Relationship Satisfaction Instability and Depression

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Abstract

In this study, we explored whether the degree of temporal instability in relationship satisfaction might add to our understanding of the well-documented association between relationship quality and depression. We hypothesized that greater relationship satisfaction instability would be associated with higher depressive symptoms, controlling for mean satisfaction levels. We conducted 12 weekly assessments of relationship satisfaction and depressive symptoms in a sample of 131 cohabiting and married women, and used intraindividual standard deviations of scores over the 12 weeks as an index of instability. Results indicated that, as hypothesized, relationship satisfaction instability predicted variance in depressive symptoms beyond that predicted by mean satisfaction; women whose weekly relationship satisfaction fluctuated more widely tended to have higher depressive symptoms. In comparison, temporal instability in depressive symptoms did not predict variance in relationship satisfaction beyond that predicted by mean depressive symptoms. Prospective analyses tentatively suggested that satisfaction instability may precede rather than follow elevated depressive symptoms. Results suggest the utility of assessing relationship satisfaction instability in future studies exploring links between marital quality and depression.

Keywords

marital quality; depression; relationship satisfaction

Poor marital functioning is associated with the onset, course, and treatment of depression (reviewed by Whisman & Kaiser, 2008). According to the marital discord model of depression (Beach, Sandeen, & O'Leary, 1990), relationship distress increases the risk for depression by increasing stress and decreasing support and coping. In support of this perspective, poorer baseline marital quality predicts increases in depressive symptoms at follow-up (e.g., Beach & O'Leary, 1993; Beach, Katz, Kim, & Brody, 2003; Fincham, Beach, Harold, & Osborne, 1997; Whisman & Uebelacker, 2009). In addition, changes in marital quality and changes in depressive symptoms covary within individuals; at times when an individual's relationship satisfaction is lower than usual that individual's depressive symptoms tend to be higher (e.g., Davila, Karney, Hall, & Bradbury, 2003; Karney, 2001; Whitton, Stanley, Markman, & Baucom, 2008).

It is possible that the influences of marital quality on depression may not be fully addressed by models that focus exclusively on the level of relationship quality at a particular time point. Rather, it may also be important to consider the degree of variability or instability in marital quality over time. Increasingly, intraindividual variability has been conceptualized and evaluated as an important individual difference variable across a wide variety of constructs including affect (e.g., Eid & Diener, 1999), self-esteem (e.g., Kernis, Cornell, Sun, Berry, & Harlow, 1993), and interpersonal behaviors (e.g., Moskowitz & Zuroff, 2004). The one study that has assessed temporal instability in relationship satisfaction over time revealed that greater instability was associated with lower commitment and higher breakup rates in newly formed dating relationships, beyond the effects of mean satisfaction level (Arriaga, 2001). This suggests that examining within-person variability may enrich our understanding of how relationship satisfaction relates to outcomes, including depression. Among adults in committed or married relationships, highly fluctuating satisfaction levels may be experienced as stressful, may impair a sense of emotional security in the relationship (Stanley et al., 2002), and may reduce relationship confidence, thereby raising risk for depression (Whitton, et al., 2007).

In this study, we began to explore the potential importance that relationship satisfaction instability may have in enhancing our understanding of the association between relationship functioning and depression. In a sample of cohabiting and married women who completed multiple assessments of relationship satisfaction and depressive symptoms over time, we evaluated the hypothesis that greater within-person variance in relationship satisfaction (i.e., instability) would be associated with higher depressive symptom levels, controlling for mean satisfaction. To assess specificity of effects, we also tested whether depressive symptom variability was associated with lower relationship satisfaction, although we did not expect it to be so. Because effects between marital quality and depression are generally thought to be bidirectional (e.g., Beach et al., 2003; Whisman & Uebelacker, 2009), we also explored prospective associations between relationship satisfaction instability and depressive symptoms.

Method

Participants and Procedure

Participants were drawn from a sample of 173 women in cohabiting or married heterosexual relationships that responded to Denver area newspaper and Internet advertisements for a 12-week web-based study of relationships and well-being. All interested persons visited the study website, which described the study and assessed eligibility (age > 18 years and current cohabitation with a partner or spouse). On a password-protected website, eligible participants completed online consent and, each week for 12 weeks, completed questionnaires about their relationships, behaviors, and feelings. At study completion, participants were debriefed by email and entered into a lottery for $250. For more information about the sample and procedure, approved by a university Institutional Review Board, see Whitton et al. (2008).

Because the primary variable of interest was relationship satisfaction instability, operationalized as the within-person variability in reported satisfaction during the 12-week study, we excluded 42 women who provided data at fewer than five time points due to concerns that estimates of within-person variability across fewer time points might be unreliable. Compared to the excluded women, the remaining 131 women were older ($p < .05$) and had lower mean depressive symptoms ($p < .001$) and higher mean relationship satisfaction ($p < .001$), reflecting differential dropout early in the study by younger, more depressed, and less satisfied women. The groups did not significantly differ on any other variables. Analyses re-run including women with fewer data points yielded highly similar

results. In the final sample (n = 131), the median number of data points completed was 11; 75% of women (n = 97) provided > 10 weeks of data and 26% (n = 34) provided data at all 12 weeks.

The average participant was 33.20 years old (SD = 8.5; *Range* = 22-59 years) and White (86.3% White, 3.1% Latino, 2.3% African-American, 3.1% Asian-American, 3.8% Multicultural, and 1.5% Native American). Thirty-seven percent of women were cohabiting and 63% were married. Fifteen women (12%) reported having a child. Mean relationship length was 8.24 years (SD = 7.39; *Range* = 5 months to 37 years). Median personal income was in the $30,000-39,000 range. The sample was highly educated (mean years of education = 17).

Measures

Relationship satisfaction was assessed with a 12-item scale designed for a daily diary study (McNulty & Karney, 2001). Scores reflect the mean of participants' ratings of satisfaction during the past week with 12 aspects of their relationship on a seven-point scale (1 = *Not at all Satisfied*; 7 = *Very Satisfied*). Internal consistency was excellent (mean α = .94, range = .91-.96).

Depressive symptoms were measured with a brief 10-item version of the Center for Epidemiological Studies Depression Scale (CESD; Radloff, 1977) developed for studies requiring frequent repeated measurement (Whitton et al., 2008). Scores represent summed ratings of how often each depressive symptom was experienced in the past week on a 4-point scale (0 = *rarely or none of the time*; 3 = *most or all of the time*). The 10-item scale, used in all analyses, correlated highly (r = .92) with the original 20-item CESD (given at Time 1 only) and had high internal consistency (mean α = .87, range = .82-.92).

Mean level of relationship satisfaction and depressive symptoms were computed by averaging scores across assessments, and instability was operationalized by computing intraindividual standard deviation scores, with higher scores reflecting greater instability.

Results

Descriptive statistics and correlations are presented in Table 1. On average, the women were quite satisfied with their relationships and had low symptom levels. However, at Time 1, 32 women (24%) scored ≥ 16 on the 20-item CESD (e.g., Derogatis, Lynn, & Maruish, 1999), a common cutoff for clinically significant depression. Consistent with hypotheses, relationship satisfaction instability was positively correlated with mean CESD scores. Relationship satisfaction instability was negatively correlated with mean satisfaction (i.e., women who showed greater variability in satisfaction were less satisfied across weeks), supporting the decision to control mean satisfaction in subsequent analyses. CESD instability correlated negatively with mean relationship satisfaction and positively with mean CESD (i.e., women showing more variability in depression were less satisfied and more depressed).

Next, mean CESD scores were simultaneously regressed onto mean level of relationship satisfaction and relationship satisfaction instability. The overall model was significant, R^2 = .22, F(2, 128) = 18.52, p < .001, and depressive symptoms were uniquely associated with mean relationship satisfaction level, B = -1.13, SE = .43, β = -.27, p < .01, and relationship satisfaction instability, B = 3.13, SE = 1.22, β = .26, p = .01. As hypothesized, controlling for mean satisfaction, satisfaction instability predicted an additional 4% of the variance in depressive symptoms. In a parallel analysis regressing mean relationship satisfaction on mean CESD and CESD instability, the overall model was significant, R^2 = .19, F(2, 128) = 15.38, p < .001, and relationship satisfaction was uniquely associated with mean CESD, B =

-.12, SE = .03, β = -.52, p < .001, but not with CESD instability, B = .06, SE = .05, β = .13, p = .22.

To explore the directionality of effects, we first assessed the association between relationship satisfaction instability across weeks and final CESD scores (for 85% of participants, this was from week 12, 4% from week 11, 2% from week 10, 2% from week 9, 5% from week 8, and 3% from week 6): the zero-order correlation was significant, r = .33, p < .001. Final CESD scores were then simultaneously regressed onto mean relationship satisfaction and satisfaction instability. In this model, relationship satisfaction instability had a marginally significant unique prospective association with final CESD score, B = 3.32, SE = 1.86, β = .19, p = .07. In contrast, in parallel analyses, although CESD instability had a significant zero-order correlation with final satisfaction, r = -.21, p = .02, it did not account for unique variance in final satisfaction when controlling for mean CESD, B = .12, SE = .07, β = .17, p =.11. Also, although week 1 CESD had a significant zero-order correlation with relationship satisfaction instability over the following weeks, r = .20, p = .02, it did not show a unique prospective association with satisfaction instability when controlling for week 1 satisfaction, B = .01, SE = .01, β = .06, p =.50.

Discussion

The present findings demonstrated that the degree of instability in women's satisfaction with their relationship was associated with the severity of their depressive symptoms. Women whose relationship satisfaction fluctuated more widely from week to week tended to have higher levels of depressive symptoms. Importantly, relationship satisfaction instability was incrementally associated with depressive symptom severity, accounting for unique variance in mean level of depressive symptoms beyond that accounted for by mean level of relationship satisfaction, a robust and well-established predictor of depression (for a review, see Whisman & Kaiser, 2008). With respect to the directionality of effects, relationship satisfaction instability across weeks was associated with final depressive symptom level; this association remained marginally significant when controlling for mean relationship satisfaction. In contrast, baseline depressive symptom level was not uniquely predictive of relationship satisfaction instability in the following weeks. This pattern of results is consistent with the perspective that relationship satisfaction instability may promote depressive symptoms and tentatively suggests that variability in satisfaction over time is not due to more severe depressive symptoms at study outset. Also of note, the finding that depressive symptom instability was not incrementally associated with relationship quality level, either cross-sectionally or prospectively, suggests that the effects of instability are specific to relationship satisfaction instability (i.e., instability on any construct does not always predict mean levels of another variable).

Taken together, these results support the perspective that examining fluctuations in relationship satisfaction over time may increase our understanding of how couple functioning influences depression. In clinical and research settings, assessing temporal stability in couple satisfaction may augment our understanding of individuals' emotional wellbeing. Although we were unable to evaluate possible mechanisms by which relationship satisfaction instability may increase depressive symptoms in this data set, widely fluctuating changes in satisfaction levels may be experienced as stressful, raising risk for depression. Previously observed links between relationship satisfaction instability and reduced relationship commitment and stability (Arriaga, 2001) suggest such fluctuations may also damage emotional security (Stanley et al., 2002) and confidence in the relationship, thereby promoting depressive symptoms (Whitton et al., 2007).

Limitations of the study include the use of a convenience sample of women who were predominantly White and highly educated. Findings may not generalize to men or to women with other ethnic or educational backgrounds. Second, because we assessed depressive symptoms and because women with the highest symptom levels in the larger study were lost to attrition, further study is needed before drawing conclusions regarding influences between relationship satisfaction instability and major depression. However, one-fourth of this sample reported initial symptom levels indicative of clinically significant depression, suggesting findings may be relevant to depressed women. Third, because other variables such as personality and attachment insecurity may contribute to both satisfaction instability and depression, future research should evaluate such variables as rival explanations for these results.

Despite these limitations, this study adds to our understanding of the links between relationship functioning and mental health by demonstrating that depressive symptoms are associated not only with mean relationship satisfaction levels, but also with the degree of within-person instability in satisfaction. We hope these results prompt future research to examine this association in more representative samples, test whether relationship satisfaction instability predicts onset of major depression, and explore potential mechanisms of this effect. Also, as this is one of only two studies of which we are aware that have examined relationship satisfaction instability as an individual difference variable, future research is needed to evaluate other individual and relationship predictors and outcomes of relationship instability.

Acknowledgments

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Table 1

Means, Standard Deviations, and Zero-order Correlations among Study Variables

Variable	M	SD	1	2	3
1. Mean Relationship Satisfaction	5.58	0.93			
2. Relationship Satisfaction Instability	0.60	0.33	−.63[**]		
3. Mean Depressive Symptoms	5.94	3.94	−.43[**]	.43[**]	
4. Depressive Symptom Instability	3.56	1.88	−.21[*]	.49[**]	.67[**]

Note. N = 131.

[*] p < .05.

[**] p < .01.