married adults than among married adults. More importantly, these analyses showed that never-married adults with lower psychological mastery were more vulnerable to experiencing higher negative affect relative to their married peers with similarly low levels of personal mastery. It is feasible, therefore, that lower levels of personal mastery may make never-married adults especially vulnerable to poorer affective well-being while those with higher levels of personal mastery are likely to enjoy low negative affect levels similar to that of their married peers. This explanation is in keeping with Rook and Zettel's (2005) view that never-married adults may rely more heavily on other resources (such as personal mastery) to maintain or enhance their well-being because they have fewer close family ties. Thus, although higher personal mastery is associated with lower negative affect in both groups, lower levels of personal mastery appear to be more critical in the case of never-married adults by making them more vulnerable to experiencing higher levels of negative affect. Our findings also extend the preliminary findings reported by Cotten (1999), who found in separate analyses performed with married and never-married participants that the relationship between personal mastery and psychological well-being appeared to be stronger in the latter group.

We also found that the psychological resource of self-sufficiency played markedly different roles in the negative affect of never-married versus married adults. Whereas higher self-sufficiency was associated with lower negative affect among never-married respondents, for married respondents, higher self-sufficiency was linked to greater negative affect. Because never-married respondents with higher self-sufficiency experienced lower negative affect, self-sufficiency can be viewed as a protective factor in the affective well-being of never-married adults. In contrast, among married participants we found the reverse trend wherein those with higher self-sufficiency reported more negative affect. In other words, we can conclude that higher

self-sufficiency appears to play a detrimental role in the affective well-being of married adults. One explanation for these findings may be that self-sufficiency potentially undermines the interdependence between spouses. The development of interdependence within marriage – rather than a focus on personal autonomy or personal self-fulfillment – has been described as an important component of long-lasting marriages (e.g., Kovacs, 1983; Szinovacz, 1984). Greater interdependence also has been linked to stronger and more intimate marriages (Gilford, 1986; Robinson & Blanton, 1993) whereas lower interdependence in married couples has been identified as a prospective risk factor for marital dissolution (Kurdek, 1993). Thus, lower self-sufficiency may facilitate the development of greater interdependence in marriage which, in turn, has been linked to better psychological well-being in married adults (Meegan & Goedereis, 2006). It could be expected, then, that to the extent that greater self-sufficiency represents lower interdependence in their marital relationship, greater self-sufficiency among married individuals would be associated with greater negative affect.

Our study advances current understanding about the role of psychological resources in the affective well-being of never-married adults compared to married adults. It is important to point out, however, that our conclusions are based on cross-sectional data that preclude any causal interpretations of relationships among variables. Moreover, the MIDUS I participants selected to participate in the survey after initial random selection; thus, the operation of possible selection effects do not allow us to draw causal inferences based on our results. Our sample also included a smaller proportion of never-married adults than married participants. However, our use of weighted-effects coding and a moderated regression approach provide robust between-group comparisons (Newsom et al., 2003) and our use of a national probability-based sample of adults permits us to generalize our findings to the larger population of never-married and married adults residing in the United States.

To conclude, our study contributes new information about potential differences in the lives of never-married adults relative to their married peers. We found that never-married adults, for the most part, have similar levels of psychological resources relative to married adults; however, psychological resources appear to contribute differentially to the psychological well-being of these two groups net of social resource differences between them. Specifically, among never-married adults, higher levels of personal mastery and self-sufficiency are associated with significantly lower levels of negative affect. To the extent that these psychological resources can be enhanced, it would be useful to develop materials and workshops that are designed to boost these resources for never-married adults who score lower on personal mastery and/or self-sufficiency. This would be valuable especially in light of the tendency for never-married adults to feel less socially integrated and to perceive family members to be less supportive. Higher levels of personal mastery and self-sufficiency could then serve to compensate for the lower levels of social resources among never-married adults.

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