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A Randomized Clinical Trial of a Brief, Problem-Focused Couple Therapy for Depression

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Abstract

The aim of this study was to evaluate a brief couple therapy for depression targeted for mildly discordant or nondiscordant couples struggling with the negative impact of depression. Subjects included women with major depression or dysthymia who had husbands without clinical depression. Thirty-five couples were randomly assigned to the 5-week intervention ($n = 18$) or a waitlist control group ($n = 17$), and followed up 1 and 3 months later. Results showed a significant effect of treatment in reducing women's depressive symptoms, with 67% of women improved and 40% to 47% recovered at follow-up, compared to only 17% improved and 8% recovered among women in the control group. Treatment was also effective in secondarily improving women's marital satisfaction, reducing husbands' levels of psychological distress and depression-specific burden, and improving both partners' understanding and acceptance of depression. The treatment was implemented in five 2-hour sessions, representing an efficient, cost-effective approach. Findings support the growing utility of brief, problem-focused couple interventions that simultaneously target depression, relational functioning, and psychological distress experienced by the loved ones of depressed persons.

The association between marital discord and depression is well-established, and a large body of work now supports the bi-directional nature of this relationship (see Whisman, 2001). That is, marital distress plays a crucial role in the etiology and maintenance of depression (e.g., Beach, Sandeen, & O'Leary, 1990; Whisman & Bruce, 1999). Moreover, the impact of one partner's depression on couple functioning can be profound and prolonged. Spouses of depressed individuals may be living with the disability for many years and may be unaware or misinformed about how to support the depressed person (Coyne & Benazon, 2001). Given that depression and relationship distress reciprocally influence each other, researchers

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have focused on couple-based treatment approaches to change maladaptive relationship patterns as a way to alleviate depression. In the present study, we build on the existing treatment literature of couple therapy for depression by evaluating a brief, problem-focused couple intervention targeted for mildly discordant to nondiscordant couples that provides both partners with psychoeducation about depression, training in coping and communication skills, and fostering of empathy and mutual support. We explain herein the rationale for our intervention, describe the treatment goals and methods, and present the findings from a randomized controlled trial examining the efficacy of our couple treatment in promoting positive change on both partners' mental health and on the relationship.

The need for couple-based treatments for the depressed person and his or her nondepressed partner is supported by the following array of clinical concerns shown to characterize couples living with depression: (a) depressed couples report more negative communications (e.g., blaming and complaints about the marriage), greater difficulty resolving conflict, and fewer expressions of affection than in couples where there is no depression (Coyne, Thompson, & Palmer, 2002; Schmaling & Jacobson, 1990); (b) spouses of depressed individuals commonly express critical and hostile attitudes towards the depressed person (Benazon, 2000; Hooley, 1986); and (c) such expressed emotion (i.e., expressions of criticism, hostility, and overinvolvement) by one's spouse is highly predictive of patient relapse and can impede recovery from depression (Hooley, 2007). In fact, there is evidence for the unique importance of spouses' positive responses to their partner's depression, namely warmth and compassion, in predicting more rapid recovery (McLeod, Kessler, & Landis, 1992). There is also a need to focus on helping the nondepressed spouse because of his or her own inhibited communication, resentment, and/or codependency (Coyne & Benazon, 2001; Coyne et al., 2002). Moreover, the nondepressed spouse often has significantly heightened psychological distress due to the burdens associated with living with a depressed person, including diminished social and sexual relations, increased conflicts about finances, children, and role expectations, chronic rumination and worrying, irritability, and feelings of helplessness (Benazon & Coyne, 2000; Coyne et al., 1987). Thus, it has become equally important for marital therapists to develop interventions that help the nondepressed partner as well as the depressed individual.

Over the past two decades, couple therapy has been successfully applied to the treatment of depression, including the evaluation of behavioral couple therapy for depression (Beach & O'Leary, 1992; Jacobson, Dobson, Fruzzetti, Schmaling, & Salusky, 1991) and cognitive couple therapy for depression (Emanuels-Zuurveen & Emmelkamp, 1996; Teichman et al., 1995). Findings from clinical trials and reviews of the treatment literature (see Beach, Dreifuss, Franklin, Klamen, & Gabriel, 2008) indicate that these couple therapy approaches are efficacious not only in alleviating depression but also in increasing marital satisfaction and minimizing relapses into depression. However, as noted by Jacobson et al. (1991), for couples that did not report marital distress prior to treatment, standard behavioral marital therapy performed poorly relative to individual cognitive therapy for alleviating depression. Such a finding is understandable from the vantage point of clients who might feel that a therapeutic focus on the relationship is not valuable if there is little marital discord. Thus, for depressed women with no marital discord, one treatment option would be individual cognitive therapy to address the depression. Alternatively, one might provide a couple-based approach to address the relationship and life challenges that even nondiscordant couples commonly face as a result of the negative impact of depression on their lives (Coyne et al., 2002). For depressed women with moderate levels of marital discord, a couple-based approach to address depression presumably would have face validity for the depressed and nondepressed client. The present study evaluated the efficacy of a brief couple therapy for depression designed to be applicable to depressed couples with no marital distress or moderate levels of distress, as it integrated standard behavioral couple therapy approaches

(i.e., communication and problem-solving training) with a focus on psychoeducation, empathic exchanges, and mutual support-building.

Our dyadic treatment approach builds on previous work in a few notable ways. First, we aimed to develop an intensive but relatively short couple treatment that could also be used as an adjunct to other individual and/or pharmacological therapies for depression, as recommended in the literature (e.g., Denton, Golden, & Walsh, 2003). The vast majority of treatment outcome studies evaluating dyadic approaches to reducing depression and increasing marital satisfaction have involved 16 to 20 therapy hours (Bodenmann et al., 2008; Dessaulles, Johnson, & Denton, 2003; Emanuels & Emmelkamp, 1996; Foley et al., 1989; Jacobson et al., 1991; O'Leary & Beach, 1990). The treatment herein involved five sessions for a total of 10 hours of therapy to reduce depression in women (i.e., approximately half the therapy time of most dyadic treatments). A major reason for developing a brief dyadic approach was to minimize the number of sessions and the travel time necessary for treatment, which would be of special importance where couples have to travel some distance to a clinic. If our intervention could produce clinically significant reductions in depression in half the time of other treatments, it would be both cost effective and a potential motivational enhancement to enter therapy for both the husband and wife.

Another key reason for a dyadic rather than an individual approach was to provide support for the nondepressed partner as well. The functioning of the nondepressed partner has received relatively little attention, despite the fact that, as noted previously, these individuals suffer from numerous burdens and distress related to living with a depressed partner. Given the documented negative impact of depression on the spouses of depressed individuals, as well as the powerful impact that spouses can have on their depressed partner's symptoms, it seemed extremely important to direct attention to outcomes in the nondepressed partners. While previous treatment outcome studies have looked at relationship satisfaction in both partners, there has been less attention placed on assessing other psychological variables. In the present study, we examined outcomes in the levels of depression-related psychological distress among the nondepressed partners, as well as changes in their depression-related attitudes and behaviors.

Study Overview

The present study aimed to test the efficacy of a brief, potentially adjunctive psychoeducational and skills-building couple-based treatment for depression in a randomized controlled design with a sample of depressed women. We chose to select only depressed women and their male partners primarily for practical reasons: depression is about twice as prevalent in females as males (*DSM-IV*; American Psychiatric Association, 1994), and we therefore expected that recruitment of female depressed subjects would be easier than recruitment of depressed men.

Our intervention had two primary goals: first, to reduce depressive symptomatology in the primary depressed patient (female partners) and increase the likelihood of recovery; and second, to help the nondepressed male partners reduce their own psychological distress. We hypothesized that compared to the waitlist controls, couples in the treatment group would demonstrate the following outcomes at posttreatment and 3-month follow-up: (a) women in the treatment would show significantly greater reductions in depressive symptomatology and higher rates of recovery from depression; and (b) men in the treatment would show significant reductions in their level of burden related to living with a depressed spouse. We also aimed to improve both partners' understanding and acceptance of depression, and expected couples in the treatment group to show significantly improved understanding of depression and more positive changes in their depression-related attitudes and behaviors.

Finally, though our treatment was targeted at couples who were not in need of extensive marital services, we measured changes in relationship satisfaction as a potential secondary gain of the other treatment outcomes.

To achieve these goals, we developed a treatment that combined psychoeducational and cognitive-behavioral marital therapy approaches to working with couples in which one partner was depressed. Specifically, the treatment was designed to provide psychoeducation about the nature of depression and its implications for social and marital functioning; help both partners to minimize negative interactions related to the depression (i.e., criticism, hostility, and blame) and increase empathic and mutually supportive interactions; teach the nondepressed spouses coping strategies to reduce specific burdens and psychological distress; and guide the nondepressed partner in becoming a long-term resource and source of support for their depressed partner.

Method

Participants

Thirty-five heterosexual couples were recruited from Long Island, NY to participate in a treatment study for depressed women and their partners. Study subjects were recruited by means of newspaper advertisements, radio and TV announcements, flyers, and pamphlets sent to local medical clinics, all of which described a free therapy program for couples struggling with depression. To be included in the study, couples had to be married or living together for at least 1 year, and both partners had to be at least 21 years old and fluent in English.

The treatment that was offered was targeted for mildly to moderately distressed couples in which women were identified as the depressed partner and men were identified as the nondepressed partner. Thus, inclusion and exclusion criteria for the study were as follows: (1) females had to meet diagnostic criteria for major depressive disorder and/or dysthymia and have a score of 21 or higher on the Beck Depression Inventory–II, as this is the cutoff point which best discriminates depressed from nondepressed individuals (Taylor & Klein, 1989); (2) male partners could not meet diagnostic criteria for a depressive disorder; and (3) severely discordant couples, as indicated by a score of 75 or lower on the Dyadic Adjustment Scale (DAS; Spanier, 1976), were referred for more intensive couple therapy. Couples could not already be receiving couples therapy and male partners could not be in individual psychotherapy or on antidepressant medication. Female partners were not restricted from receiving concurrent treatments for their depression as long as they had been in individual psychotherapy for a minimum of 12 weeks or taking a stable dose of psychotropic medication for a minimum of 8 weeks.

To ensure the appropriateness of our brief, problem-focused treatment for couples, we excluded couples if one or both partners disclosed an act of infidelity in the preceding 6 months or more than two acts of physical aggression in the preceding year. Both affairs and partner violence have been shown to lead to clinical depression in women even when the women had never been previously depressed (Cano & O’Leary, 2000), and infidelity has been cited as the most frequent reason for marriages to end (Gordon, Baucom, Snyder, & Dixon, 2008). Similarly, it has become common for experts in the couple aggression area to recommend exclusion of couples from conjoint treatment when there is more than what is seen as sporadic acts of mild physical violence (e.g., pushing or shoving) in the preceding year (e.g., O’Leary, 2008).

Procedure

The recruitment period lasted from April 2004 to April 2006. Follow-up assessments were conducted between August 2004 and August 2006. Participants responding to study advertisements were initially screened by telephone (i.e., on depression,¹ marital satisfaction, and suitability for a brief couples treatment based on levels of aggression and infidelity), and laboratory assessments were conducted only with couples who did not report any exclusion criteria on telephone screening. Prior to the initial visit, couples were informed of the possibility of being excluded from the study based on the information provided in the interview and the possibility of waiting 4 months for treatment. Interested participants were then scheduled for a visit to the marital laboratory to conduct psychiatric interviews² and collect baseline data. Couples determined to be eligible were then randomized to either the treatment or waitlist group.

Couples assigned to the treatment group completed five weekly, 2-hour therapy sessions, followed by a posttreatment assessment and a follow-up evaluation 3 months later. Couples assigned to the waitlist group were assessed approximately 5 weeks after entry into the study and again 3 months later, and then received the treatment as a courtesy for their wait. We selected 3 months as the length of follow-up to provide a lengthy enough period to assess the maintenance of treatment gains while not being so long as to increase the risk of participant dropout. All assessments were conducted by advanced graduate students who were blind to group assignment and well-trained in conducting the diagnostic and semistructured interviews described below. Experimental blindness was maintained by ensuring that interviewers who conducted assessments, as well as clinicians who provided the treatment, did not have access to information about the couple's group assignment. All couples received the brief therapy at no cost and were paid \$30 for participation in each of the assessment visits.

Figure 1 summarizes the flow of participants from initial phone screening to completion of the study. Of the 201 couples screened, 79 couples decided not to participate due to lack of interest or scheduling/time constraints. Of the remaining interested couples, 87 were excluded because they did not meet the inclusion criteria. A total of 35 eligible couples were enrolled into the study and randomized to either the brief couple therapy ($n = 18$) or the control group ($n = 17$). Of these, 30 (85.7%) completed their postassessment and 27 (77.1%) completed their 3-month follow-up. Of the 8 couples who did not complete the study, 3 were in the treatment group and 5 were in the waitlist control group (Fisher's exact test = 0.31). Thus, analyses of postassessment data are based on 16 couples that completed treatment and 14 control couples, and analyses of complete follow-up data are based on 15 treatment couples and 12 control couples. Univariate tests revealed that women who dropped out did not differ significantly from women in the study on baseline levels of depression, $t(34) = 0.91$, $p = .30$, or marital satisfaction, $t(34) = 1.24$, $p = .21$. Similarly, men who dropped out of the study did not significantly differ from men in the study on baseline levels of depression-related burden, $t(34) = 1.03$, $p = .28$, or marital satisfaction, $t(34) = 1.43$, $p = .25$. The mean length of time to follow-up was 14.42 weeks.

¹We used the Patient Health Questionnaire (PHQ-9), a 9-item self-rated depression screening measure, in the initial phone contact to screen female partners for the presence of significant depressive symptomatology and male partners for the absence of depressive symptoms. The PHQ-9 has been well validated as a brief depression severity and screening measure in primary care practice (Kroenke, Spitzer, & Williams, 2001).

²The Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I; First, Gibbon, Spitzer, & Williams, 1996) was administered to the female partners at the initial visit to assess whether diagnostic criteria were met for a depressive disorder and to rule out the presence of clinical depression in the male partners. To determine the reliability of women's depression diagnoses, a second diagnostician independently derived diagnoses from 12 randomly selected audiotapes of SCIDs with female patients. There was 100% concordance between diagnosticians for major depressive disorder and for dysthymia.

Treatment Program

Brief Couple Therapy for Depression—The goals of our brief, problem-focused couple therapy for depression were to promote an increased understanding of depression as an illness, reduce negative attitudes and behaviors towards depression, and increase empathy and mutual support between partners. This treatment was manualized, and the manual containing the full treatment protocol was provided to all therapists in the study. A brief overview of the major treatment components are described herein.

In the first session, the therapist conducted a detailed assessment of the couples' strengths and deficits in the areas described above (i.e., knowledge about depression, behaviors and attitudes towards depression, and levels of negativity, empathy, and support). Session two focused on psychoeducation regarding the symptomatology, course, etiology, and treatment of depression, including a focus on how particular symptoms can impact the patient's functioning, the spouse, and the marriage. The third session emphasized coping and communication strategies that can aid husbands in reducing their specific burdens and psychological distress related to their wives' depression. Cognitive-behavioral techniques were used to help spouses replace negative thinking with a more constructive, optimistic outlook, thereby relieving some of the worry that is commonly experienced by spouses of depressed individuals. Spouses were also encouraged to focus not only on their depressed partners' demands, but also on their own needs (e.g., personal interests, social activities, and support from close others.) Sessions four and five were devoted to minimizing negative interactions with depressed partners (e.g., criticism, hostility, blame) and fostering more positive, supportive interactions. Couples were instructed about various forms of support (e.g., emotional versus problem-focused support) and how to adaptively communicate support needs. The final two sessions also aimed to foster empathy for the depressed partner and acceptance of depression as a complex, debilitating illness.

Treatment Integrity—Three advanced clinical psychology doctoral students served as therapists in the study, along with the first author. The first author provided therapy to 9 of the 18 couples in the treatment group, while the other three therapists each provided therapy to three couples. As advanced students, all of the therapists had a minimum of 4 years of predoctoral clinical training and were selected on the basis of their clinical experience and interest in the study. Therapists were extensively trained in the treatment protocol by reading the treatment manual and attending a workshop provided by the authors that covered issues related to the delivery and implementation of the treatment (e.g., treatment protocol and rationale, session content, potential complications, and referral guidelines). Workshop training also involved didactic instruction and role-playing. Moreover, all therapists were supervised by the first and second authors, who co-developed the brief couple therapy. The supervisors listened to session audiotapes and met with the therapists weekly to provide feedback prior to the next session.

All of the session audiotapes were then coded for therapy adherence and therapist competence. Our adherence scale, developed for the present study, measured both (a) *treatment adherence*, or the degree to which therapists carried out various treatment criteria reflecting the four major areas of therapeutic intervention (i.e., psychoeducation, communication, empathy-building, and support-building); and (b) *therapist competence*, including general skills of the therapist (e.g., ability to set and follow an agenda and communicate goals to the couple) and nonspecific factors such as rapport-building, expression of warmth and concern, and instilling hope for the couple and treatment. Therapists were rated on their competence (i.e., general skills and nonspecific factors) using a scale from 1 to 7 (with 1 = *poorly*, 4 = *satisfactorily*, and 7 = *excellently*). For treatment adherence items, therapists were rated on the degree to which they delivered various

treatment interventions in each session, using a scale from 1 to 7, with 1 = *not at all* and 7 = *extensively*. Specifically, therapists were rated on their interventions targeting the following areas: psychoeducation (8 items), communication (4 items), empathy-building (3 items), and support-building (3 items). For each therapy case, all sessions were coded by the same adherence rater. Three advanced research assistants were extensively trained in the adherence coding system using practice tapes of sessions from couples who had dropped out midtreatment. Each student independently coded a randomly selected group of the therapy cases. Six random cases (40% total) were also assigned to a second coder to assess interrater reliability on our adherence coding scale.

Measures

Beck Depression Inventory–Second Edition (BDI-II; Beck, Steer, & Brown, 1996)—The BDI-II is a widely used 21-item self-report measure of depressive symptoms with well-established reliability and validity. In the present sample, we used the BDI-II as one of two outcome measures of depression for the women ($\alpha = .88$).

Hamilton Rating Scale for Depression (HAM-D; Miller, Bishop, Norman, & Maddever, 1985)—The 24-item modified HAM-D is a clinician-administered, semistructured interview designed to assess severity of depressive symptoms over recent and extended time intervals. It is one of the most frequently used rating scales in depression research due to its excellent psychometric properties (Bagby, Ryder, Schuller, & Marshall, 2004). We used the HAM-D as the second outcome measure for women's depression so that we could supplement the subjective self-report ratings of depression on the BDI-II with an interview-based external perspective. All raters were certified in the administration of the HRSD and were blind to treatment condition. A second diagnostician independently rated 25% of these interviews selected randomly at each time point. Intraclass correlation coefficients were .85 at pre, .97 at post, and .97 at follow-up.

Family Distress Scale for Depression (FDSD; Jacob et al., 1987)—The FDSD is a 25-item self-report measure of the impact of a patient's depression on a significant other. Male partners rated the frequency of distress and burden associated with their female partners' various depressive symptoms. Scores range from 0 to 100, with higher scores reflecting higher levels of distress and depression-related burden. Internal consistency in the present sample was $\alpha = .93$.

Illness-Related Behaviors and Attitudes Scale (IRBAS; Beardslee et al., 1993)—The IRBAS is an interviewer-rated measure of changes in illness-related behaviors and attitudes, originally designed for use following participation in an intervention for families with depression. For the present study, we modified the IRBAS into a shortened, 10-item self-report version including the following: (1) *behavior change* items reflecting adoption of new and adaptive coping strategies, increased or improved communication, improved individual and partner functioning, and seeking out additional information about depression; and (2) *attitude change* items reflecting normalization or destigmatization of the illness, increased factual understanding of depression, recognition and increased understanding of spouses' perspectives, and generalization of intervention concepts leading to global attitude change towards depression and one's partner. Scores ranged from 0 to 70, with higher scores indicating more positive change in behaviors and attitudes towards depression. In the present study, Cronbach's alpha was .71 for wives and .78 for husbands.

Dyadic Adjustment Scale (DAS; Spanier, 1976)—The DAS is a commonly used 32-item self-report measure of overall relationship satisfaction. DAS scores range from 0 to 151, with a score of 97 or below typically constituting the distressed range (Eddy, Heyman,

& Weiss, 1991). Internal consistency in this study was excellent for both women ($\alpha = .91$) and men ($\alpha = .93$).

Concurrent Treatment(s) Interview—Detailed information was collected from the female participants at each time point as to whether they had changed, adhered to, or discontinued any antidepressant medication and/or individual therapy since the prior assessment.

Data Analysis

Analyses were conducted using hierarchical linear modeling (HLM; Raudenbush & Bryk, 2002), which is well-suited for modeling data with correlated groups (i.e., repeated measures and partners) and for handling missing data (Atkins, 2005). In the present study, 15% of the total data were missing. We used a three-level model to analyze couple data on the IRBAS and DAS, as we expected that an intervention would likely have a dyadic effect on change over time in both partners' depression-related attitudes and behaviors and in their relationship satisfaction. The three-level model is considered to be more parsimonious than the two-level multivariate model described by Raudenbush, Brennan, and Barnett (1995) for analyzing couple data (see Atkins, 2005). Additionally, we did not expect partners within a couple to show widely varying change trajectories on the DAS or IRBAS and, therefore, obviated the need to use the two-level approach. Following the notation of Raudenbush and Bryk (2002), the model is displayed in Equation 1:

$$\begin{aligned} \text{Level 1: } Y_{ij} &= \pi_{0ij} + \pi_{1ij}(\text{time})_{ij} + \varepsilon_{ij} \\ \text{Level 2: } \pi_{0ij} &= \beta_{00j} + r_{0ij} \\ \pi_{1ij} &= \beta_{10j} \\ \text{Level 3: } \beta_{00j} &= \gamma_{000} + u_{00j} \\ \beta_{10j} &= \gamma_{100} + u_{10j} \end{aligned} \quad (1)$$

in which t indexes time, i indexes individuals, and j indexes couples. In this 3-level model, ε_{ij} is the Level 1 residual error term that describes the scatter of each individual's data around his or her estimated regression line; r_{0ij} is a random intercept that allows individuals within the same couple to have separate intercept values; u_{00j} and u_{10j} are the random effects at the couple level that allow different couples within the study to have distinct intercept and slope. Gender (0 = *men*, 1 = *women*) was added as a level-2 predictor and group assignment (0 = *control*, 1 = *treatment*) as a level-3 predictor to detect whether couples who received the treatment reliably deviated from control couples in their depression-related behaviors/attitudes and relationship satisfaction trajectories, and whether change occurred differently for husbands and wives across the two groups. Gender and group were entered on both the intercept and the slope in these models. For all other outcome measures (BDI-II, HAM-D, and FDSD), we ran a two-level linear model for women's data on the BDI-II and HAM-D and for men's data on the FDSD, in which repeated measures within individuals were modeled linearly across time with group assignment (treatment vs. control) as the level-2 predictor.³ For all HLM analyses presented below, we also compared the trajectories of couples who received treatment from the first author of the project versus from all other therapists in the study. These analyses aimed to explore whether the desired treatment outcomes could be achieved uniformly by all therapists regardless of their specific expertise in the areas of couples therapy and/or depression treatment (as the principal investigator was the most knowledgeable and experienced with our treatment).⁴

³We chose HLM methodology to analyze treatment effects on the BDI-II, HAM-D, and FDSD instead of univariate analysis of variance with repeated measures as HLM was felt to best represent individuals' change trajectories over time while also accounting for missing data.

Results

Table 1 presents demographics of the sample and diagnostic information about female participants at baseline. Couples in the control group had significantly higher family incomes than couples in the treatment group, and women assigned to the control group had a noticeably younger age at onset of depression, though this difference was not significant. Table 2 shows women's scores on the BDI-II and HAM-D, men's scores on the FDSD, and both partners' scores on the DAS and IRBAS at all three time points. There were no significant group differences for men and women on initial levels of marital satisfaction, depressive symptoms, or depression-specific distress in the male partners. However, it is worth noting that both men and women in the control group had lower levels of baseline marital satisfaction than subjects in treatment. Given the small sample size, we ran additional primary analyses with these baseline variables (family income, marital satisfaction, and women's age at onset of depression) as covariates. Repeated-measures ANOVAs conducted separately for men and women indicated that the treatment findings for women's depression and men's burden remained unchanged.

Status and Adherence of Women's Concurrent Treatments

Seven of the 18 women in the treatment group and 6 of the 17 women in the control group reported being on medication at the start of the study, and 2 women in the treatment group and 1 woman in the control group discontinued their medication(s) by 3-month follow-up. Similarly, 3 of the 18 women in the treatment group and 5 of the 17 women in the control group were receiving concurrent individual therapy at the start of the study, and only one woman in the control group discontinued her therapy while participating in the study. Moreover, there were no women who went on medication or began in individual therapy during the course of the study.

Since female participants were free to change and/or discontinue any medications or individual therapy during the course of the study, we examined whether there were any significant group differences in women's concurrent treatments at each time point. First, we conducted a series of chi-square tests at each time point to compare women across the two groups (treatment vs. waitlist control) in terms of their medication status and level of adherence to their prescribed medication regimen (i.e., computed as a percentage of days since the prior assessment that the medication of interest was taken in a compliant manner). There were no significant group differences in medication status at any of the time points [Time 1: $\chi^2(3, N = 35) = 0.03, p = .92$; Time 2: $\chi^2(3, N = 30) = 0.01, p = .96$; Time 3: $\chi^2(3, N = 27) = 0.01, p = .96$], and among those women who were on medication, there were no significant group differences in adherence at any of the time points [Time 1: $\chi^2(3, N = 15) = 2.68, p = .32$; Time 2: $\chi^2(3, N = 11) = 2.93, p = .40$; Time 3: $\chi^2(3, N = 11) = 1.32, p = .67$]. That is, the number of women who were taking antidepressant medication at each time point did not significantly differ between groups, nor did the groups differ in the degree to which women were adherent to their medication(s). Moreover, almost all the women taking medication reported 100% adherence to the prescribed dosage (i.e., two women in the control group reported less than 100% adherence). Thus, we can assume that the contribution of any pharmacological effects to changes in the measured outcome variables was evenly distributed and not significantly different across groups.

⁴We did not find a significant effect of therapist (i.e., first author vs. all other study therapists) on the trajectories of any of the outcomes variables [HAM-D: $b = -0.25, SE = 0.17, t(45) = -1.53, p = .19$; BDI-II: $b = -0.23, SE = 0.18, t(45) = -1.29, p = .24$; FDSD: $b = -0.149, SE = 0.227, t(16) = -0.658, p = .56$; IRBAS: $b = 0.110, SE = 0.138, t(90) = -0.80, p = .36$; DAS: $b = -0.06, SE = 0.20, t(90) = -0.29, p = .68$].

Similarly, we conducted chi-square analyses to compare women across the two groups in terms of whether they were receiving additional therapy at each time point and whether they had discontinued their individual therapy since the prior assessment. There were no significant group differences in therapy status at any of the time points [Time 1: $\chi^2(3, N = 35) = 0.81, p = .75$; Time 2: $\chi^2(3, N = 30) = 1.21, p = .66$; Time 3: $\chi^2(3, N = 27) = 0.47, p = .96$], and among those women who were receiving individual therapy, there were no significant group differences in women who had stopped their treatment from pre-to-post assessment [Time 2: $\chi^2(3, N = 11) = 2.14, p = .38$] or during the follow-up period [Time 3: $\chi^2(3, N = 11) = 0.01, p = .92$]. That is, the numbers of women receiving individual therapy at each time point did not significantly differ between groups, nor did the groups differ in the degree to which women remained in treatment.

Treatment Integrity

Using our adherence coding system, we obtained a separate summary score for the four major areas of targeted intervention: psychoeducation, communication, empathy-building, and support-building. Therapists received high adherence ratings across all scales, and even the lowest ratings on each scale were still in the good-to-excellent range for adherence. Moreover, there were no significant differences between therapists on summary scores for each subscale (psychoeducation: $F = 2.01, p = .18$; communication: $F = 0.50, p = .64$; empathy-building: $F = 2.29, p = .14$; and support-building: $F = 2.32, p = .13$). Thus, therapists did not differ in the degree of adherence to the treatment protocol and were equally skilled in executing the intended interventions. Finally, with respect to general skills of the therapist, ratings averaged 52.95 ($SD = 2.44$), with mean scores for each therapist ranging from a low of 45 (midway between *good* and *very good*) to a high of 56 (the maximum possible score). In sum, these ratings suggest high levels of fidelity for the major goals of therapy and general proficiency across all therapists.

Treatment Outcomes

Table 3 summarizes the HLM results for all outcome variables. The primary goal of our brief treatment was to improve women's depressive symptoms. Compared to women in the waitlist group, women who received treatment showed significantly greater reductions in depression, with average total reductions of 11.83 points on the HAM-D and 13.04 points on the BDI-II across the mean 24.15 weeks of being in the study. Effect sizes of this overall change from pretreatment to follow-up were $d = .72$ on the HAM-D and $d = .54$ on the BDI-II.

In order to test whether the treatment was similarly effective in reducing women's depression regardless of their baseline levels of marital distress, we conducted preliminary analyses comparing women's BDI-II depression scores at follow-up across the two groups (treatment vs. control) for women classified as nondistressed and moderately distressed based on their baseline DAS scores. We found that women in the treated group with low and high levels of marital distress (categorized using a DAS cutoff score of 98) both showed significant reductions in BDI-II depression scores at follow-up compared to women in the control group (low marital distress: $t = 3.59, df = 7, p = .009$; high marital distress: $t = 3.28, df = 7, p = .013$). While women with low levels of marital distress had a mean reduction in BDI-II scores of 13.30 and women with high levels of marital distress had a mean reduction in BDI-II scores of 9.25, the difference was not significant, $F(7, 35) = 1.23, p = .29, d = .18$. Thus, the couple therapy worked equally well for women in moderately distressed and nondistressed relationships.

We also examined the clinical significance of women's depression outcomes at follow-up on the HAM-D and BDI-II using two categories of clinical significance: (1) *improved*, defined

as a 50% reduction in HAM-D or BDI-II scores from pre- to follow-up (Beck et al., 1996; Miller et al., 1985); and (2) *recovered*, defined by standard conventions as HAM-D scores below 6 and BDI-II scores below 11 at follow-up (Pilkonis, Heape, Ruddy, & Serrao, 1991). Rates of improvement and recovery are based on study completers ($n = 15$ for treatment group; $n = 12$ for waitlist group). Based on HAM-D data, 67% of women in the treatment group showed improvement and 47% showed full recovery, compared to only 17% in the control group who improved and 8% who recovered. Similarly, on the BDI-II, 67% of women in treatment were improved and 40% were recovered by follow-up, whereas only 20% of women in the comparison group improved and 8% recovered. These data show significant differences in clinical outcome on both the HAM-D and the BDI-II for both improvement and recovery (Fisher's exact test, $p < .01$).

Our second major treatment goal was to reduce husbands' levels of distress and burden related to their wives' depression. There was a significant effect of therapy on the slope of the FDSD, $b = -0.416$, $SE = 0.180$, $t(33) = -2.311$, $p < .05$, with husbands in treatment showing a significant decrease in distress and burden levels over time compared to husbands in the control group. The rate of this decrease over time was 0.41 FDSD points per week, an average reduction on the FDSD of nearly 10 points by the end of the study ($d = .80$).

We also examined the impact of our treatment on couples' attitudes and behaviors towards depression, as an outcome of the particular psychoeducational and acceptance/empathy-building focus of our treatment. There was a significant main effect of therapy on the slope, $b = 0.269$, $SE = 0.106$, $t(168) = 2.544$, $p < .01$, with treatment couples showing increased understanding and more positive behaviors/attitudes towards depression over time than waitlist control couples by a rate of 0.25 IRBAS points per week (i.e., 6 total points over the course of the study). The effect size of this change from pretreatment to follow-up was $d = .39$ for couples who received treatment. Similarly, we did not find a significant main effect of gender on the slope of IRBAS scores, $b = -0.025$, $SE = 0.123$, $t(168) = -0.206$, $p = .71$, and the gender-by-group interaction was not significant as well, $b = 0.092$, $SE = 0.150$, $t(168) = 0.612$, $p = .43$. Thus, while couples in treatment were overall improving their behaviors and attitudes towards depression, there was no differential change between wives and husbands in each group.

Finally, as a secondary gain of other treatment outcomes, we found a significant effect of therapy on marital satisfaction (see Table 3), with treatment couples showing significantly greater improvements in their satisfaction than control couples. Across the course of the study, couples who received the brief therapy improved on average by a total of 5.55 DAS points ($d = .43$). For gender main effects, we observed a noticeable though nonsignificant effect on the slope, $b = 0.30$, $SE = 0.22$, $t(170) = 1.34$, $p = 0.15$. This suggests an overall trend for women's marital satisfaction to increase more than men's (by a total of 5.1 DAS points), which is consistent with the direction of change shown in Table 2 for women's and men's mean DAS scores at each time point. The gender-by-group interaction was not significant, $b = -0.19$, $SE = 0.27$, $t(170) = -0.72$, $p = .48$, suggesting that husbands and wives were not differentially changing across each group. However, given the small sample size in our study, the design may be underpowered to detect such a complex interaction effect in a three-level HLM model, as is suggested by the observed pattern in means in Table 2.

Discussion

The current study demonstrates the utility of a brief, five-session problem-focused treatment for couples in reducing the depressed partner's symptoms, reducing the nondepressed partner's levels of distress and burden, and in improving both partners' attitudes and

behaviors towards depression. A large body of research shows that depression in one partner can place strain on the relationship and is associated with negative health consequences for both partners. More specifically, it can lead to heightened psychological distress, increased negativity and reduced support from the nondepressed partner, which, in turn, can further exacerbate the depressed partners' symptoms. With these negative sequelae of depression, we set out to develop a brief, problem-focused therapy for mildly discordant to nondiscordant couples aimed at improving couples' understanding and acceptance of depression as an illness. Specifically, our intent was to reduce negative behaviors and attitudes towards depression and to increase positive support toward the depressed partner.

Results showed that this brief intervention produced significant reductions in women's depressive symptomatology, with an average reduction of nearly 12 points on the HAMD and 13 points on the BDI-II after 3.5 months of follow-up. The corresponding effect sizes of these depression reductions were in the medium-to-large range (.54 for the BDI-II and .72 for the HAMD), and consistent with findings from other longer couple-based treatments for depression (e.g., Jacobson et al., 1991; O'Leary & Beach, 1990; Emanuels-Zuurveen & Emmelkamp, 1996). We were also interested in whether our therapy could achieve outcomes of clinical significance at follow-up. Significantly more women showed improvement and recovery in the treatment group compared to the waitlist group. Two-thirds of women in treatment improved by at least a 50% reduction in their depression scores on both the HAMD and BDI-II, and recovery rates ranged from 40% (on the BDI-II) to 47% (on the HAMD). The rates of clinically significant change found in this study are comparable to meta-analytic findings from other psychotherapy and pharmacotherapy studies for depression, which indicate that roughly half of patients who complete these treatments will benefit significantly (see Westen & Morrison, 2001, for a review).

In accord with one of the main aims of this study, these changes in depression were achieved in approximately half the time of other couple-based interventions, results that seem especially promising in terms of the cost-effectiveness and ability to motivate individuals to attend therapy, especially where the clients live some distance from the clinic. As noted in the introduction, the vast majority of treatment outcome studies evaluating dyadic approaches to reducing depression and increasing marital satisfaction have involved 16 to 20 therapy hours (Bodenmann et al., 2008; Dessaulles, Johnson, & Denton, 2003; Emanuels & Emmelkamp, 1996; Foley et al., 1989; Jacobson et al., 1991; O'Leary & Beach, 1990). The treatment herein involved five sessions for a total of 10 hours of therapy to reduce depression in women. Thus, relative to other treatments, the monetary savings of our brief couple therapy is estimated at a 38 to 50% reduction in session fees and a 70% reduction in travel expenses, plus additional reductions in potential childcare expenses.

Similarly, in accord with another major aim of the study, we found that our intervention was equally effective in reducing women's depression for both moderately distressed and nondistressed couples. Although women with low levels of marital distress were slightly more improved at follow-up relative to women with high levels of marital distress at baseline, the overall difference was small and not significant. Thus, while standard behavioral marital therapy has been shown to be less efficacious at reducing depression relative to individual cognitive therapy for women without marital distress (Jacobson et al., 1991), the couple-based intervention herein worked equally well in reducing depression for women with and without marital distress.

In addition to the impact of our brief couple therapy on women's depression, we found significant treatment effects on husbands' levels of distress and on both partners' illness-related behaviors and attitudes. Men in treatment showed a significant decrease in their own levels of distress and burden associated with their wives' depression as compared to

husbands in the control group. This lessening of the negative impact of depression on husbands was one of the larger treatment effects in the study ($d = .80$), and suggests the utility of a couple intervention for depression that simultaneously focuses on the psychological functioning of the depressed person's spouse as a way to alleviate burden in the relationship and perhaps also enhance motivation to participate in couple therapy. Treatment couples also showed significantly increased levels of understanding and more positive behaviors/attitudes towards depression over time than control couples, with a small effect size of this change from pretreatment to follow-up ($d = .39$). These findings demonstrate the purpose of a couples-based approach in treating not only the depressed partner's symptoms but also improving the psychological health of the nondepressed spouse, as well as improving couples' understanding of and acceptance of depression.

While this was not a study of marital therapy per se (that is, marital outcomes were not a target of treatment), we observed an ancillary significant effect of the treatment on improved relationship satisfaction. Couples in treatment showed an overall improvement of nearly six points on the DAS compared to waitlist control couples ($d = .43$), albeit a modest effect on marital satisfaction compared to the effect sizes found in other studies of behavioral marital therapy (average effect size = 0.59; see Shadish & Baldwin, 2005, for a review).

Results of the present study, though encouraging, are preliminary due to several notable limitations. First and foremost, the obtained sample size was small, which limited the power of statistical tests. Most notably, the design of the present study may have been underpowered to detect a significant interaction in our HLM analysis of gender and group on the DAS. Second, the length of follow-up was relatively short, and a preferable follow-up period of 6 to 12 months would provide a more robust assessment of treatment gains. Third, our design included only three assessment points, which potentially limited the resolution of the data. Inclusion of more time points would have allowed for a more fine-grained analysis of temporal changes following treatment. Fourth, the use of a waitlist control group is limited, as couples assigned to waitlist may have expected that they would not improve and even deteriorated as a result. Given these limitations, the present study represents a promising first step in demonstrating the efficacy of a depression-focused, brief couple therapy of this kind, and future research should aim to replicate this study with a larger sample of couples, a longer follow-up period, and a more stringent control group (e.g., an active depression treatment) that controls for expectancy of improvement.

Finally, a key issue in evaluating psychotherapy research is the extent to which the findings may be generalized. We eliminated any couple who reported more than moderate marital discord and excluded those who reported serious focal problems in the relationship (e.g., physical violence and/or infidelity). In such cases where the couple presents with more chronic and/or severe relationship issues, either individually focused treatments or standard marital therapy are better indicated. Moreover, it would be important to replicate this study with a more ethnically and socioeconomically diverse sample of couples, as the present sample was largely Caucasian and middle class. Likewise, because only depressed wives were included in this study, the treatment findings cannot be generalized to depressed men without testing its efficacy with a sample of couples wherein the male partners are depressed.

Despite these limitations, this study contributes to the literature on couple therapy and depression in some significant ways. Results of this study support the growing applicability of brief, problem-focused couple interventions in treating individual problems such as depression. The intervention developed herein aimed to address several aspects of the marital relationship theorized to impact depressive symptoms (e.g., reducing expressed emotion; increasing positive marital interactions, empathy, and mutual support; and

reducing caregiver burden). However, further investigation is needed to test whether the treatment outcomes are due to the targeting of these proposed mechanisms of change. Nonetheless, given the substantial reductions in depression and depression-related burden, as well as the improvements in mild levels of marital dissatisfaction observed after only five, 2-hour sessions, the present findings lend support for the viability of a brief, problem-focused couple therapy for depression that is likely to be seen as cost-effective, reimbursable in clinic settings, and desirable to patients.

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Figure 1.
Flowchart of participation in the study.

Table 1**Demographic and Baseline Clinical Information for Study Participants**

	Treatment (N = 18)	Waitlist (N = 17)	<i>t</i> or χ^2	<i>d</i>
<u>Women's Diagnostic Information</u>				
Diagnosis, <i>n</i>			$\chi^2(2) = 1.21, p = .55$	0.38
MDD	15	15		
Dysthymia	3	2		
Age at onset of MDE, <i>M</i> (<i>SD</i>)	35.50 (17.30)	27.57(14.39)	$t = -1.32, p = .20$	-0.45
Lifetime no. of episodes (%)				
1	35.7	13.3		
2	14.3	26.7		
3 – 4	28.5	20.0		
5 or more	21.4	40		
Weeks in current episode, <i>M</i> (<i>SD</i>)	16.20 (12.28)	25.10 (60.10)	$t = 0.94, p = .36$	0.32
<u>Sample Demographics</u>				
Age				
Women, <i>M</i> (<i>SD</i>)	42.72 (11.60)	43.69 (9.81)	$t = 0.26, p = .80$	0.09
Men, <i>M</i> (<i>SD</i>)	44.75 (9.17)	45.39 (12.23)	$t = -0.17, p = .87$	-0.06
Race/ethnicity ^a (% of sample)			$\chi^2(1) = .02, p = .90$	0.05
Non-Hispanic Caucasian	88.9	87.5		
Black	0	6.2		
Hispanic/Latino	11.1	0		
Asian	0	6.2		
Married (%)	94.1	94.4	$\chi^2(1) = .00, p = .96$	0.02
Years married, <i>M</i> (<i>SD</i>)	17.00 (13.08)	13.43(10.55)	$t = -0.84, p = .41$	-0.28
Education Level - Men (%)			$\chi^2(2) = 4.01, p = .26$	0.73
High school or less	22.3	31.2		
College	61.1	37.5		
Post bachelor's	16.7	31.2		
Education Level - Women (%)			$\chi^2(2) = 2.73, p = .26$	0.59
High school	44.4	18.8		
College education	38.9	50		
Post bachelor's education	16.7	31.2		
Employment - Men (%)			$\chi^2(2) = 2.92, p = .40$	0.61
Full-time	77.8	93.8		
Part-time	5.6	6.2		
Other	16.7	0		
Employment - Women (%)			$\chi^2(2) = 1.27, p = .87$	0.39
Full-time	27.8	25		
Part-time	11.1	25		
Other	11.2	12.4		
Yearly family income, <i>M</i> (<i>SD</i>)	71,667 (27,356)	100,091 (39,267)	$t = 2.18, p = .04$	0.74

Note. MDE = Major Depressive Episode. d = Cohen's effect size.

^aSame percentages for men and women. Chi-squares compare Caucasian to non-Caucasians.

Table 2
Means and Standard Deviations of Outcome Variables for Depressed Women and Partners

Outcome measure	Pretreatment				Posttreatment				3-Month Follow-up			
	M	SD	T	d	M	SD	t	d	M	SD	T	d
BDI-II (W)												
Treatment	31.38	9.32	0.35	0.12	20.34	13.48	0.93	0.34	14.41	10.56	1.60	0.62
Control	30.16	11.13			25.28	13.86			26.92	17.16		
HAM-D (W)												
Treatment	26.89	6.76	0.71	0.24	18.38	10.77	1.92	0.70	13.60	11.43	2.81**	1.09
Control	28.53	6.93			26.29	10.55			26.42	12.25		
FDSD (H)												
Treatment	52.28	15.27	0.25	0.08	49.91	16.15	0.17	0.06	42.20	12.87	0.64	0.25
Control	49.74	13.47			50.91	13.06			48.86	15.26		
IRBAS												
Wife												
Treatment	31.61	8.37	0.11	0.04	40.00	7.13	2.04*	0.87	42.40	9.12	2.24*	0.86
Control	31.30	8.79			33.45	7.97			33.83	10.84		
Husband												
Treatment	34.11	6.34	0.29	0.10	40.44	4.57	1.93*	1.32	41.80	5.53	2.83**	1.28
Control	34.69	5.10			34.06	5.08			35.66	3.89		
DAS												
Wife												
Treatment	96.55	17.44	1.04	0.35	100.6	20.52	1.02	0.37	102.07	22.77	1.10	0.43
Control	90.25	18.37			91.87	23.54			92.94	19.77		
Husband												
Treatment	105.74	18.99	1.08	0.26	108.7	19.86	1.34	0.42	108.96	16.65	1.64	0.61
Control	100.98	17.93			100.4	14.00			98.06	18.78		

Note. Treatment group: N = 18 at pre; N = 16 at post; N = 15 at follow-up; Waitlist control group: N = 17 at pre; N = 14 at post; N = 12 at follow-up; (W) = Wife only, (H) = Husband only; BDI-II = Beck Depression Inventory-II, HAM-D = Hamilton Depression Rating Scale, FDSD = Family Distress Scale for Depression, IRBAS = Illness-Related Behaviors and Attitudes Scale, DAS = Dyadic Adjustment Scale;

* $p < .05$,

**
 $p = .01$.

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Table 3
Hierarchical Linear Modeling Results for Effect of Treatment on Change in Outcome Variables

	B	SE	t	p	d
<u>Outcome Measure</u>					
BDI-II	-0.41	0.16	-2.51	< .01	0.54
HAM-D	-0.47	0.14	-3.44	< .001	0.72
FDSD	-0.42	0.18	-2.31	< .05	0.80
IRBAS	0.27	0.11	2.54	< .01	0.39
DAS	0.55	0.19	2.83	< .01	0.43

Note. HLM results reflect treatment group by time interaction (i.e., the effect of treatment on slope of the outcome measure). BDI-II, HAM-D, and FDSD based on HLM-2 models with wife or husband data only. IRBAS and DAS results based on couple data (gender and gender-by-group interaction excluded).