Partner support and marital satisfaction: Support amount, adequacy, provision, and solicitation

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Abstract

To compare the extent to which (a) amount versus adequacy of received support and (b) support provision versus solicitation behaviors predict marital satisfaction, married couples from the United States ($N = 275$) provided perceptions of received support and participated in 2 support transactions. Actor–partner interdependence modeling and structural equation modeling techniques were employed. Husbands' perceptions of support adequacy predicted marital satisfaction more than their perceptions of support amount, whereas the results were generally the opposite for wives. Husbands' provision and wives' solicitation behaviors predicted marital satisfaction. Results suggest the need to move beyond simple counts of support received to examining support adequacy—and the various behaviors and roles involved in supportive transactions—to enhance theories of support and relationship functioning.

A growing body of evidence demonstrates the importance of intimate partner support for relationship satisfaction (e.g., Cutrona, Suhr, & MacFarlane, 1990; Kurdek, 2005; Pasch & Bradbury, 1998; Sarason, Sarason, & Pierce, 1994). Spouses reporting greater partner support are more satisfied with their marriages than those reporting less support (e.g., Acitelli & Antonucci, 1994; Katz, Beach, & Anderson, 1996), and spouses often identify a lack of partner support as a major reason for relationship dissatisfaction and dissolution (e.g., Baxter, 1986). In addition, there have been efforts to examine how various support components influence relational outcomes and individual health. There is increasing convergence on the importance of the distinction between the amount of supportive acts

received and the adequacy[1] of that support. Data demonstrate that recipients do not always interpret support as helpful (Gardner & Cutrona, 2004), and that support adequacy contributes to individual and dyadic outcomes (e.g., marital satisfaction and physical health; Frazier, Tix, & Barnett, 2003). Researchers also routinely distinguish between received support—the amount of support a person perceives receiving—and observed support—the amount of support a person receives based on an observed or objective index (e.g., a behavioral coding task). In the present study, we examined these two dimensions—(a) spousal perceptions of the amount and adequacy of support received and (b) behavioral observations of support provision and support solicitation. Specifically, we examined the relative influences of these facets of partner support on husbands' and wives' marital satisfaction during a critical transitional stage in the developmental course of intimate relationships—the transition to marriage. Because more than one third of divorces occur among couples married less than 5 years (Cherlin, 1992), focusing on newly married couples allowed to study this period of high risk for dissolution. Moreover, researching established marriages would have limited the general applicability of our findings because couples who divorce in the early years of marriage are necessarily left out of those samples (Glenn, 1990).

We conceptualized the influences of the various support components on relational outcomes within a relationship-enhancement model (Cutrona, Russell, & Gardner, 2005), which suggests that partner support enhances physical and mental well-being through its influence on relationship satisfaction and stability. This model is uniquely relevant to the present study because it includes an examination of the combined influence of multiple facets of support. Specifically, the impact of partner support on marital satisfaction depends on both the behaviors one's partner exhibits during support transactions and an individual's perceptions of the support received. Supportive actions perceived as beneficial set in motion a series of emotional and cognitive events that strengthen the relationship and prevent relationship conflict, distress, and dissolution. In particular, support transactions lead to the modification of one's overall perception that partner support will be available when needed (i.e., perceived available support; Cutrona, 1996). Consequently, the impact of support on relationship functioning is not limited to the days and weeks directly surrounding a stressful event; rather, perceived availability of support influences attitudes, emotions, and behaviors throughout the longitudinal course of the relationship (Cutrona et al., 2005).

Perceptions of support received: Support amount versus support adequacy

Researchers are increasingly moving from examining dichotomous categorizations of the presence or absence of support and from simple counts of the amount of support received to investigating the adequacy of the support provided (e.g., Gardner & Cutrona, 2004). Because an individual may not always welcome partner support, one partner may believe he or she is providing a great deal of support, whereas the other partner may perceive receiving little support (Dehle, Larsen, & Landers, 2001; Frazier et al., 2003; Gardner & Cutrona, 2004; Manne et al., 2004). Consequently, supportive behaviors not perceived as such may not have the expected positive associations with marital outcomes. Findings also suggest that individuals have unique support needs and preferences for the amount of support they receive from their partners (e.g., Gardner & Cutrona, 2004), and that perceptions of the adequacy of partner support— rather than perceptions of the amount of support—promote marital satisfaction (Dehle

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1. Across different disciplines, researchers have investigated constructs related to support adequacy such as support effectiveness (which takes into account both the quantity and the quality of support attempts; e.g., Rini et al., 2006) and support satisfaction (defined as "the discrepancy between desired and experienced levels of support"; Xu & Burleson, 2001, p. 539). We have chosen to use the term support adequacy—and indeed generally (although not exclusively) to narrow the focus of our literature review to investigations of support adequacy. Our focus on support adequacy is consistent with the constructs employed by the authors of the original Support in Intimate Relationships Rating Scale (Dehle et al., 2001) and by the authors of its theoretical foundations (Cutrona & Russell, 1990).

et al., 2001). Indeed, not all support behaviors are equally desirable or viewed by the recipient as beneficial (Gardner & Cutrona, 2004), which may result in marital dissatisfaction.

Support amount and adequacy are important contributors to outcome variables such as individual health. For example, pregnant women who receive more effective partner support report lower levels of anxiety mid-pregnancy and reductions in anxiety from mid- to late-pregnancy (Rini, Dunkel-Schetter, Hobel, Glynn, & Sandman, 2006). When newlywed wives are more satisfied with the partner support they receive, they demonstrate smaller increases in negative affect and smaller changes in cortisol in response to marital conflict (Heffner, Kiecolt-Glaser, Loving, Glaser, & Malarkey, 2004). Moreover, both newlywed husbands and wives evidence lower blood pressure after marital conflict when satisfaction with support is higher. Given these findings, it seems reasonable to expect that partner support adequacy—when compared to support amount—would also differentially predict relationship functioning.

Assessing the components of support transactions: Support solicited, provided, and received

Any given support transaction can include the following elements: (a) support solicitation from the potential support recipient, (b) enacted support from the provider, and (c) recognition by the support recipient that the provider has enacted support behaviors (i.e., received support; Pierce, Sarason, Sarason, Joseph, & Henderson, 1996). Although the majority of the research examining components of support transactions has been focused on the benefits of receiving support (see previous section), researchers have found that both receiving and providing support can influence individual and relationship well-being. Therefore, examining all facets of a support transaction rather than focusing exclusively on received support is critical.

Specifically, researchers are beginning to compare the effects of support provided versus support received. In one study, participants completed a self-report questionnaire to assess their perceptions of the support they provided and the support they received across multiple relationships. Among women, perceptions of support provided to their partners positively affected subsequent health status more than receiving support, as indicated by fewer absences from work due to illness. In contrast, among men, receiving more support predicted fewer absences than providing more support (Väänänen, Buunk, Kivimäki, Pentti, & Vahtera, 2005). In a separate study, husbands' (but not wives') provision of "goal support" (defined in that study as support of the pursuit of personal goals) uniquely accounted for variations in marital satisfaction, after controlling for support received (Brunstein, Dangelmayer, & Schultheiss, 1996). Finally, wives tend to provide better support on days when their husbands experience greater stress, providing further justification for taking into account the entire context of a support transaction (Neff & Karney, 2005).

In contrast with the research examining support provision and support receipt, researchers have paid relatively little attention to the role of a third component of support transactions—support solicitation—in marital satisfaction. One possible explanation for this omission is that researchers have typically conceptualized the support provider as an active participant in a support transaction and viewed the person requesting or on the receiving end of the support as a passive recipient of that support (Väänänen et al., 2005). In a notable exception, Barbee, Rowatt, and Cunningham (1998) discussed the role of emotion in support solicitation behaviors, and suggested that emotion affects an individual's choice of support activation behaviors, defined as verbal or nonverbal tactics used to solicit partner support (e.g., asking for help, crying, sulking), as well as one's responses to his or her partner's support attempts. Though not termed support solicitation, Goldsmith (2000) demonstrated that the sequencing of acts affects the degree to which individuals view advice giving (one type of support provision) as solicited and, consequently, as appropriate or adequate.

Researchers have also collected observational data to examine the partner's role in a support transaction. Based on this research,

individuals reporting higher levels of marital satisfaction have partners who engage in more support provision (Cutrona & Suhr, 1994). Others have extended this research to examine support solicitation as well as support provision in marriage (e.g., $N = 32$ couples; Verhofstadt, Buysse, & Ickes, 2007). In a sample of 60 newlywed couples, Pasch and Bradbury (1998) found that both partner support provision and solicitation impacted marital satisfaction. Importantly, none of these studies directly compared the effects of support provision versus solicitation on marital satisfaction.

Sex differences in support received, provided, and solicited

Social support researchers have linked much of their work to the support gap hypothesis (e.g., Belle, 1982; Cutrona, 1996; Xu & Burleson, 2001), which posits that women receive less support from their spouses than do men, and that the support women receive is less helpful than the support they provide to their male partners. According to this perspective, men and women also have different styles of providing support, such that men are more likely to offer instrumental support, whereas women are more likely to provide emotional support.

Empirical support for the support gap hypothesis has been mixed and varies as a function of how one operationalizes the construct of support. For example, researchers have found evidence with regard to support adequacy (referred to as desired support in the relevant study) but not with regard to support amount (Xu & Burleson, 2001). Empirical support also varies depending on the methodology. Specifically, evidence in favor of the support gap hypothesis has been fairly strong and consistent via self-report measures of perceptions of support and weak or nonexistent when tested via observational data (Verhofstadt et al., 2007).

Overview of the present study

In the present study, we sought to compare the relative contributions of support amount, adequacy, provision, and solicitation to marital satisfaction in a sample of couples undergoing the transition to marriage. Our first aim was to examine the extent to which perceptions of support amount versus support adequacy influence husbands' and wives' marital satisfaction. In line with prior research (e.g., Frazier et al., 2003; Heffner et al., 2004; Kiecolt-Glaser & Newton, 2001), we expected spouses' perceptions of the adequacy of the support they received to be a significantly stronger predictor of their own marital satisfaction compared to their perceptions of the amount of support they received. We know of no prior research that speaks directly to the associations between perceptions of support amount versus adequacy and partner's marital satisfaction; nonetheless, we predicted that the pattern would be the same for within-spouse and cross-spouse paths, such that adequacy of the support a spouse received would more strongly predict his or her partner's marital satisfaction compared to the amount of support that spouse received.

Our second aim was to demonstrate the contribution of support solicitation behaviors to marital satisfaction and to examine the extent to which observed support provision versus support solicitation influenced husbands' and wives' marital satisfaction. Expanding upon the work of Väänänen and colleagues (2005), we hypothesized that sex would moderate the links between support provision versus solicitation and marital satisfaction. We expected the amount of support that wives provided, compared to the amount of support they solicited, to be a significantly stronger predictor of their own marital satisfaction and of their husbands' marital satisfaction. In contrast, for husbands, we expected the amount of support husbands solicited, compared to the amount of support they provided, to more strongly predict their own marital satisfaction and their wives' marital satisfaction. Finally, findings concerning sex differences among perceptions of support have been inconsistent, and existing data suggest a lack of sex differences in observations of support provision and support solicitation (Verhofstadt et al., 2007); therefore, we did not hypothesize (but did conduct post hoc tests to detect) any other sex differences.

Method

Participants

We analyzed two samples of newlywed couples (married 3–6 months in each sample) in the present study: Sample 1 ($n = 103$ couples) and Sample 2 ($n = 172$ couples). (We describe these samples in detail below.) Analyses relevant to Aim 1—comparing support amount versus support adequacy as predictors of marital satisfaction—included data collected via self-report (Support in Intimate Relationships Rating Scale [SIRRS]; Dehle et al., 2001). Only Sample 1 completed the SIRRS and thus we only included Sample 1 ($n = 103$ couples) in the analyses relevant to Aim 1. Analyses relevant to Aim 2—comparing support provision versus support solicitation as predictors of marital satisfaction—included data collected via behavioral observations (Social Support Interaction Coding System [SSICS]; Pasch, Harris, Sullivan, & Bradbury, 2002). A subsample of Sample 1 ($n = 62$ couples) and all of Sample 2 ($n = 172$ couples) completed the support transaction task and so we included all of these couples ($n = 235$ couples) in the analyses relevant to Aim 2.

Sample 1. Couples in the state of Iowa in the United States who applied for marriage licenses were sent letters inviting them to participate in a research project on marriage. Couples were eligible to participate if spouses were between the ages of 18 and 55, in their first marriages, living together, married less than 6 months, and reasonably fluent in English. We removed one couple's data once the husband revealed during the laboratory session that this was not the wife's first marriage. We removed data from another couple because we deemed the husband's responses unusable and invalid. Analyses relevant to perceptions of support included 103 couples. A subset of these couples ($n = 62$ couples) also completed the support transaction task and were included in analyses relevant to support provision versus solicitation. Couples who completed this task were younger (husbands: $t = 2.17$, $p = .04$; wives: $t = 2.56$, $p = .01$) and less likely to have cohabited premaritally, $\chi^2 = .26$, $p = .01$, compared to cou-

ples who did not compete this task. The groups did not but did not differ on any other demographics (i.e., race, religion, education, income, length of relationship).

The full sample of couples ($N = 103$) dated for an average of 42.0 months ($SD = 26.1$) prior to marriage. Most (76%) cohabited prior to marriage, and premarital cohabitation lasted an average of 21.1 months ($SD = 17.3$). Husbands averaged 26.4 ($SD = 4.7$) years of age, and their modal education level was 14 years. Wives averaged 25.0 ($SD = 4.3$) years of age, and their modal education level was also 14 years. Modal joint income ranged from US$35,000 to US$45,000. For 15% of the couples, at least one member of the couple identified himself or herself as a member of an ethnic minority group. (The proportion of non-Caucasian individuals in Iowa is 7%; U.S. Census Bureau.) None of the demographic variables significantly correlated with the key variables in this study.

Sample 2. Couples in Los Angeles, CA (in the United States) who applied for marriage licenses ($N = 3,606$) were sent letters inviting them to participate in a research project on marriage. Couples were eligible to participate if the spouses were between the ages of 18 and 35, in their first marriages, married less than 6 months, living together, had no children, were not currently expecting a child, were in good health, had at least a 10th-grade education, and could read and speak English. More than 637 couples contacted the laboratory, and 56% of those couples met all of the eligibility requirements. The first 172 who met criteria and kept their scheduled laboratory appointment comprise this sample. Husbands averaged 27.6 ($SD = 3.9$) years of age, 15.6 ($SD = 2.2$) years of education, and a gross annual income ranging from US$21,000 to US$30,000. Wives averaged 26.0 ($SD = 3.4$) years of age, 16.2 ($SD = 2.1$) years of education, and a gross annual income ranging from US$11,000 to US$20,000. Sixty-four percent identified themselves as Caucasian and 36% identified themselves as ethnic minorities. None of the demographic variables significantly correlated with the key variables in this study.

Procedures

We employed identical procedures across the two samples.[2] After confirming eligibility over the telephone, couples scheduled a laboratory session. All spouses completed a set of questionnaires including measures of marital satisfaction. Only couples in Sample 1 ($N = 103$ couples) completed the SIRRS and the Kansas Marital Satisfaction Scale (KMS; one of the three measures of marital satisfaction included in the present study; Schumm et al., 1986). A subset of couples in Sample 1 ($n = 62$ couples) and all couples in Sample 2 ($N = 172$ couples) engaged in two 10-min conversations. Prior to the conversations, we asked each spouse to identify an important personal characteristic, problem, or issue that he or she wanted to change, with the explicit restriction that the topic could not be a source of tension in the marriage. Common topics included losing weight, making a career change, improving family-of-origin relationships, being more assertive, dealing with stress, and being more organized. For the first discussion, we randomly selected one spouse to "talk about something you would like to change about yourself." Partners were instructed to "be involved in the discussion and respond in whatever way you wish." After a short break, spouses switched roles. Thus, each spouse served as the support solicitor (i.e., talking about a personal issue he or she wanted to change) and support provider (i.e., talking with his or her partner about a personal issue the partner wanted to change). Interactions were videotaped and later coded for support solicitors' and support providers' behaviors. Couples received US$100 in Sample 1 and US$75 in Sample 2.

Measures

Personal and relationship demographics. Spouses answered questions about their per-

sonal and relationship demographics. Specifically, they provided information about their ages, races, religion, education levels, gross income, whether they cohabited prior to marriage, and the length of their relationships prior to marriage.

SIRRS (Dehle et al., 2001). The SIRRS measures spousal perceptions of support amount from one's partner and support adequacy. It is a paper-and-pencil questionnaire that: (a) assesses support across a wide range of supportive behaviors, (b) focuses on support in intimate relationships, (c) emphasizes the perceived adequacy of that support, and (d) is anchored in behaviorally specific indicators assessed over a discrete time period. SIRRS items represent supportive behaviors including emotional support (e.g., providing reassurance, love, affection), informational support (e.g., providing information, advice), esteem support (i.e., validation or showing confidence in one's partner's abilities), instrumental or tangible support (i.e., providing direct or indirect assistance in solving the problem), and network support (i.e., encouraging one's partner to make use of social resources, such as family and friends; Cutrona & Russell, 1990).

Dehle and colleagues (2001) developed the SIRRS to capture perceptions of support rather than objective indices of support, and to further capitalize on this strength, we made two modifications to the SIRRS. First, rather than collecting daily measures of support frequency (as was proposed in the original SIRRS), we collected perceptions of support frequency over the prior month to generate a measure of global support perceptions. Second, in the original SIRRS, participants reported the specific number of supportive behaviors received from their partner, and the specific number of behaviors they would have preferred. Support adequacy was then calculated by computing difference scores. (Xu & Burleson, 2001, employed a similar approach.) In line with our interest in global perceptions of support adequacy, we simply asked participants whether they wished to have more, less, or the same amount of each

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2. Although data from Sample 1 have been published elsewhere (e.g., Brock & Lawrence, 2008; Ro & Lawrence, 2007), this is the first article to compare support amount versus adequacy and the only manuscript from this sample to include behavioral observation data from the support interaction task. Similarly, although data from Sample 2 have been published elsewhere (e.g., Lawrence, Nylen, & Cobb, 2007), this is the first article from Sample 2 to include behavioral observation data from the support interaction task.

supportive act.[3] Responses were then coded as either adequate or inadequate and summed. Factor analyses of the modified SIRRS in samples of dating and married couples strongly support the reliability and validity of this revised measure (see Barry, Bunde, Brock, & Lawrence, in press).

SSICS (Pasch et al., 2002). We used the SSICS to assess behaviors spouses exchanged during the support interaction task. Coders were predoctoral and doctoral psychology students who knew the topic of the discussion and the roles assigned to spouses but were blind to any identifying information about the couple. They coded support behaviors into four categories (positive, negative, neutral, and off-task), although we only analyzed positive and negative behaviors in the current study. Positive support behaviors included statements of instrumental support ("Would it help you with your diet if I bought more fruits and vegetables at the grocery store?"), emotional support ("I know that you can do this and I'll support you in any way I can"), and positive other support ("That's a great idea"). Negative support behaviors included comments such as "Stop whining. Just change what you want to change and move on." Coders also classified support solicitation behaviors into four categories (positive, negative, neutral, and off-task); again, we only analyzed positive and negative behaviors. Positive support solicitations included statements such as, "It would be very helpful if you could tell me what you would do in this situation." Negative support solicitations included statements such as, "Why can't you just tell me what to do?"

In Sample 1, we assigned codes for every 5-second block. In Sample 2, codes were assigned to each support provider's speech turn and to each support solicitor's speech turn. Proportions of positive provision, negative provision, positive solicitation, and negative solicitation codes were calculated for each sample by summing each spouse's total score for a given support category and then dividing that category by the total number of possible codes for the spouse (the number of 5-s blocks for Sample 1 and the number of speech turns for Sample 2). Thus, we computed proportional codes and converted them to z scores in both samples.

Observers independently coded the interactions with the SSICS and assessed interrater reliability by having a random selection of 20% of the interactions coded by a randomly selected second observer. Intraclass correlations revealed high levels of interrater reliability. In Sample 1, intraclass correlations ranged from .72 to .93 across the different codes, and in Sample 2, correlations ranged from .75 to .86. In both samples, for the interactions used to compute reliability, we randomly selected the summary scores of one of the observers for subsequent analyses.

Marital Adjustment Test (MAT; Locke & Wallace, 1959). The MAT is a widely used 15-item self-report measure assessing marital adjustment. MAT scores have a test–retest reliability of .75 over a 3-week interval (MacEwen & Barling, 1988) and a split-half reliability of .90 (Locke & Wallace, 1959), and they correlate with clinicians' judgments of marital discord (Crowther, 1985) and increase following marital therapy (e.g., Margolin & Weiss, 1978). Scores on the MAT can range from 2 to 158, with higher scores reflecting higher levels of marital adjustment.

Quality of Marriage Index (QMI; Norton, 1983). The QMI consists of six items measuring global perceptions of marital satisfaction. Spouses rate the extent to which they agree with evaluative statements about their marriage, and we summed scores to indicate global marital satisfaction. Alpha correlations (which provide an index of reliability) were .94 for husbands and .91 for wives in Sample

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3. In the present study, we operationalized inadequate support as an individual's desire for a different amount of support than the support he or she is currently receiving (based on the individual's perceptions). This operationalization is in accord with previous work on support adequacy, with the constructs employed by the authors of the original SIRRS (Dehle et al., 2001), and with the constructs employed by the authors of its theoretical foundations (Cutrona & Russell, 1990).

1 and .93 for husbands and .91 for wives in Sample 2.

KMS (Schumm et al., 1986). The KMS is a three-item self-report measure of global marital satisfaction. Spouses rate their satisfaction with their marriage, their spouse, and their relationship with their spouse on 7-point scales, yielding scores from 3 to 21. In Sample 1, alphas were .94 for husbands and .94 for wives.

Data analyses

We employed an actor–partner interdependence model (APIM) for mixed independent variables (Kenny, Kashy, & Cook, 2006) and tested our hypotheses using structural equation modeling techniques (SEM) and Mplus software (Muthén & Muthén, 2004) with maximum likelihood estimation. SEM allows one to model all variables simultaneously and to compare the relative magnitudes of different regression paths. We conducted two primary sets of analyses: (a) to compare support amount and adequacy as predictors of marital satisfaction and (b) to compare support provision and solicitation as predictors of marital satisfaction. To allow for comparisons of the relative magnitudes of regression coefficients, we converted observed predictor variables to z scores. The models included two latent outcome variables—husbands' and wives' marital satisfaction. In the first set of analyses, we modeled husbands' marital satisfaction as a latent variable, representing the shared variance of our three measures of satisfaction (husbands' KMS, QMI, and MAT scores). In the second set of analyses, we modeled husbands' marital satisfaction as a latent variable with two measures (husbands' QMI and MAT scores). Wives' marital satisfaction was modeled similarly. (The KMS was not available in Sample 2; therefore, we excluded the KMS from any analyses that included Sample 2.) The error variances of the latent variables were allowed to covary. The error variances of the three marital satisfaction measures were also allowed to covary across husbands and wives. (For example, the error term of husbands' MAT was allowed to covary with the error term of wives' MAT.)

We used several goodness-of-fit indices to assess the quality of our models, including chi-square statistics, the Tucker–Lewis index (TLI; Tucker & Lewis, 1973), the incremental fit index (IFI; Bollen, 1989), and the root mean square error of approximation (RMSEA; Steiger & Lind, 1980). Model fit was determined to be adequate if the chi-square value was nonsignificant at $p < .05$, TLI and IFI were greater than .95, and RMSEA was less than .08 (Hu & Bentler, 1999).

To test for significant differences between paths (e.g., between predictors of husbands' vs. wives' satisfaction, between support provision vs. support solicitation as predictors of satisfaction), we generated nested models by constraining paths (e.g., husbands' perceptions of support amount and support adequacy paths) to be equal and compared the constrained models with the baseline (unconstrained) models. Because constraining a single path to be equal to another leads to a gain of 1 *df,* the nested models allow for a chi-square test of the null hypothesis (i.e., that the paths are not significantly different).

For the analyses relevant to Aim 2, we sought to analyze data from both samples. To determine whether it was appropriate to collapse data across our two samples, we estimated a baseline model that included the data from each sample modeled as two groups with no equality constraints. The overall fit of this model was good, $\chi^2(30) = 32.015$, $p = .37$; TLI = 0.99, IFI = 0.99, RMSEA = 0.02. Next, we constrained the model to have full measurement invariance (i.e., we set the models for each data set to be equal) following the procedures Steenkamp and Baumgartner (1998) outlined. The overall fit of the constrained model was excellent, $\chi^2(36) = 34.134$, $p = .56$; TLI = 1.0, IFI = 1.0, RMSEA = 0.01. The nested chi-square value was not significant, $\chi^2(6) = 2.119$, *ns*, indicating that constraining the two groups to be equal did not significantly reduce model fit. Thus, we pooled the data from our two samples for all analyses relevant to Aim 2.

Results

In Table 1, we present the means and standard deviations for each index of support across the two measures. Husbands and wives did not differ on perceptions of support amount, but they did differ on perceptions of support adequacy such that husbands typically reported receiving more adequate support from their partners than their wives did. Husbands and wives did not differ on observed support behaviors.

In Table 2, we present the within-scale correlations among our measures. The SIRRS revealed small to moderate within-spouse correlations ($rs = .26$ and $.40$); spouses who reported receiving more support also reported receiving more adequate support. Interspousal correlations on the SIRRS were also small to moderate in size ($rs = .26$ and $.48$); husbands who perceived themselves as receiving more support had wives who reported receiving more support, and husbands who reported receiving more adequate support had wives who reported receiving more adequate support. Within-spouse correlations on the SSICS were small to moderate in magnitude (rs ranged from $.02$ to $.51$), and interspousal correlations were small (rs ranged from $-.03$ to $.22$). Spouses who exhibited more positive behaviors also exhibited fewer negative behaviors; this pattern was consistent across husbands and wives and across support provision and support solicitation roles. In sum, correlations across husbands' and wives' behaviors, across negative and positive behaviors, and across provision and solicitation behaviors were sufficiently high to suggest that these constructs are related but sufficiently distinct to warrant examining them separately rather than aggregating them.

The shaded portion of Table 2 comprises correlations between measures of support and marital satisfaction. Correlations with marital satisfaction were small to moderate for perceptions of support (rs ranged from $.22$ to $.54$) and observed supportive behaviors (rs ranged from $.00$ to $.41$). Thus, measures of support were related to but sufficiently distinct from measures of marital satisfaction to warrant an analysis of the predictive paths.

In the box within Table 2, we present the correlations across the two measures of partner support. All of these correlations were small in size and nonsignificant, and most were smaller than the within-measure correlations. This pattern of correlations was similar for husbands and wives. These findings indicate that the other indices do not explain a considerable amount of variability in each index of support. In sum, consistent with our operational definitions of our support predictors, the two measures of partner support are likely capturing very different constructs.

Perceptions of support received: Support amount versus support adequacy

We examined perceptions of two dimensions of support received—support amount and support adequacy—as predictors of concurrent marital satisfaction. Marital satisfaction was regressed onto the four predictors: (a) amount of support husbands received, (b) adequacy of support husbands received, (c) amount of support wives received, and (d) adequacy of support wives received. The overall fit of the model was good, $\chi^2(23) = 25.34$, $p = .33$; TLI $= 0.99$, IFI $= 1$, RMSEA $= 0.03$, indicating that it was appropriate to examine the path estimates. The observed variables were reliable indicators of the latent variables—husbands' and wives' marital satisfaction—with R^2 values ranging from $.60$ to $.91$. The model explained a significant amount of variance in husbands' and wives' marital satisfaction, with R^2 values of $.29$ and $.54$, respectively. See Figure 1 for a visual depiction of the path estimates.

Within-spouse paths (i.e., actor paths). The adequacy of the support husbands received significantly predicted their own marital satisfaction ($\gamma = .44$, $p < .01$), whereas the amount of support they received did not ($\gamma = .03$, *ns*). When we constrained the regression coefficients of husbands' support amount and adequacy on husbands' marital satisfaction to be equal, the constrained model produced a significant decrease in model fit ($p = .01$). Thus, the adequacy of the support husbands received more strongly predicted their own marital satisfaction compared to the amount of support they received.

Table 1. *Descriptive statistics for the indices of partner support for husbands and wives*

		Husbands		Wives		

Perceived support: Support in Intimate Relationships Rating Scale (SIRRS)

Variable	Possible range	*M*	*SD*	*M*	*SD*	*t*(102)
Overall support amount	0–192	111.60	3.54	113.5	31.68	0.73
Emotional	0–72	42.05	11.35	42.00	12.32	0.04
Tangible	0–44	24.18	9.00	25.59	9.39	1.39
Esteem	0–32	19.38	6.69	20.05	6.89	1.11
Informational	0–28	17.43	5.47	17.15	5.34	0.41
Network	0–16	8.55	3.82	8.73	3.91	0.61
Overall support adequacy	0–48	39.62	9.80	33.30	12.58	4.63***
Emotional	0–18	14.70	3.94	12.18	5.00	4.77***
Tangible	0–11	9.43	2.56	7.85	3.49	3.97***
Esteem	0–8	6.56	2.09	5.46	2.71	3.57***
Informational	0–7	5.43	1.98	5.04	2.02	1.72
Network	0–4	3.45	0.90	2.80	1.44	3.68***

Observed support: Social Support Interaction Coding System (SSICS)

Variable	Possible range	*M*	*SD*	*M*	*SD*	*t*(234)
Support provision						
Total positive	0–60	19.58	7.76	18.23	8.13	0.80
Instrumental	0–60	5.45	4.95	4.64	4.77	0.88
Emotional	0–60	2.17	4.29	2.61	3.54	0.55
Positive other	0–60	20.33	8.57	21.48	8.87	−1.68
Negative	0–60	3.12	5.67	3.17	5.84	−.19
Support solicitation						
Negative	0–60	2.55	5.10	3.12	5.24	−1.50
Positive	0–60	20.33	8.57	21.48	8.87	−1.68

Measures of marital satisfaction

Variable	Possible range	*M*	*SD*	*M*	*SD*	*t*(274)
Marital Adjustment Test (MAT)	2–158	125.27	18.04	127.75	17.32	−2.34*
Quality of Marriage Index (QMI)	6–43	41.31	4.49	41.24	4.52	0.20
Kansas Marital Satisfaction (KMS)	3–21	19.30	2.27	19.19	2.17	1.60

Note. Descriptives for the SIRRS and KMS are based on Sample 1 only, as Sample 2 was not administered these measures. Descriptives for all other indices are aggregated across Samples 1 and 2.
*$p < .05$. ***$p < .001$ (two-tailed).

Both the amount of support wives received ($\gamma = .49$, $p < .01$) and the adequacy of the support wives received ($\gamma = .16$, $p < .05$) predicted their own marital satisfaction. When we constrained these paths to be equal, the constrained model produced a significant decrease in model fit ($p = .02$). Thus, the amount of support wives received more strongly predicted their own marital satisfaction compared to the adequacy of the support they received.
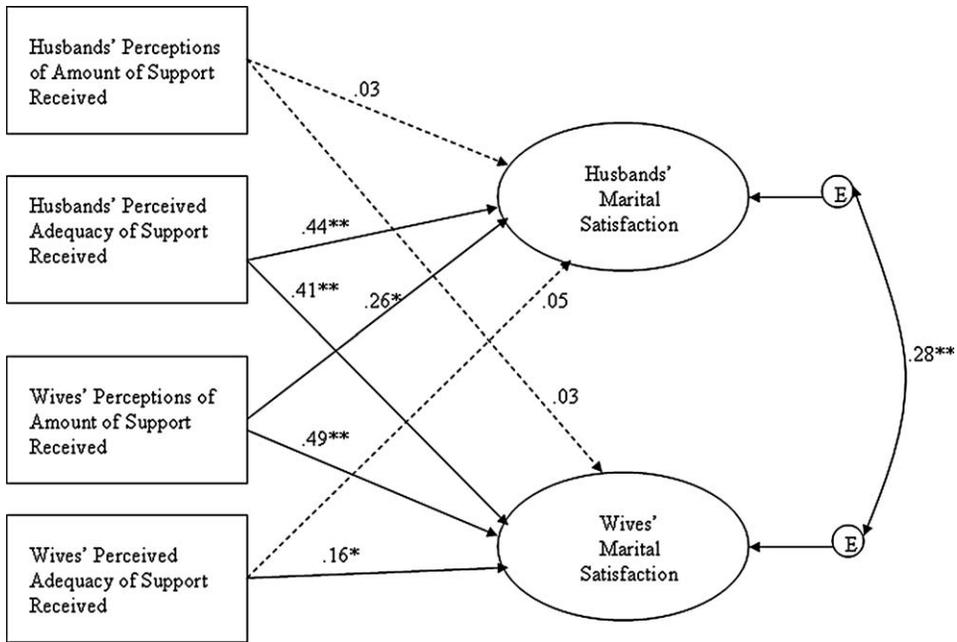
Cross-spouse paths (i.e., partner paths). The adequacy of the support husbands received significantly predicted wives' marital satisfaction ($\gamma = .41$, $p < .01$), whereas the amount of support husbands received did not ($\gamma = .03$,

Table 2. *Within-spouse and between-spouse correlations among indices of support and marital satisfaction*

Husbands	Support in Intimate Relationships Rating Scale (SIRRS)		Social Support Interaction Coding System (SSICS)				Marital Satisfaction		
	Support amount	Support adequacy	Positive support provision	Negative support provision	Positive support solicitation	Negative support solicitation	MAT	QMI	KMS
Perceived support amount	**.48****	.40**	.11	−.07	−.05	−.24	.48**	.53**	.54**
Perceived support adequacy	.26**	**.26****	−.09	.17	.01	−.10	.28**	.44**	.39**
Positive support provision	−.08	.00	−**.22**	−.51**	.25	−.11	−.11	.02	−.03
Negative support provision	.10	.11	−.38**	**.13**	−.33**	.26*	.08	−.02	−.07
Positive support solicitation	.03	−.12	.05	−.34**	−**.09**	−.53**	−.38**	−.27*	−.41**
Negative support solicitation	.03	.13	.02	.42**	−.49**	−**.03**	−.04	−.11	.01
Marital Adjustment Test (MAT)	.33**	.30**	.14	−.22	.00	−.14	**.50****	.72**	.67**
Quality of Marriage Index (QMI)	.23*	.47**	.04	−.20	.06	−.15	.76**	**.68****	.84**
Kansas Marital Satisfaction (KMS)	.22*	.43**	.06	−.15	−.07	−.16	.71**	.85**	**.44****

Notes. Wives' correlations are above the diagonal; husbands' correlations are below diagonal; between-spouse correlations are on the diagonal and in bold. Correlations between measures of support and marital satisfaction are shaded. Correlations between the two measures of support are presented in the boxes. Correlations (a) between the SIRRS and the SSICS indices and (b) between the KMS and other indices were only calculated for Sample 1 because the KMS and the SIRRS were not administered to Sample 2.
*p < .05. **p < .01 (two-tailed).

Figure 1. Husbands' and wives' perceptions of amount and adequacy of partner support received and marital satisfaction.
Note. Solid lines represent significant paths. Dashed lines represent nonsignificant path.
*p < .05. **p < .01.

ns). The constrained model produced a significant decrease in model fit (*p* = .006), indicating that the adequacy of the support husbands received more strongly predicted wives' satisfaction compared to the amount of support husbands received.

In contrast, the amount of support wives received significantly predicted husbands' marital satisfaction (γ = .26, *p* < .01), whereas the adequacy of the support wives received did not (γ = .05, *ns*). The constrained model did not produce a significant decrease in model fit (*p* = .21), indicating that the amount versus adequacy of support wives received were similarly predictive (or nonsignificantly different in their predictive power) of husbands' marital satisfaction.

Observations of support transactions: Support provision versus support solicitation

We examined husbands' and wives' support provision and solicitation behaviors as predictors of marital satisfaction. Husbands' and

wives' marital satisfaction were regressed onto the eight predictors: (a) husbands' positive support provision, (b) husbands' negative support provision, (c) husbands' positive support solicitation, (d) husbands' negative support solicitation, (e) wives' positive support provision, (f) wives' negative support provision, (g) wives' positive support solicitation, and (h) wives' negative support solicitation. The observed variables were reliable indicators of the latent variables (i.e., husbands' and wives' marital satisfaction). The overall fit of the model was excellent, $\chi^2(37) = 22.10, p = .11$; TLI = 0.99, IFI = 0.97, RMSEA = 0.04, suggesting that it was appropriate to interpret the path estimates. The model explained significant variance in both husbands' and wives' marital satisfaction, with R^2 values of .18 and .20, respectively. See Figure 2 for a visual depiction of the significant path estimates.

Husbands' positive support provision significantly predicted husbands' (γ = .26, *p* < .01) and wives' (γ = .31, *p* < .01) marital satisfaction. Husbands who provided more
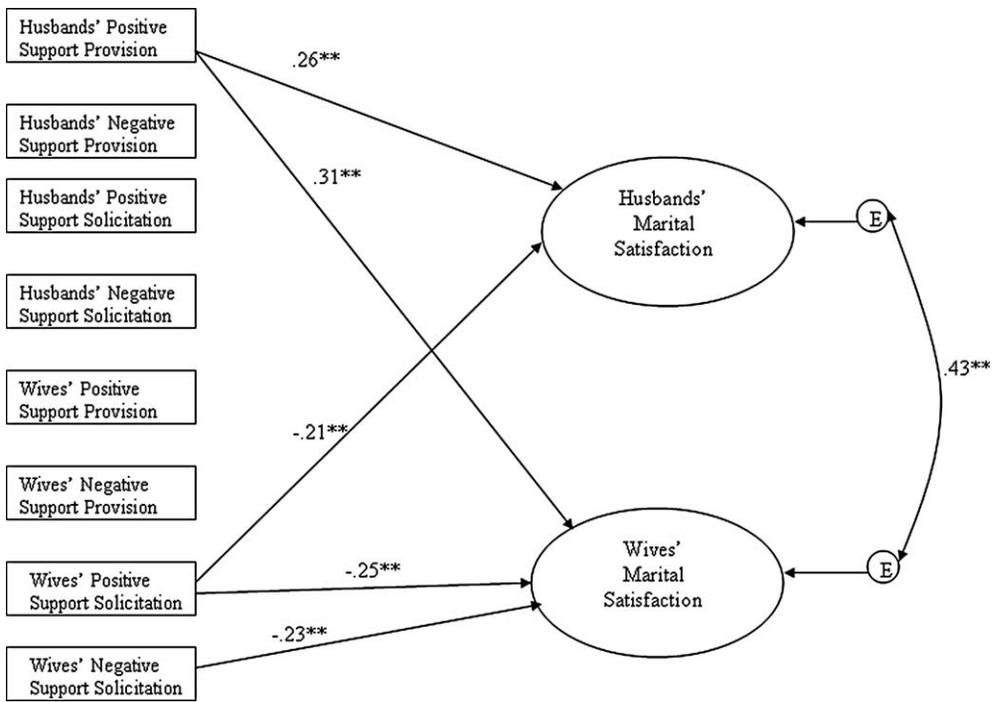
Figure 2. Husbands' and wives' observed partner support provision and solicitation behaviors and marital satisfaction.

Note. For clarity of presentation, we have only presented significant paths in this figure.
** $p < .01$.

positive support to their wives were more satisfied with their marriages and had wives who were more satisfied. Wives' positive support solicitation significantly predicted husbands' marital satisfaction ($\gamma = -.21, p < .01$). Surprisingly, husbands whose wives solicited support using more positive behaviors also reported lower levels of marital satisfaction. Wives' positive ($\gamma = -.25, p < .01$) and negative ($\gamma = -.23, p < .01$) support solicitation behaviors significantly predicted wives' marital satisfaction. Wives who solicited support using more positive or more negative behaviors also reported lower levels of satisfaction. All other paths were nonsignificant.

We specified a series of nested models to examine the relative magnitudes of the regression coefficients of support provision versus solicitation on marital satisfaction. Regression paths were constrained to equality to determine the model with the most constraints that did not significantly reduce model fit. Each constrained model was tested against the base-

line (unconstrained) model. In the most constrained model, we set the actor and partner effects of positive support provision to equally predict husbands' and wives' marital satisfaction and set the regression paths of all other predictors to be equal. This constrained model did not produce a significant decrease in model fit ($p = .52$). When we added any additional constraints (i.e., constraining positive support provision to be equal to any other predictors), model fit was significantly reduced. This pattern of results suggests that positive support provision (regardless of who is providing or receiving it) is a stronger predictor of marital satisfaction than negative support provision, positive support solicitation, or negative support solicitation. There were no significant differences among the magnitudes of the effects of negative support provision, positive support solicitation, and negative support solicitation on husbands' or wives' marital satisfaction.

These results may seem confusing because the baseline SEM model (see Figure 2) generated

significant effects for husbands' positive sup-
port provision but not for wives' positive sup-
port provision, and for wives' positive and
negative support solicitation but not for hus-
bands' positive or negative support solicita-
tion. An examination of the confidence
intervals associated with the regression coeffi-
cients sheds light on these findings. For exam-
ple, the regression estimate of husbands'
marital satisfaction on husbands' positive sup-
port provision was significant, whereas the
regression estimate of husbands' marital satis-
faction on wives' positive support provision
was not. Nevertheless, the confidence intervals
for the unstandardized regression coefficients
for husbands' marital satisfaction on husbands'
positive support provision and husbands' mar-
ital satisfaction on wives' positive support pro-
vision overlap. Therefore, we cannot conclude
that the relative magnitudes of these two paths
significantly differ from one another. In sum,
the current study did not demonstrate sex dif-
ferences in observed support behaviors, though
positive support provision does appear to have
a greater impact on marital satisfaction com-
pared to other supportive behaviors.

Discussion

Summary and interpretation of results

The first goal of the present study was to exam-
ine the extent to which support amount versus
adequacy influences husbands' and wives' mar-
ital satisfaction. Husbands' perceptions of the
adequacy of support received were far more
influential than their perceptions of the amount
of support received. Indeed, husbands' percep-
tions of the amount of support they received did
not even predict marital satisfaction. In contrast,
we found a markedly different pattern for wives'
perceptions of support. Wives' perceptions of
the amount of support received and the ade-
quacy of that support similarly predicted hus-
bands' marital satisfaction. Moreover, wives'
perceptions of amount of support more strongly
predicted wives' marital satisfaction compared
to wives' perceived adequacy of that support.
These findings support existing conceptual and
emerging empirical arguments that partner sup-
port adequacy may matter more than support

amount in predicting marital satisfaction (e.g.,
Dehle et al., 2001; Gardner & Cutrona, 2004).
Our findings expand upon this work by demon-
strating that for husbands, perceptions of sup-
port adequacy more strongly predict marital
satisfaction than perceptions of support amount,
whereas this difference does not exist for wives.
That is, it seems important for wives to provide
adequate support to their husbands, whereas for
husbands, it seems critical that they make efforts
to provide support in general rather than that the
support they provide be adequate. Alternatively,
it is possible that other factors such as social
desirability or individual differences (e.g., per-
sonality variables) influence self-reports of sup-
port adequacy (and thus these apparent sex
differences). That is, self-reports are subjective
and may be of limited utility.

To address this possible limitation, we also
examined behavioral observations of multiple
components of support transactions. More
generally, our second goal was to demonstrate
the important contribution of support solicita-
tion behaviors to marital satisfaction and to
address the extent to which support provision
versus support solicitation influences hus-
bands' and wives' marital satisfaction.
Whereas husbands' support provision (but
not their support solicitation) predicted hus-
bands' and wives' marital satisfaction, wives'
support solicitation (but not their support pro-
vision) predicted both partners' marital satis-
faction. The prevalence and proportion of
positive and negative behaviors husbands and
wives exhibited did not differ during these
tasks; therefore, the different impacts of hus-
bands' and wives' behaviors are not a function
of husbands demonstrating fewer supportive
behaviors during these interactions than wives.
Importantly, we did not find significant differ-
ences between husbands' and wives' predic-
tive paths, so it seems premature to interpret
any sex differences in this model prior to rep-
lication with a larger sample. Indeed, the lack
of significant sex differences is consistent with
a recently published study that found sex dif-
ferences in perceptions of received support but
not in behavioral observations of support ($N =
32$ couples; Verhofstadt et al., 2007).

We found the relative influences of positive
versus negative support behaviors at times

surprising and counterintuitive. First, positive support provision was a significantly stronger predictor of marital satisfaction compared to negative support provision, positive support solicitation, and negative support solicitation. Second, wives' positive support solicitation was significantly negatively associated with husbands' and wives' marital satisfaction. Intuitively, we would expect more positive behaviors and fewer negative behaviors to be associated with greater marital satisfaction. Until we replicate these findings, we suggest that they be interpreted with caution. Nevertheless, we offer some tentative explanations. One possible explanation is that wives who more actively solicit support from their husbands, regardless of whether the method of solicitation is positive or negative, may already perceive their husbands as not providing them with enough support. That is, there may be an interaction between (a) wives' perceived adequacy of support received and (b) the extent to which wives believe they have to repeatedly ask for the support they want in order to receive it that accounts for their lower levels of marital satisfaction. Alternatively, perhaps wives who are relatively less satisfied with their marriages are less satisfied because they have to ask for the support they want rather than having husbands who spontaneously provide that support or who provide that support when it is most critical (e.g., in times of greater stress). Finally, given our cross-sectional design, researchers should be cautious about making assumptions regarding directionality of effects. It is possible that wives' marital satisfaction predicts their support solicitation behaviors rather than solicitation behaviors predicting marital satisfaction. That is, wives who are less maritally satisfied may exhibit greater attempts to solicit support from their husbands because they are more distressed in their marriages. Although Pasch et al. (2002) designed the support transaction task to tap into personal (i.e., nonmarital) problems, it is possible that the nature of the task still taps into marital problems indirectly and therefore elicits more solicitation behaviors from wives who perceive themselves as having more marital difficulties.

The two partner support measures were not interchangeable and yielded very different results with regard to predicting marital satisfaction. On one hand, this finding seems intuitive given that we employed different methods (paper-and-pencil questionnaire vs. objectively coded behavioral task) and, we would argue, we assessed different aspects of partner support (support amount and adequacy vs. support provision and solicitation). Nonetheless, comparisons of measures of negative behaviors expressed during problem-solving discussions demonstrate similar findings across self-report questionnaires and behavioral observations (Rogge & Bradbury, 1999). To help explain the weak relation between enacted support and received support, and the differential implications of each support component for marital satisfaction, we return to the relationship-enhancement model (Cutrona et al., 2005). This model suggests that support contributes to trust in a relationship, which in turn enhances relationship satisfaction. The critical component of support that enhances trust is the perceived availability of support (i.e., believing that one's partner can be counted on for support in times of need; Cutrona, 1996). An individual's global perceptions of support availability develop from a series of support transactions (Pierce et al., 1996). As previously discussed, support transactions include support solicitation, support provision or enacted support, and received support. Although spouses may enact supportive behaviors, the intended support recipient may not notice the behavior or recognize the behavior as supportive (Pierce et al., 1996). Therefore, enacted support and received support will not necessarily occur at the same frequency. Further, if the intended support recipient does not actually receive the support provided, the support transaction is incomplete. Individuals must receive the support in order to enhance one's global perception of support availability and, subsequently, one's trust and relationship satisfaction. In sum, the role of the support recipient and the importance of the completion of supportive transactions may account for the weak relations between enacted support (i.e., observed support behaviors) and received support (i.e., self-reported frequency and adequacy of support) in the present study.

Strengths, limitations, and implications of the present study

Several factors strengthen our confidence in the findings of the present study. First, we employed a multimethod design, using both self-report questionnaires and behavioral observation methods. Second, studying a newlywed sample allowed us to examine support processes earlier in the marital relationship compared to most prior studies. Studies based on established marriages necessarily do not include divorced couples in their samples (Glenn, 1990). Consequently, findings based on established marriages may not generalize to the large percentage of couples who divorce in the early years of marriage. Third, the sample size for our analyses of observational data was relatively large ($N = 275$ couples) compared to prior studies of observational support data on couples (e.g., $N = 60$ couples, Pasch & Bradbury, 1998; $N = 32$ couples, Verhofstadt et al., 2007). Fourth, we analyzed husbands' and wives' data using APIM and SEM techniques, which allowed us to control for interdependence and to examine both within- and cross-spouse associations.

There are also several limitations to consider when interpreting our results. First, our design speaks to correlations among the variables and hence is susceptible to criticisms that can be directed at nonexperimental research. Second, the demographics of our samples (e.g., heterosexual, married couples who were predominantly Caucasian) may limit the general applicability of these findings. We recommend that researchers replicate our findings across other nonprobability samples with differing characteristics (e.g., ethnic minorities, nonmarried couples, same-sex couples).[4] Moreover, the associations we found between specific components of support and marital satisfaction might differ across cultural con-

texts. For example, in our sample from the United States, men's support provision and women's support solicitation were strongly associated with marital satisfaction. In contrast, in a matriarchical society, couples might place greater value on women's support provision and men's support solicitation behaviors. Consequently, those sex-specific behaviors might be more strongly associated with marital satisfaction in that culture—a different pattern from the one we found in our U.S. sample. A third limitation is that the nature of the support task used for the dyadic interaction may limit the general applicability of our findings. In line with Pasch and colleagues (2002), we used this task with the goal of eliciting common but important personal problems with which all spouses could easily identify and that represent everyday contexts in which spouses solicit and provide support to one another. Nevertheless, we cannot assume that the same pattern of results would emerge across all contexts in which spouses might exchange supportive behaviors (e.g., coping with specific events).

The findings of the present study build on an emerging body of literature demonstrating the importance of the perceived adequacy of support received for marital satisfaction (e.g., Brock & Lawrence, 2008; Dehle et al., 2001). There are two forms of (in)adequate support that can occur during any given support transaction: (a) underprovision of support (i.e., when the support recipient receives less support than he or she desires) and (b) overprovision of support (i.e., when the support recipient receives more support than he or she desires). To date, researchers have routinely collapsed across the two types (as we have done in the present study; see footnote 3), which yields a more comprehensive approach to matching support to the needs of support recipients than examining these constructs in isolation. However, aggregating these constructs is based on the assumption that support underprovision and overprovision contribute to marital satisfaction in the same way and therefore can be combined. In the future, we recommend that researchers consider the possibility that one form of support inadequacy may be a stronger predictor of marital discord.

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4. One cannot address the generalizability of a study's findings without access to a probability sample, which is impossible to draw without a sampling frame. Unfortunately, no sampling frame is available that is relevant to the present study. Thus, we (and other researchers studying similar samples) can only speak to the general applicability of our sample and call for replications of our findings based on other nonprobability samples.

Findings from the present study further support the relationship-enhancement model by providing evidence of the importance of perceptions of support adequacy for marital satisfaction. These findings may also advance this model by demonstrating important and surprising sex differences in perceptions of support. Specifically, men's perceptions of support adequacy clearly mattered more than their perceptions of the amount of support received, whereas this pattern did not emerge for wives. Future investigations of the mechanisms underlying these sex differences (e.g., personality variables, depressive symptoms, external stressors) will further elucidate the functional role of partner support in intimate relationships. More generally, we call for researchers to move beyond simple counts of support received when operationalizing partner support to examine support adequacy, and the various behaviors and roles involved in supportive transactions, to enhance theories of support and relationship functioning.

From the perspective of designing effective couple interventions, it is likely that teaching support provision skills in isolation would be insufficient because an individual might not perceive those behaviors as adequate. Indeed, in one existing prevention program targeting marital distress and dissolution (Compassionate and Accepting Relationships through Empathy [CARE]; Rogge, Cobb, Johnson, Lawrence, & Bradbury, 2002), the researchers found little difference in treatment outcome rates between the well-established Prevention and Relationship Enhancement Program (Markman, Renick, Floyd, Stanley, & Clements, 1993), which primarily targets conflict resolution, and CARE, which targets partner support provision skills as well as conflict resolution skills. One possible explanation for this lack of differences in intervention components may be that the researchers targeted support provision skills in isolation in CARE. Based on the results of the present study and the relationship-enhancement model (Cutrona et al., 2005), it seems likely that efficacy rates would improve if clinicians also addressed spousal cognitions about support (attributions, perceptions of its adequacy).

Conclusions

The purpose of the present study was to further clarify the specific aspects of partner support associated with within-spouse and cross-spouse relationship satisfaction at the beginning of marriage, when spouses are less likely to have developed well-ingrained perceptions and behaviors and, consequently, when couple interventions might be most effective. This is one of the first studies to examine perceptions of support and behavioral observations of support in the same study and, to our knowledge, the first to directly compare support amount versus adequacy or to directly compare support provision versus solicitation in terms of their associations with marital satisfaction. We are emboldened by the new opportunities researchers now have to explicate the functional roles of various support components on the developmental course of marital dysfunction.

References

Acitelli, L., & Antonucci, T. (1994). Gender differences in the link between marital support and satisfaction in older couples. *Journal of Personality and Social Psychology*, *67*, 688–698.

Barbee, A. P., Rowatt, T. L., & Cunningham, M. R. (1998). When a friend is in need: Feelings about seeking, giving, and receiving social support. In P. A. Andersen & L. K. Guerrero (Eds.), *Handbook of communication and emotion: Research, theory, applications, and contexts* (pp. 281–301). San Diego, CA: Academic Press.

Barry, R. A., Bunde, M., Brock, R. L., & Lawrence, E. (in press). The validity and utility of distinguishing among types of support in intimate relationships. *Journal of Family Psychology*.

Baxter, L. A. (1986). Gender differences in the heterosexual relationship rules embedded in break-up accounts. *Journal of Personality and Social Psychology*, *3*, 289–306.

Belle, D. (1982). *Lives in stress: Women and depression*. Thousand Oaks, CA: Sage.

Bollen, K. A. (1989). *Structural equations with latent variables*. Oxford, England: Wiley.

Brock, R. L., & Lawrence, E. (2008). Chronic role strain and marital satisfaction: Does spousal support adequacy help explain the link? *Journal of Family Psychology*, *22*, 11–20.

Brunstein, J. C., Dangelmayer, G., & Schultheiss, O. C. (1996). Personal goals and social support in close relationships: Effects on relationship mood and marital satisfaction. *Journal of Personality and Social Psychology*, *71*, 1006–1019.

Cherlin, A. J. (1992). *Marriage, divorce, remarriage* (2nd ed.). Cambridge, MA: Harvard University Press.

Crowther, J. H. (1985). The relationship between depression and marital maladjustment: A descriptive study. *Journal of Nervous and Mental Disease*, *173*, 227–231.

Cutrona, C. E. (1996). *Social support in couples: Marriage as a resource in times of stress*. Thousand Oaks, CA: Sage.

Cutrona, C. E., & Russell, D. W. (1990). Type of social support and specific stress: Toward a theory of optimal matching. In B. R. Sarason, I. G. Sarason, & G. R. Pierce (Eds.), *Social support: An interactional view* (pp. 319–366). Oxford, England: Wiley.

Cutrona, C. E., Russell, D. W., & Gardner, K. A. (2005). The relationship enhancement model of social support. In T. A. Revenson, K. Kayser, & G. Bodenmann (Eds.), *Couples coping with stress* (pp. 3–23). Washington, DC: American Psychological Association.

Cutrona, C. E., & Suhr, J. A. (1994). Social support communication in the context of marriage: An analysis of couples' supportive interactions. In B. R. Burleson, T. L. Albrecht, & I. G. Sarason (Eds.), *Communication of social support: Messages, interactions, relationships, and community* (pp. 113–135). Thousand Oaks, CA: Sage.

Cutrona, C. E., Suhr, J. A., & MacFarlane, R. (1990). Interpersonal transactions and the psychological sense of support. In S. Duck with R. C. Silver (Eds.), *Personal relationships and social support* (pp. 30–45). Thousand Oaks, CA: Sage Publications.

Dehle, C., Larsen, D., & Landers, J. E. (2001). Social support in marriage. *American Journal of Family Therapy*, *29*, 307–324.

Frazier, P. A., Tix, A. P., & Barnett, C. L. (2003). The relational context of social support: Relationship satisfaction moderates the relations between enacted support and distress. *Personality and Social Psychology Bulletin*, *29*, 1133–1146.

Gardner, K. A., & Cutrona, C. E. (2004). Social support communication in families. In A. L. Vangelisti (Ed.), *Handbook of family communication* (pp. 495–512). Mahwah, NJ: Erlbaum.

Glenn, N. D. (1990). Quantitative research on marital quality in the 1980s: A critical review. *Journal of Marriage and Family*, *52*, 818–831.

Goldsmith, D. J. (2000). Soliciting advice: The role of sequential placement in mitigating face threat. *Communication Monographs*, *67*, 1–19.

Heffner, K. L., Kiecolt-Glaser, J. K., Loving, T. J., Glaser, R., & Malarkey, W. B. (2004). Spousal support satisfaction as a modifier of physiological responses to marital conflict in younger and older couples. *Journal of Behavioral Medicine*, *27*, 233–254.

Hu, L., & Bentler, P. M. (1999). Cut-off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*, 1–55.

Katz, J., Beach, S. R. H., & Anderson, P. (1996). Self-enhancement versus self-verification: Does spousal support always help? *Cognitive Therapy and Research*, *20*, 345–360.

Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis*. New York: Guilford.

Kiecolt-Glaser, J. K., & Newton, T. L. (2001). Marriage and health: His and hers. *Psychological Bulletin*, *127*, 472–503.

Kurdek, L. A. (2005). Gender and marital satisfaction early in marriage: A growth curve approach. *Journal of Marriage and Family*, *67*, 68–74.

Lawrence, E., Nylen, K., & Cobb, R. J. (2007). Prenatal expectations and marital satisfaction over the transition to parenthood. *Journal of Family Psychology*, *21*, 155–164.

Locke, H. J., & Wallace, K. M. (1959). Short marital adjustment predictions tests: Their reliability and validity. *Marriage and Family Living*, *21*, 251–255.

MacEwen, K., & Barling, J. (1988). Inter-role conflict, family support and marital adjustment of employed mothers: A short-term longitudinal study. *Journal of Organizational Behavior*, *9*, 241–250.

Manne, S., Ostroff, J., Sherman, M., Heyman, R. E., Ross, S., & Fox, K. (2004). Couples' support-related communication, psychological distress and relationship satisfaction among women with early stage breast cancer. *Journal of Consulting and Clinical Psychology*, *72*, 660–670.

Margolin, G., & Weiss, R. L. (1978). Comparative evaluation of therapeutic components associated with behavioral marital treatments. *Journal of Consulting and Clinical Psychology*, *46*, 1476–1486.

Markman, H. J., Renick, M. J., Floyd, F. J., Stanley, S. M., & Clements, M. (1993). Preventing marital distress through communication and conflict management training: A 4- and 5-year follow-up. *Journal of Consulting and Clinical Psychology*, *61*, 70–77.

Muthén, B., & Muthén, L. (2004). *Mplus user's guide*. Los Angeles: Author.

Neff, L. A., & Karney, B. R. (2005). Gender differences in social support: A question of skill or responsiveness? *Journal of Personality and Social Psychology*, *88*, 79–90.

Norton, R. (1983). Measuring marital quality: A critical look at the dependent variable. *Journal of Marriage and Family*, *45*, 141–151.

Pasch, L. A., & Bradbury, T. N. (1998). Social support, conflict and the development of marital dysfunction. *Journal of Consulting and Clinical Psychology*, *66*, 219–230.

Pasch, L. A., Harris, K. M., Sullivan, K. T., & Bradbury, T. N. (2002). The social support interaction coding system. In P. Kerig & D. Baucom (Eds.), *Couple observational coding systems*. Mahwah, NJ: Erlbaum.

Pierce, G. R., Sarason, B. R., Sarason, I. G., Joseph, H. J., & Henderson, C. A. (1996). Conceptualizing and assessing social support in the context of the family. In G. R. Pierce, B. R. Sarason, & I. G. Sarason (Eds.), *Handbook of social support and the family* (pp. 3–23). New York: Plenum.

Rini, C., Dunkel-Schetter, C., Hobel, C. J., Glynn, L. M., & Sandman, C. A. (2006). Effective social support: Antecedents and consequences of partner support during pregnancy. *Personal Relationships*, *13*, 207–229.

Ro, E., & Lawrence, E. (2007). Comparing three measures of psychological aggression: Psychometric properties and differentiation from negative communication. *Journal of Family Violence*, *22*, 575–586.

Rogge, R. D., & Bradbury, T. N. (1999). Til violence do us part: The differing roles of communication and aggression in predicting adverse marital outcomes. *Journal of Consulting and Clinical Psychology*, *67*, 340–351.

Rogge, R. D., Cobb, R. M., Johnson, M., Lawrence, E., & Bradbury, T. N. (2002). The CARE Program: A preventive approach to marital intervention. In N. S. Jacobson & A. S. Gurman (Eds.), *Clinical handbook of couple therapy* (3rd ed., pp. 420–440). New York: Guilford.

Sarason, I. G., Sarason, B. R., & Pierce, G. R. (1994). Social support: Global and relationship-based levels of analysis. *Journal of Social and Personal Relationships*, *11*, 295–312.

Schumm, W., Paff-Bergen, L., Hatch, R., Obiorah, F., Copeland, J., Meens, L., et al. (1986). Concurrent and discriminant validity of the KMS. *Journal of Marriage and Family*, *48*, 381–387.

Steenkamp, J. E. M., & Baumgartner, H. (1998). Assessing measurement invariance in cross-national consumer research. *Journal of Consumer Research*, *25*, 78–90.

Steiger, J. H., & Lind, J. C. (1980, May). *Statistically based tests for the number of factors*. Presented at the annual spring meeting of the Psychometric Society, Iowa City, IA.

Tucker, L. R., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika*, *3*, 1–10.

Väänänen, A., Buunk, B. P., Kivimäki, M., Pentti, J., & Vahtera, J. (2005). When it is better to give than to receive: Long-term health effects of perceived reciprocity in support exchange. *Journal of Personality and Social Psychology*, *89*, 176–193.

Verhofstadt, L. L., Buysse, A., & Ickes, W. (2007). Social support in couples: An examination of gender differences using self-report and observational methods. *Sex Roles*, *57*, 267–282.

Xu, Y., & Burleson, B. R. (2001). Effects of sex, culture, and support type on perceptions of spousal social support: An assessment of the "support gap" hypothesis in early marriage. *Human Communication Research*, *27*, 535–566.