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RANDOMIZED CONTROLLED TRIAL OF EMOTIONALLY FOCUSED COUPLE THERAPY COMPARED TO TREATMENT AS USUAL FOR DEPRESSION: OUTCOMES AND MECHANISMS OF CHANGE

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This randomized controlled trial examined the effectiveness of Emotionally Focused Therapy (EFT) for depression and relationship satisfaction versus usual care (i.e., couple therapy other than EFT), and explored mechanisms of change. Mixed model trajectory analyses of 16 couples indicated EFT was associated with greater improvement in relationship satisfaction among men and women. Men receiving EFT reported greater improvements in depressive symptoms compared to usual care. Unified structural equation modeling revealed changes in relationship satisfaction preceded changes in depressive symptoms in one cluster of partners, while changes in depression preceded changes in relationship satisfaction in a second cluster. Two other clusters reported simultaneous changes in satisfaction and depression. This study provides encouraging results on the effectiveness of EFT for depression, and insight into mechanisms of change.

Major Depressive Disorder (MDD) is the world's leading cause of medical disability (World Health Organization, 2017), and is associated with costs exceeding $219 billion in the United States each year (Greenberg, Fournier, Sisitsky, Pike, & Kessler, 2015). There is a strong, bidirectional association between MDD and relationship distress for both men and women (Davila, Karney,

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Hall, & Bradbury, 2003; Whisman, 2007). For example, poor relationship quality is associated with future development of depressive symptoms (Overbeek et al., 2006). Conversely, depressive symptoms can put one at risk for the development of relationship distress, due in part to characteristics of the disorder spilling over into the relationship. Once MDD is present, supportive interpersonal relationships are highly important for recovery. For instance, relationship functioning is not always improved following individual treatments for depression, even if the disorder itself remits (Atkins, Dimidjian, Bedics, & Christensen, 2009).

Research and clinical guidelines indicate that psychotherapy is the most effective and enduring treatment of mild-to-moderate depression (Hollon et al., 2005; National Institute for Health and Care Excellence, 2009). Emotionally focused therapy (EFT) is one of few evidence-based psychotherapies for couples (Johnson, Hunsley, Greenberg, & Schindler, 1999), and findings from two prior clinical trials of EFT for depression support its efficacy. The first study was a pilot trial that evaluated the treatment of depression and relationship distress in 12 women who were randomly assigned to pharmacotherapy or EFT (Dessaulles, Johnson, & Denton, 2003). At termination, EFT reduced the symptoms of the depressed women as much as pharmacotherapy alone. Findings also provided preliminary support that the effects of EFT may be more enduring than pharmacotherapy 6 months following termination of treatment. The second study was a randomized controlled trial of 24 women and their partners that tested whether participants treated with a combination of antidepressant medication and EFT experienced greater improvement in symptoms compared to women receiving antidepressant medication alone (Denton, Wittenborn, & Golden, 2012). Depressive symptoms significantly improved in both groups, yet only women who received antidepressant medication augmented with EFT reported a significant improvement in relationship quality. While findings support the efficacy of EFT for depression, prior studies have not evaluated EFT for men with depression. Given the sex differences in the etiologic pathways and clinical presentation of MDD (e.g., Kendler & Gardner, 2014), it remains unclear whether findings on EFT can be generalized to depressed men. Furthermore, no known studies have evaluated the degree to which improvement occurs in "real world" community practice settings. Effectiveness research is an imperative step in the translation of evidence-based treatments to community settings (Sexton et al., 2011).

Along with effectiveness research, more work is needed to determine the underlying mechanisms of psychotherapeutic change. While EFT is an efficacious treatment for depression and marital discord, it remains unclear how EFT, a treatment intended for marital distress, also relieves depression. In a meta-analysis of couple therapy for depression, authors examined whether improvement in couple satisfaction was followed by a decrease in depressive symptoms. This temporal relationship was not supported, although the authors point out that a major limitation of the meta-analysis was that the hypothesis was not adequately tested in the trials analyzed, indicating a need for additional research on mechanisms of change in couple therapy for depression (Barbato & D'Avanzo, 2008). A subsequent study used data from a clinical trial of couple therapy to examine the effect of marital quality on depressive symptoms over the course of treatment (Atkins et al., 2009). The study found a small effect, but the findings were limited by too few assessments over time (i.e., three) and the composition of the sample (i.e., MDD was not an explicit condition of inclusion and few participants were clinically depressed). Thus, while findings of intervention studies have demonstrated improvements in both relationship satisfaction and depressive symptoms following couple therapy, temporal relationships among the variables have not been adequately investigated (e.g., Beach & O'Leary, 1992; Christensen et al., 2004; Denton et al., 2012; Dessaulles et al., 2003). Clinicians and scholars often assume that couple therapy improves relationship quality, and improvement in the relationship later relieves depressive symptoms (e.g., Barbato & D'Avanzo, 2008). It is important to explore the temporal changes in depressive symptoms and marital distress over the course of couple therapy to begin to understand mechanisms of therapeutic change.

Current Study

In this study, we conducted a pilot effectiveness trial of EFT for depression. This trial used a stringent comparison group in which EFT was compared to usual care (i.e., treatment selected and implemented by clinicians in community settings who practice couple therapy other than EFT;

Baucom, Hahlweg, & Kuschel, 2003). In addition, we sought to examine the underlying mechanisms of change. To do this, assessments of both depression and couple satisfaction must occur at intervals brief enough to capture change on the time scale appropriate for the variables of interest and should continue over the course of treatment (Kazdin, 2007; Lorenzo-Luaces, German, & DeRubeis, 2015). In this study, change in relationship satisfaction and depression were assessed after each weekly therapy session. This study aimed to address the following research questions: (a) Does EFT provide greater improvement in depressive symptoms and relationship satisfaction for male and female partners compared to usual care?; and (b) Is improvement in relationship satisfaction the means by which couple therapy reduces depression?.

METHOD

Participants

Couples were predominately married (66.7%) and their length of marriage or committed partnership ranged from 2 to 27 years (M = 9.57; SD = 9.00). The average age of both men and women was 38 years (male SD = 11.96; female SD = 10.48). Men were 80% White, 6.7% Latino, 6.7% Black, and 6.7% Other. Women were 93.3% White and 6.7% Other. Couples were predominately middle class. All couples who participated were heterosexual. Twelve men and seven women were at least mildly depressed, according to the Beck Depression Inventory (BDI-II; Beck, Steer, & Brown, 1996), and both partners were depressed in five of the couples.

Procedure

Couples were recruited from a metropolitan area in the Mid-Atlantic region of the United States to participate in a treatment study for committed partners experiencing problems in their relationships (i.e., <95 on the Dyadic Adjustment Scale; Spanier, 1976) and for couples in which at least one partner was mildly or moderately depressed (i.e., BDI-II scores between 14 and 24). The patient could be of any gender, and as spousal concordance rates for depression are often high (Lindeman, Kaprio, Isometsä, Poikolainen, & Heikkinen, 2002; Mathews & Reus, 2001), couples in which both partners were depressed were not excluded. Couples were required to have been married or cohabiting for at least 1 year, suitable for receiving couple therapy (i.e., not involved in an ongoing extramarital relationship or experiencing active violence in their intimate relationship), and fluent in English. Partners using psychotropic medications were included if they had been on a stable dose for 2 months. Figure 1 provides a summary of the flow of participants from the initial screening to the termination of treatment; 16 couples were included in the final analysis.

Potential participants responded to advertisements for the study (e.g., flyers, website postings, mass emails) or were referred by local physicians or mental health practitioners. Partners who expressed interest in participating were given the option to complete a screening questionnaire by telephone with a study coordinator or complete an online survey to assess whether they met the requirements for inclusion. Couples determined to be eligible were invited into the university research laboratory to provide consent and complete a 2-hr baseline research assessment with trained graduate students. All qualifying participants who consented to participate were then randomized to either EFT or usual care. To enhance ecological validity and increase the generalizability of the results, therapy was provided in the community practice settings. All participants were asked to complete 15, 1-hr therapy sessions in one of nine practitioners' offices. One couple requested to receive services from their assigned clinician at the university laboratory instead of the practitioner's office due to proximity, and, in this case, arrangements were made to meet the request. In addition to the screening and baseline assessments, couples were asked to complete questionnaires after each session. Participants completed assessments either through online surveys or paper-pencil surveys in their practitioners' offices immediately following appointments. Couples who opted to complete surveys in their practitioners' offices were provided envelopes in which to enclose and seal their surveys, and study staff collected the surveys. Participants were compensated by receiving reduced fees for therapy services from licensed professionals in the community; therapists were reimbursed for the amount of the fee reduction.

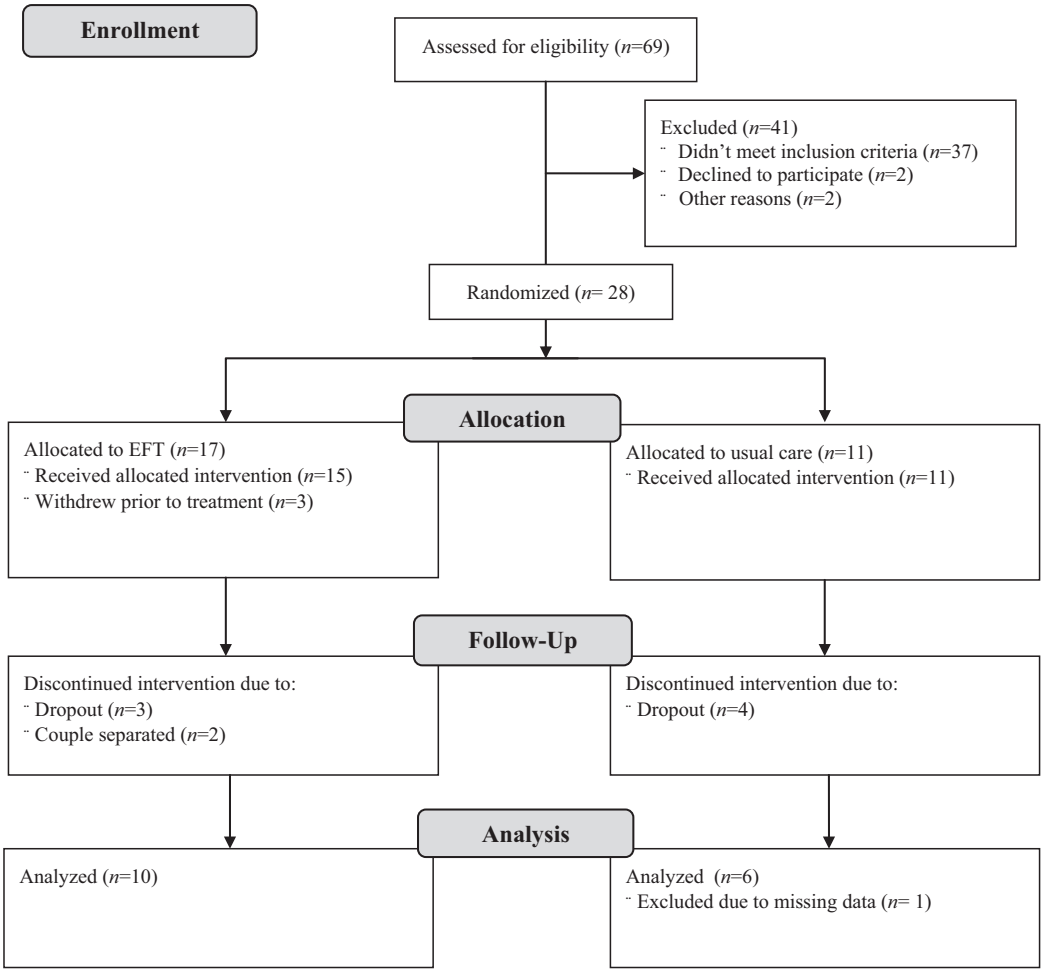


Figure 1. Consolidated standards for reporting trials (CONSORT) diagram of patient flow through study.

Treatments

Couples were randomized to receive 15–1 hr sessions of either EFT or usual care.

EFT. EFT is a manualized approach for treating couple distress (Johnson, 2004). It is based on the theoretical frameworks of attachment and emotion regulation. The goals of EFT are to help partners address their negative cycles of interaction, and engage in more positive interactions of accessibility, responsiveness, and attunement. Couples randomized to EFT attended 15 sessions: 1 conjoint, 1 individual, and 13 additional conjoint sessions.

Change in EFT is designed to occur in three stages. In the first stage, clinicians form a therapeutic alliance with each patient which is a key predictor of change in EFT (Johnson & Talitman, 1996). Distressed couples are thought to engage in negative cycles of interaction that inhibit them from maintaining an intimate bond. In stage one, therapists track the cycle of interactions among partners, identify each partner's position in the negative interactional cycle, and begin to access each partner's emotions and attachment needs that underlie their positions in the cycle. Stage one is complete when the negative interactional cycle that maintains emotional distress is de-escalated. Two important change events occur in stage two. First, the therapist helps the more withdrawn partner to begin taking risks to express his or her unmet attachment needs. Once the more withdrawn partner becomes more engaged in his or her relationship, the therapist encourages the more pursuing partner to express his or her vulnerable emotions. This creates softening events that encourage connection and lead to bonding interactions. The negative cycle of interactions that had

perpetuated conflict and isolation shift into positive cycles of bonding and connection. The changes in interactions are consolidated and integrated in the third stage of treatment. See Johnson (2004) for a complete description of the approach and Wittenborn, Culpepper, and Liu (2012) for a case example on using EFT for depression.

Usual care. Participants randomized to usual care were assigned to a licensed psychotherapist who provided couple therapy services in their community practice settings. In this study, usual care was defined as a referral to a couple therapist, including a phone call from study staff to the therapist to introduce them to the couple, and a summary of the data collected on the couple at the first data collection visit (e.g., attachment history, scale scores for depression, and marital distress). Couple therapists in the usual care condition: (a) were licensed marriage and family therapists, psychologists, social workers, or professional counselors, (b) received advanced training in couple therapy during their careers through either advanced graduate coursework or postdegree training, as indicated on their websites, (c) provided couple therapy services other than EFT at the time of the study, and (d) agreed to participate in the study. The usual care comparison group was not protocolized in order to ensure that services provided in this arm adequately represented typical practices (Silverman & Miller, 2004). Each usual care practitioner provided the type of couple therapy services they deemed appropriate for a given couple. Therapists used a range of methods including behavioral, narrative, Gottman, Bowen, psychodynamic, and eclectic approaches. They were encouraged to practice as they typically would with other couples they treat, and to continue any other activities in which they were already engaged (e.g., peer consultation or supervision).

Therapists

Psychotherapy services in both the EFT and usual care arms were provided by master's or doctoral-level practicing couple therapists. Four therapists provided EFT and six therapists provided usual care. EFT therapists were licensed marriage and family therapists (50%), licensed social workers (25%), or licensed professional counselors (25%). Usual care clinicians were licensed professional counselors (50%), licensed social workers (33%), or licensed psychologists (17%). All therapists provided a treatment they held an allegiance to and were experienced in, regardless of treatment arm (i.e., EFT vs. usual care) to reduce the potential threat to internal validity that can be posed by therapist allegiance effects (Mohr et al., 2009).

Treatment Integrity

EFT. EFT was delivered by four therapists in the community who were experienced in the approach as evidenced by having at least completed the requirements for certification as an EFT therapist by the International Centre for Excellence in Emotionally Focused Therapy (ICEEFT). All therapists were monitored for fidelity by the second author who is certified by ICEEFT as an EFT trainer. The EFT trainer watched their videotapes weekly to ensure that the treatment being provided adhered to the EFT manual. The supervisor provided feedback to the therapist prior to the next session on an as-needed basis in order to ensure fidelity; two therapists required no supervisory feedback, and two therapists required less than two hours over the course of the study.

Usual care. Licensed practitioners of couple therapy provided services in the usual care arm. An intake report on their assigned couple was provided to each clinician, and any consultation or supervision the therapists may have been engaged in prior to starting the study was provided outside of the study.

Measures

Beck depression inventory-II (BDI-II; Beck et al., 1996). Participants completed the BDI-II during screening and baseline assessments and after each therapy session. The BDI-II is a commonly used 21-item self-report measure of depressive symptoms. Scores of 0–13 are considered nondepressed, 14–19 reflect mild symptoms, 20–28 reflect moderate symptoms, and 29–63 reflect severe symptoms. The BDI-II has good internal consistency ($\alpha = 0.92$; Beck et al., 1996), and Cronbach's alpha in this study was 0.98 for men and 0.97 for women.

Dyadic satisfaction subscale of the dyadic adjustment scale (DAS; Spanier, 1976). Participants completed the DAS at screening, baseline, and after each session. The DAS is a widely used

assessment of relationship functioning. However, the DAS has been criticized for confounding the measurement of relationship satisfaction with variables known to determine levels of satisfaction (Kurdek, 1992). As a result, the dyadic satisfaction subscale has been recommended as a stand-alone measure of relationship satisfaction (Graham, Liu, & Jeziorski, 2006). The dyadic satisfaction subscale consists of 10 items; higher scores are indicative of higher relationship satisfaction. The dyadic satisfaction subscale has been shown to be reliable and valid in several prior studies (Graham et al., 2006; South, Krueger, & Iacono, 2009; Spanier, 1976) and internal consistency in the current study was 0.96 for men and 0.97 for women.

Data Analysis

Mixed model trajectory analysis (MMTA). MMTA, also termed hierarchical linear modeling, was used to study change in depression and relationship satisfaction among male and female partners over the course of treatment. This is an ideal approach for rigorous estimations of trends over time with small samples and data consisting of many repeated observations over a short time period. MMTA quantifies an individual's time series observations at level 1 while the aggregates of individuals' data are analyzed at level 2 (also providing a statistical test for individual differences) (Hedeker & Gibbons, 2006; Ridenour, Wittenborn, Raiff, Benedict, & Kane-Gill, 2016; Singer & Willett, 2003). Maximum likelihood estimation and multiple fit statistics (likelihood-ratio χ^2, Akakie's Information Criterion, Bayesian Information Criterion) tested whether fit to the observed data was improved by adding competing predictors, treatment group membership, and error covariance structures using SAS 9.3 and the $p < .05$ threshold. Subsequently, model parameters were obtained using restricted maximum likelihood estimation. Error covariance structures that were tested were autoregressive, heterogeneous autoregressive, autoregressive moving average (ARIMA), and Toeplitz (each with a lag 1). To reduce potential for Type I error, the Kenward-Roger adjusted F test for small samples was used (Kenward & Roger, 1997).

Unified structural equation modeling (USEM). USEM was used to explore mechanisms of change in this study. Conceptually, USEM is a form of state-space modeling having some overlap with structural equation modeling (Chow, Ho, Hamaker, & Dolan, 2010). USEM is a useful method for examining mechanisms of treatment using many assessments over time (Ridenour et al., 2016). It tests treatment mechanisms by comparing how associations among mechanisms and outcomes differ over time, and can be used in studies with small sample sizes. For this study, USEM was used as a novel approach to model session-to-session changes within persons, while accounting for autocorrelation, or correlation among a person's assessments over time. Few studies to date have used USEM within clinical trial designs (Kim, Zhu, Chang, Bentler, & Ernst, 2007; Gates, Molenaar, Hillary, & Slobounov, 2011; Molenaar & Nesselroade, 2009; Ram, Brose, & Molenaar, 2013; Ridenour et al., 2016; Zheng, Wiebe, Cleveland, Molenaar, & Harris, 2013). This study used a special case of USEM based on Granger causality conditions (Granger, 1980; Zheng et al., 2013) to test the sequencing of changes in relationship satisfaction leading to changes in depression or vice versa *within an individual* (Figure 2).

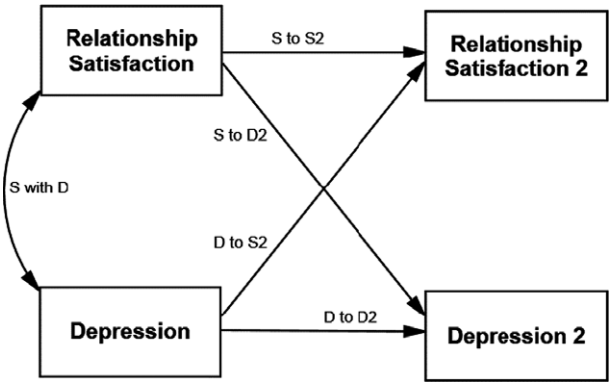


Figure 2. Within-person granger causality model.

USEM models were estimated at the level of the individual and aggregated by analyzing each individuals' data as if they were from a separate sample (Zheng et al., 2013). Based on the MMTA tests of error covariance structures, the same covariance structure was found for all participants. Thus, to acquire fit statistics and parameter estimates, autocorrelations models could be aggregated across all participants or subgroups by fixing their corresponding parameters to be equal. Statistical differences between models that were nested could be tested using likelihood ratio χ^2. Thus, moderators were tested by comparing the fit of two models: fixing parameters to be equal across all participants versus estimating parameters separately per level of the characteristic (e.g., EFT vs. usual care). Competing models were compared using traditional SEM fit statistics that were designed for longitudinal, within-person data (likelihood ratio χ^2, Akakie's Information Criterion, and Brown Cudeck Criterion) and AMOS 19 software (Arbuckle, 2010).

In addition to testing the hypothesized moderator of treatment group, an exploratory testing for subgroups of idiographic patterns was data driven by cluster analyzing individual's model parameters. Consistent with the preliminary nature of this study, clusters were not grounded in theoretical causes of the subgrouping, but rather were exploratory. Cluster assignments were based on visual inspection of a K-means cluster analysis dendogram, using squared Euclidean distances and complete linkage.

The relatively large number of parameters required for USEM models also requires as many observations as possible; thus, only participants with less than 10% missing observations were included. The number of observations in this study is generally regarded as inadequate for state-space data, but is nevertheless reported here because of the preliminary nature of this study and its potential to generate hypotheses for future studies on this topic (Chow et al., 2010; Zheng et al., 2013).

RESULTS

Clinical Outcomes

The autocorrelation (lag 1) error covariance structures best fits each participant's data with the latter being used due to greater parsimony. Overall, MMTA trajectories suggested that compared to usual care, EFT was associated with greater increase in relationship satisfaction in both partners (Figure 3). Moreover, the specific statistical models that best fit the data were similar for women and men with the largest gender difference being for the size of increase in satisfaction per week (week $\times$ treatment term); women indicated a slightly greater increase.

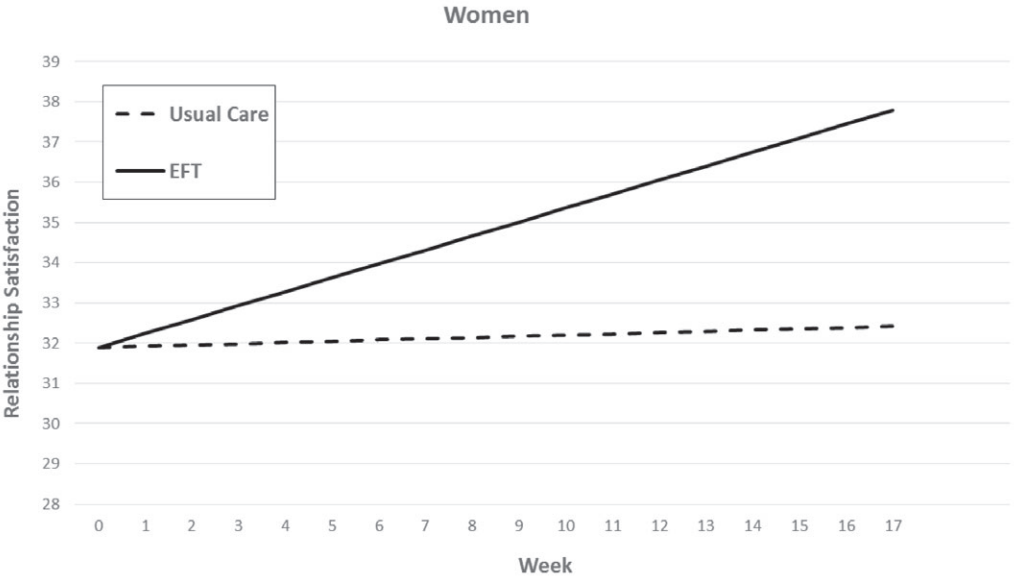
In contrast, gender differences in depression outcomes associated with EFT were noteworthy (Figure 4). In women, the decreasing trajectories of depression associated with EFT and usual care appear to be equivalent. In men, however, the decrease in depression is greater for EFT than usual care (Figure 4) by about 0.25 points on the BDI-II per week.

Mechanisms of Change

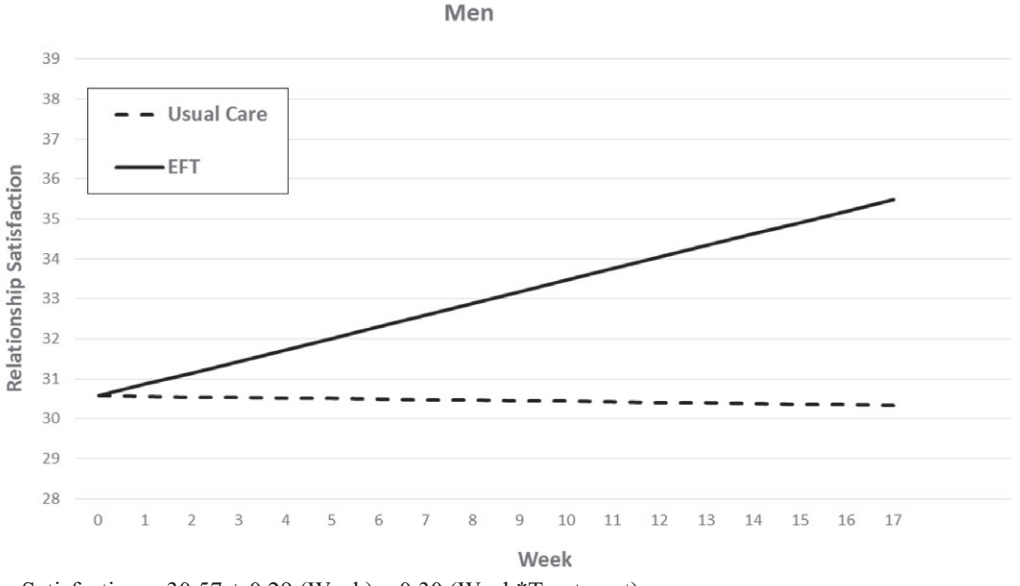
The theoretical USEM model presented pictorially in Figure 2 guided tests to clarify interrelated changes in depression and relationship satisfaction. Columns 3–6 in Tables 2 and 4 present individual's USEM model parameters. Table 1 presents fit statistics among three competing models for women in which model parameters are aggregated (1) for the entire sample, (2) per treatment arm assignment, and (3) by cluster. Cluster analysis suggested three classes of model parameters. Fit statistics indicated that treatment arm differences (Model 2) best accounted for idiographic patterns in the contemporaneous and sequential associations between depression and relationship satisfaction.

Aggregated model estimates for EFT and usual care appear in the leftmost column of Table 2. Although treatment arm statistically accounted for between-person differences, the notable individual differences parameter estimates observed within each subgroup of women suggest additional factors have powerful effects on the interplay between depression and relationship satisfaction for women.

Table 3 presents fit statistics among the three competing models for men. The model that best fit to men's USEM parameters was subgrouping based on cluster analysis, although treatment arms also improved statistically over whole sample aggregation. Cluster analysis suggested four



Satisfaction = 31.89 + 0.35 (Week) – 1.32 (Week*Treatment)

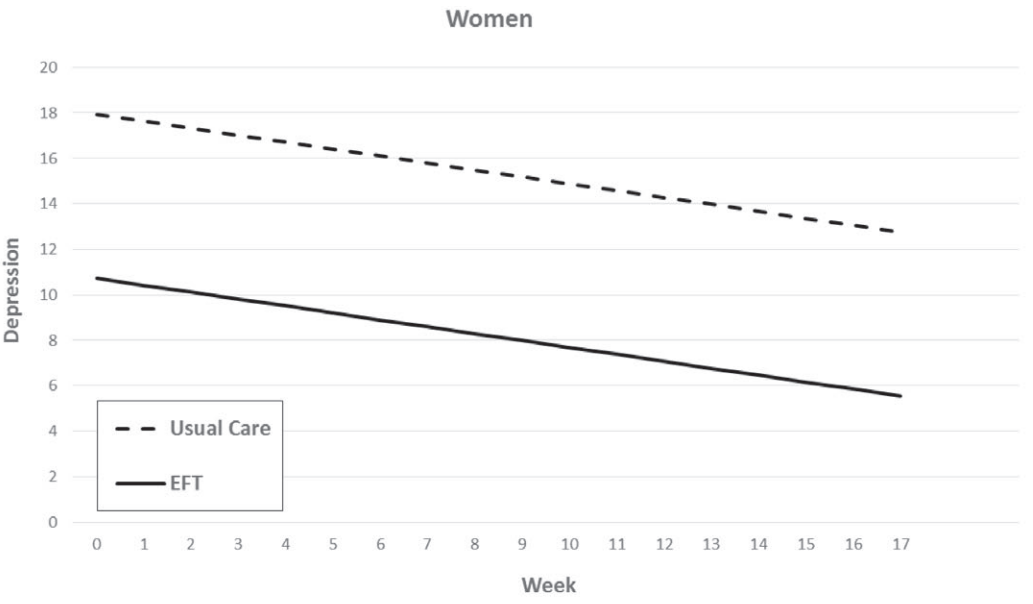


Satisfaction = 30.57 + 0.29 (Week) – 0.30 (Week*Treatment)

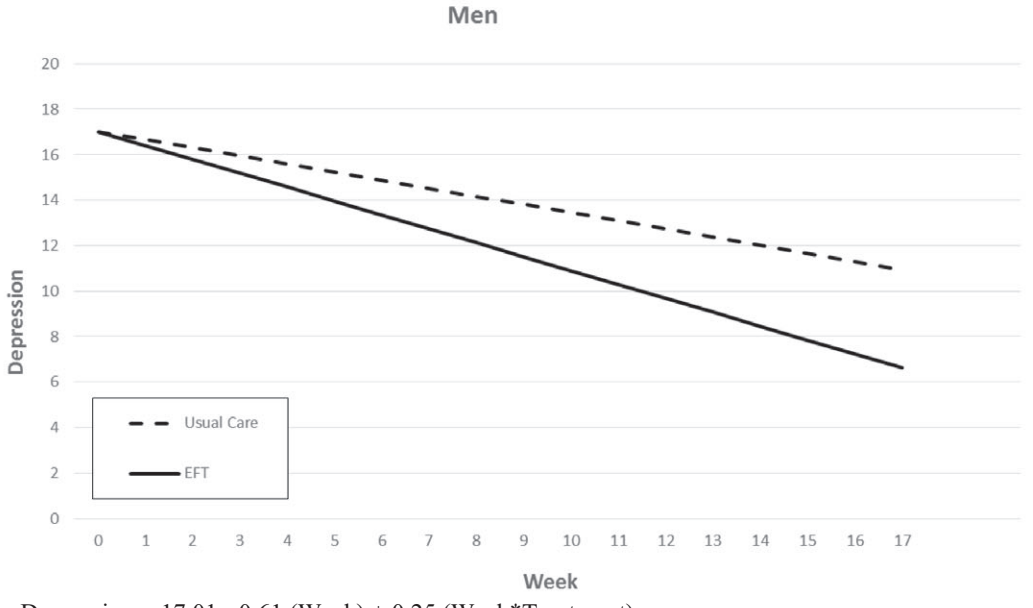
Figure 3. Mixed model trajectory analysis of relationship satisfaction.

distinct clusters. Compared to women, men's between-cluster differences were greater and USEM parameters were more homogeneous within clusters (Table 4).

Men's clusters differed both in terms of how stable satisfaction and depression were from session to session and which preceded the other in terms of change. Cluster 1 men tended to first experience change in depression which preceded changes in relationship satisfaction. In contrast, changes in relationship satisfaction of Cluster 2 generally preceded changes in depression. Two clusters (3 and 4) were characterized only in terms of autocorrelation from 1 day to the next and general lack of sequential change from depression to relationship satisfaction or vice versa. Cluster membership was not associated with treatment (rightmost column of Table 4). Results suggest that a cluster-by-treatment interaction may even better account for men's idiographic patterns; however, the preliminary sample size precluded such modeling.



Depression = 10.72 + 7.20 (Treatment) - 0.30 (Week)



Depression = 17.01 - 0.61 (Week) + 0.25 (Week*Treatment)

Figure 4. Mixed model trajectory analysis of depression.

DISCUSSION

Two prior studies demonstrated the efficacy of EFT for depression among women (Denton et al., 2012; Dessaulles et al., 2003). However, no prior studies have examined the effectiveness of EFT for depression and relationship satisfaction, or have examined the effectiveness of EFT for men with depression. The primary purpose of this randomized controlled pilot effectiveness trial was to add to the body of research by examining the effectiveness of EFT in the treatment of depression in both men and women in community practice settings. A secondary purpose of the study was to begin to explore the potential mechanisms of change. Finally, this study contributed

Table 1
Fit Statistics of Three Competing Subgroupings of Women

Path parameters fixed equal...	χ^2, *df*	AIC	BCC	LR χ^2, *df* vs. Model 1
1. . . .across all participants	1410.09, 171	1488.1	1515.9	–, –
2. . . .within treatment arms	1371.72, 166*	1460.0*	1491.4*	38.1, 5*
3. . . .within each of 3 clusters	1381.24, 161	1479.2	1514.2	28.8, 10

Note. *df* = degrees of freedom; RMSEA = root mean square error of approximation; AIC = Akakie's Information Criterion; BCC = Brown-Cudeck Criterion; LR = likelihood ratio. Models 2 and 3 are not nested and thus were not compared using LR χ^2.
*The best fitting model indicated by the fit statistic.

Table 2
Standardized Path Coefficients of the Four-cluster Solution for Women

		Autocorrelation		Cross-lag paths		
Aggregate estimates	ID	S→S2	D→D_2	S→D_2	D→S_2	Cluster path characteristics
EFT:	2	0.323	0.367	−0.348	−0.501	Autocorrelation in
S→S_2 = 0.40;	3	0.521	0.545	−0.779	−0.015	depression and
D→D_2 = 0.50;	11	0.891	0.671	−0.181	0.160	satisfaction; negative
S→D_2 = −0.17;	15	0.100	0.509	0.208	−0.569	cross-lagged
D→S_2 = −0.14	21	0.690	0.320	−1.012	0.056	correlation from
	22	0.063	0.616	0.055	−0.184	satisfaction to
	24	0.377	−0.267	−0.407	0.505	depression
	27	0.566	0.200	−0.075	−0.029	
	28	0.716	0.170	−0.355	0.864	
UC:	8	0.635	0.477	−1.627	−0.060	Autocorrelation in
S→S_2 = 0.22;	16	0.236	0.470	0.168	0.166	depression; little
D→D_2 = 0.31;	20	−0.831	0.076	0.268	−0.523	cross-lagged
S→D_2 = −0.14;	23	0.311	−0.024	−0.352	0.014	correlation from
D→S_2 = −0.10	25	0.526	0.312	−0.317	−0.151	depression to
	26	−0.161	0.629	1.367	0.055	satisfaction

Note. S = relationship satisfaction; D = depression.

to the literature on clinical research by using an innovative approach to analyzing pilot trials with frequent assessments and small sample sizes (Ridenour et al., 2016).

Examining Clinical Outcomes

Our findings provide additional support for the use of EFT in concurrently treating depression and couple distress. Over the 15-session treatment, both men and women in the EFT group experienced statistically significant gains in their couple satisfaction when compared with usual care. Men and women in both the EFT and usual care groups experienced statistically significant decreases in depression, providing additional evidence of the effectiveness of couple therapy in treating depression. Depressive symptomatology for men in the EFT group improved significantly compared to the usual care group. An attachment perspective offers insight into the findings. EFT

Table 3
Fit Statistics of Three Competing Subgroupings of Men

Path parameters fixed equal. . .	χ^2, *df*	AIC	BCC	LR χ^2, *df* vs. model 1
1. . . . across all participants	1199.09, 171	1277.1	1305.0	–, –
2. . . . within treatment arms	1183.18, 166	1271.2	1302.6	15.9, 5
3. . . .within each of 4 clusters	1124.27, 151*	1242.3*	1284.4*	58.9, 20*

Note. *df* = degrees of freedom; RMSEA = root mean square error of approximation; AIC = Akakie's Information Criterion; BCC = Brown-Cudeck Criterion; LR = likelihood ratio. Models 2 and 3 are not nested and thus were not compared using LR χ^2.
*The best fitting model indicated by the fit statistic.

fosters a sense of relationship safety as couples are able to frame issues within the context of attachment needs, threats, and longings (Johnson, 2004). EFT identifies the couple's cycle as the target of change, rather than the individual's symptoms, which allows the couple to work together. As a result, this target may protect depressed men from experiencing overwhelming feelings of isolation, helplessness, and hopeless to overcome symptoms of depression alongside their partner (Wittenborn et al., 2012). Overall, when taking into account these findings for both depression and couple satisfaction, there is support for the effectiveness of EFT, especially in treating depression in men. These findings are impressive in light of the stringent comparator of usual care and study design that allowed couples with concordant MDD—who are typically less likely to improve —to participate.

Exploring Mechanisms of Change

Our findings also provide some interesting preliminary information regarding the potential order effects and change mechanisms in the treatment of depression and couple satisfaction, which we hope will provide impetus for future research in this area. Findings suggest that for some couples, changes in depression and couple satisfaction seem to be occurring simultaneously, but independently. In other words, improving depressive symptoms is not contingent upon improving relationship satisfaction first. For other couples, change in couple satisfaction seems to be the impetus for change in depression. However, the opposite is also true for others, with changes in depression resulting in changes in couple satisfaction. Interestingly, this latter effect existed for some couples receiving EFT treatment, even though the focus of EFT is hypothesized to be on enhancing relationship quality and not depression per se. Yet this makes some sense when one considers depression as a systemic syndrome (Wittenborn, Rahmandad, Rick, & Hosseinichimeh, 2016). Targeting one cause of disorder (i.e., marital quality) could create enough of a perturbation in the system to alleviate symptomatology in both marital quality and depression. It also makes sense given that some EFT interventions specifically target intrapsychic change in addition to interpersonal change (Johnson, 2004).

Clinical Implications

Research and clinical guidelines indicate that psychotherapy is the most effective and enduring treatment of mild-to-moderate depression, while psychotherapy combined with antidepressants is recommended for severe depression (Hollon et al., 2005; National Institute for Health and Care Excellence, 2009). Given the harmful side effects of antidepressant medications, it is important for couple therapists to consider the severity of a patient's depressive symptoms before referring a patient out for antidepressant medication. Mild-to-moderate depression can be treated effectively with couple therapy, particularly when marital distress is also a concern. Only patients with severe depression need to be provided psychiatry referrals for antidepressant medication, which should be taken in addition to receiving couple therapy.

Table 4
Standardized Path Coefficients of the Four-cluster Solution for Men

Aggregate estimates	ID	Autocorrelation		Cross-lag paths		Cluster path characteristics	Study arm
		$S \rightarrow S_2$	$D \rightarrow D_2$	$S \rightarrow D_2$	$D \rightarrow S_2$		
Cluster 1:	20	−0.02	0.64	−0.30	−0.96	Autocorrelation in depression only; Granger	UC
$S \rightarrow S_2 = 0.03$;	25	−0.05	0.71	−0.13	−0.56	causality from depression to satisfaction	UC
$D \rightarrow D_2 = 0.26$;	27	−0.08	0.71	0.04	−0.54		EFT
$S \rightarrow D_2 = -0.37$;							
$D \rightarrow S_2 = -0.35$							
Cluster 2:	11	1.09	0.01	−0.69	0.26	Autocorrelation in satisfaction only;	EFT
$S \rightarrow S_2 = 0.77$;	21	0.50	−0.09	−0.83	−0.40	Granger causality from satisfaction to	EFT
$D \rightarrow D_2 = 0.02$;	26	0.47	0.05	−0.39	−0.28	depression; lesser sequence from	UC
$S \rightarrow D_2 = -0.71$;						depression to satisfaction	
$D \rightarrow S_2 = -0.05$							
Cluster 3:	8	0.16	0.50	0.31	−0.24	Moderate autocorrelation for depression;	UC
$S \rightarrow S_2 = 0.43$;	15	0.16	0.50	0.00	−0.20	small-to-nil cross-lagged correlations	EFT
$D \rightarrow D_2 = 0.31$;	22	−0.33	0.33	0.11	−0.23		EFT
$S \rightarrow D_2 = -0.17$;							
$D \rightarrow S_2 = -0.14$							
Cluster 4:	2	0.65	0.64	−0.32	−0.20	Large autocorrelations for depression and	EFT
$S \rightarrow S_2 = 0.40$;	3	0.86	0.76	−0.19	0.01	satisfaction; moderate-to-nil cross-lagged	EFT
$D \rightarrow D_2 = 0.50$;	16	0.54	0.90	−0.04	−0.45	correlations	UC
$S \rightarrow D_2 = -0.17$;	23	0.63	0.91	−0.02	0.19		UC
$D \rightarrow S_2 = -0.14$	28	0.55	0.76	0.12	0.05		EFT

Note. S = relationship satisfaction; D = depression. Model parameters of one participant (ID 24) did not fit into any of the clusters; they were −0.71, 0.07, 2.23, and −0.09, respectively.

This study supports the use of EFT for mild-to-moderate depression and relationship distress. EFT outperformed usual care, which included behavioral, narrative, Gottman, Bowen, psychodynamic, and eclectic approaches, indicating EFT may produce more meaningful changes than other couple therapy approaches. This study shows that EFT does not need to be adapted in order to target mental disorders such as depression; EFT can be delivered as described in Johnson (2004). In general, findings show that couple therapy can directly alleviate depression. Therapists and patients can expect a range of experiences in symptom improvement through the course of therapy. For some patients, couple therapy may directly improve depression first, which may lead to improved marital distress in later weeks. For others, couple therapy may directly alleviate marital distress and then reduce depressive symptoms. Finally, other couples may experience relief from depression and marital distress simultaneously.

Limitations

There are some limitations to this study that suggest the need for future research. Despite a novel analytic approach that made it possible to conduct rigorous statistical analyses across many time points, we acknowledge that a sample size of 16 couples makes it difficult to know if the results generalize to other populations and settings. A fully powered effectiveness trial is an important next step in EFT research. Also, while randomization procedures were followed carefully, women in the EFT condition began treatment with lower depressive symptomatology compared to usual care simply due to chance. The randomization failure may explain why women in both groups performed similarly well, while EFT outperformed usual care for men. Finally, it is important to note that half of the EFT therapists held degrees in marriage and family therapy (MFT), while none of the usual care therapists held MFT degrees. While we were careful to enroll only those therapists who were actively practicing couple therapy in their communities and there is no research to suggest the quality of a clinician's performance may differ by the mental health–related degree they earned, it is possible that an MFT degree could have advantaged clinicians in the EFT condition given the additional couple therapy curriculum common in MFT degree programs.

CONCLUSION

Findings from this study support the effectiveness of EFT for couples in which depression and relationship dissatisfaction co-occur. This study provides important additional information regarding the mechanisms by which couple therapy relieves depressive symptoms and relationship distress. Our findings highlight that the order of effects among depressive symptoms and relationship dissatisfaction may vary by patient, and that different change mechanisms may be involved. As we understand the links between the quality of relationships and mental health problems such as depression, and we understand more about how to help couples shape positive relationships, couple interventions can begin to take their place as part of integrated health care that targets the self and social system.

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