A Comparison of the Generalization of Behavioral Marital Therapy and Enhanced Behavioral Marital Therapy

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ABSTRACT

This study examined the generalization of behavioral marital therapy (BMT) and enhanced behavioral marital therapy (EBMT), which added cognitive restructuring, affect exploration, and generalization training to BMT. Couples' communication and cognitions were assessed in the clinic and at home. Both BMT and EBMT were effective in decreasing negative communication behaviors and cognition across settings, but there was little evidence of differential generalization or change between the treatments. A series of regression equations showed no significant association between the extent of change in communication or cognitions and change in frequency of marital disagreements or marital satisfaction. It is concluded that BMT results in impressive generalization of communication and cognitive change, but it remains to be demonstrated that these changes are crucial to improvements in marital satisfaction.

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Behavioral marital therapy (BMT) traditionally has focused on promoting positive behavior exchange and communication and problem-solving skills training (Jacobson & Margolin, 1979). Although this approach consistently has been found to be superior to no treatment (Hahlweg & Markman, 1988), a substantial minority of couples show no improvement after BMT (Jacobson et al., 1984). Relapse following initial gains in marital satisfaction is very common (Jacobson, Schmaling, & Holtzworth-Munroe, 1987), and the majority of couples' marital satisfaction 4 or 5 years after BMT is not significantly higher than pretreatment levels (Snyder, Wills, & Grady-Fletcher, 1991a).

As the limitations of traditional BMT have been recognized, two general suggestions have been offered for improving BMT. First, a number of authors have suggested that the focus of BMT be broadened to
encompass cognitive and affective change strategies (Baucom & Epstein, 1990; Beach, Sandeen, & O’Leary, 1990; Jacobson, 1991). Second, others have suggested that the effects of BMT may not generalize adequately to crucial interactional settings and that additional attention to generalization enhancement is needed (Behrens, Sanders, & Halford, 1990; Halford, Gravestock, Lowe, & Scheldt, 1992). In the sections following, we consider these suggestions in turn.

Attempts to enhance BMT by adding treatment components have not been demonstrated to improve outcome. Cognitively focused marital treatments do modify maladaptive relationship beliefs and improve marital satisfaction (Emmelkamp et al., 1988), but the addition of such interventions to BMT does not increase marital satisfaction gains significantly (Baucom & Lester, 1986; Baucom, Sayers, & Sher, 1990).

Two new approaches to modifying marital affect recently have been described: emotional expressiveness training (EET; Baucom et al., 1990) and exploration of the individual partners’ experience of repetitive patterns of emotionally charged marital interactions (affect exploration; Greenberg & Johnson, 1986; Jacobson & Holtzworth-Munroe, 1986; Snyder & Wills, 1989). The EET approach trains labeling and self-disclosure of emotions but adding EET does not enhance BMT effects significantly (Baucom et al., 1990). Interventions focusing on affect exploration have been proposed by insight-oriented (Greenberg & Johnson, 1988; Snyder & Wills, 1989) and behavior-oriented researchers (e.g., Jacobson & Holtzworth-Munroe, 1986). Elements that are common to the various affect exploration strategies are the encouragement of partners to focus on subjective experience of emotion arising from marital interaction and to verbalize their sense of meaning about the experience and interpretation by the therapist of the clients’ verbalizations in terms of recurrent relationship and personal themes. There is dispute as to the extent to which the affect exploration procedures advocated by different therapists are similar (Jacobson, 1991; Snyder, Wills, & Grady-Fletcher, 1991b). Two recent studies found that affect exploration—based therapy produces better long-term improvement in marital satisfaction than traditional BMT (Johnson & Greenberg, 1985; Snyder et al., 1991a), though it has been argued that current practice of BMT incorporates many of the procedures labeled as affect focused (Jacobson, 1991). The possible additive effect of affect-focused interventions to traditional BMT is untested.

One hallmark of behavior therapy is its commitment to affecting changes in clients' behaviors that generalize across settings and time (Baer & Roberts, 1981; Stokes & Baer, 1977). Yet the generalization of the effects of BMT, or its various suggested enhancements, rarely has been assessed. Setting variables have a significant impact on marital conflict, and high risk of conflict has been associated with being at home and staying busy in the kitchen during the working week, discussing topics arising from current activity, and having higher life stress (Halford et al., 1992). The couples who do not respond to BMT, and those who relapse after initially successful therapy, may reflect failures of the effects of therapy to generalize from clinic to critical home settings. For example, training in communication and problem-solving training is central to traditional BMT, yet couples report at 2 years posttherapy that they rarely apply trained skills at home, and the extent that they do apply trained skills at home does not predict marital satisfaction (Jacobson et al., 1987). The validity of self-reports of marital interaction is open to dispute, and these results highlight that generalization should be assessed rather than presumed in BMT.

Behrens et al. (1990) conducted the only published observational assessment of the generalization of treatment effects of BMT. In a study of four maritally distressed couples, BMT produced improvements in clinic-based communication skills training that did generalize to each of two home settings. However, only communication behaviors were assessed, and the extent of generalization of other treatment effects (e.g., cognitions) is unknown. Furthermore, all assessed settings involved planned interactions on an agreed topic, and the generalization to communication during unplanned interactions is unknown. In the
current study, couples monitored stressful marital interactions to assess impact on unplanned interactions.

Assessment of cognitive change following marital therapy has used predominantly global self-report scales, such as the Relationship Beliefs Inventory (RBI) or the Irrational Beliefs Test (Baucom et al., 1990), that ignore situational variations in cognitions. Implicitly, this assumes that important cognitions do not vary cross-situationally and that cognitive changes produced by marital therapy do generalize across settings. Reported cognitions during marital interaction differ significantly across settings, and these differences covary and predict behavioral negativity (Halford & Sanders, 1990). Consequently, the assumption of cross-situational consistency of cognitions is not warranted.

In this study, we sought to extend the literature on marital therapy by comparing the effects of BMT and an enhanced BMT (EBMT) on behavior and cognitions in clinic and home settings and by relating the extent of generalized change to clinical outcome. The BMT approach focused on the traditional components of behavior exchange and communication skills training. The EBMT approach added cognitive and affective change strategies and generalization enhancement procedures to the BMT. We hypothesized that couples receiving EBMT would generalize behavioral and cognitive changes across settings more than couples receiving BMT. Furthermore, on the basis of the assumption that generalized change would be crucial to clinical improvement, we predicted that the extent of generalized change would predict improvement on marital satisfaction.

Method

Subjects

Subjects in this study were 26 couples presenting for marital therapy to the Behavior Research and Therapy Centre, an outpatient facility run jointly by the Departments of Psychiatry and Psychology of the University of Queensland in Brisbane, Australia. From an initial pool of couples, subjects were selected who met the following criteria: (a) Neither partner reported any history of psychiatric hospitalization; (b) neither partner currently met Diagnostic and Statistical Manual of Mental Disorders (3rd ed., rev.; DSM—III—R; American Psychiatric Association, 1987) criteria for an Axis I diagnosis; (c) at least one partner had a score of less than 100 on the Dyadic Adjustment Scale (DAS; Spanier, 1976), which is a commonly used cutoff to classify marital distress; and (d) the couple had been married for at least 1 year.

Subjects were randomly assigned to either BMT or EBMT, 13 couples per condition. A series of analyses of variance (ANOVAs) showed there were no significant differences between the groups at pretreatment on marital satisfaction, steps taken toward divorce, age, years married, years of education, or number of children. For the whole sample mean DAS scores were 83.2 (SD = 10.6) for husbands and 79.2 (SD = 14.7) for wives, reflecting moderate-to-severe marital distress. All couples completed the Marital Status Inventory (MSI), which is a 14-item Gutman rating scale that assesses steps taken toward separation and divorce (Weiss & Cerreto, 1980). The mean score on the MSI for husbands was 4.4 (SD = 3.2) and for wives was 5.9 (SD = 3.7), which indicated that many couples were actively considering separation. Couples had been married an average of 15.7 years (range = 1.5 to 35.0 years), and most had at least one child (M = 2.5). The average age of husbands was 43.2 years and that of wives was 40.1 years. Husbands and wives both averaged 12.5 years of formal education. Occupational status was classified using Congalton and Daniel's (1976) system and yielded a mean of 3.9, which corresponds to lower middle class.

Measures Self-report measures.
A battery of self-report inventories were administered to each partner at pre- and posttreatment and at a 3-month follow-up. This battery consisted of the DAS (Spanier, 1976), the Areas of Change Questionnaire (ACQ; Margolin, Talovic, & Weinstein, 1983), the Positive Feelings Questionnaire (PFQ; O'Leary, Fincham, & Turkewitz, 1983), and the RBI (Eidelson & Epstein, 1982). The DAS is a widely used 32-item self-report measure of general marital satisfaction (Spanier, 1976). The ACQ asks respondents to rate the amount of change they want their partner to make in each of 34 specific behaviors from −3 do much less to 0 no change to 3 do much more. The sum of the absolute scores is an index of the total amount of requested change, and this score discriminates between maritally distressed and nondistressed couples (Margolin et al., 1983). The PFQ is a 17-item questionnaire assessing the overall level of positive affect individuals feel toward their spouse, which correlates with marital satisfaction and communication (O'Leary et al., 1983). The RBI is a 40-item scale assessing irrational beliefs about relationship, which correlates with marital distress (Eidelson & Epstein, 1982; Epstein, Pretzer, & Fleming, 1987).

**Observational measures.**

Assessments of marital communication were conducted in the clinic and at home at pre- and posttreatment and at a 3-month follow-up. In both settings, couples were instructed to discuss for 10 min a predetermined topic selected from the ACQ items on which partners had requested behavior change from each other. In the clinic setting, the discussion was videotaped. In the home setting, couples were instructed to select a time and a place with minimal distractions and interruptions, were given an audiocassette recorder, and were asked to record the discussion. The home setting differed from the training setting along several dimensions (i.e., it was a different place and time; it was a couple-controlled, not therapist-controlled, venue; and it was audiotaped rather than videotaped). Assessment in this setting was intended to assess the extent of generalization of behavioral and cognitive treatment effects across these dimensions. Couple's cognitive construction of their interactions were assessed by a thought-listing procedure (Halford & Sanders, 1988). After each of the problem discussions for each setting, each partner individually completed a thought-listing sheet that contained 30 blank boxes. The partners were asked to list any thoughts they had experienced, using Caccioppo and Petty's (1981) procedure, during the immediately preceding discussion. In addition, each partner rated their affect during the interaction on a 7-point Likert-type scale from 1 = very negative to 7 = very positive.

Video and audio recordings were coded to assess interaction behaviors. Two observers received approximately 30 hr of training in the use of the Interactional Coding System (ICS). In the ICS, each verbal response by each partner is classified into 1 of 12 verbal content codes and also is assigned to one of three nonverbal categories (Hahlweg et al., 1984). The ICS reliably discriminates between distressed and nondistressed couples, particularly on the frequency of use of negative responses (Hahlweg et al., 1984; Halford, Hahlweg, & Dunne, 1990). Coding using the ICS is time consuming; a 10-min tape of interaction takes 2 to 3 hr of coding time. As we wished to assess only if communication had improved across settings, we simplified the coding procedure to make it less time consuming. In the ICS there are four categories of negative verbal behavior. Interaction was sampled in observation blocks of 20 s; the blocks were repeated 30 times for each observation setting. Observers used a partial interval time-sampling procedure to record the occurrence or nonoccurrence of any category of negative verbal communication in each interval. In addition, if the subject's voice tone was negative, then it was defined as a negative communication. The measures derived were the percentage of intervals in which husbands and wives used negative communication. This simplified system lacks the descriptive richness of the ICS, but it provides an index of communication negativity that has been found to be sensitive to therapeutic change (Behrens et al., 1990).

One observer scored all tapes, while a second observer coded a randomly selected sample of one third of all tapes to assess interobserver reliability. Coders were not informed of the treatment phase, the nature
of different settings used, or the experimental hypotheses. Coders were able to code 10 min of interaction with this simplified system in approximately 15 to 20 min. Point-by-point agreement between raters was calculated (κ = 0.83 for the videotapes and κ = 0.76 for the audiotapes).

Thoughts reported on the thought-listing forms were classified into one of the following categories by trained observers: self-referent, partner-referent, or other-referent; they were then classified into either positive or negative valence in the same manner as described by Halford and Sanders (1988). Halford and Sanders found that the procedure can allow researchers to differentiate reliably between distressed and nondistressed couples. The measure derived from the coding of the thought-listing procedure was the percentages of all reported thoughts that were negative partner-referent. We focused on negative partner-referent cognitions because these have been shown to be associated with distressed marital communication (Halford & Sanders, 1990). Observers received approximately 10 hr of training in the system, consisting of memorizing code definitions, practice coding, and feedback. One coder rated all the forms and a second coder coded a randomly selected one third of all forms. Interrater reliability of the thought-listing classification of negative partner-referent cognitions was κ = 0.80.

Each partner completed the Marital Interaction Diary (MID) for 7 consecutive days at pre- and posttreatment and at a 3-month follow-up. The diary was adapted from Halford et al. (1992). At the end of each day, partners recorded in separate diaries their global rating of marital satisfaction, and they wrote event records for any stressful interactions that they experienced with their spouses during the previous 24 hr. A stressful interaction was defined as any exchange (e.g., overt fighting or nasty words) that was found aversive. Each spouse independently rated how intense they found the stressful exchange on a 7-point Likert-type scale from 1 = minimally stressful to 7 = extremely stressful. From this diary, the number and mean intensity of stressful interactions were derived. These scores have been shown to discriminate between distressed and nondistressed couples (Halford et al., 1992) and to be sensitive to change from marital therapy (Behrens et al., 1990).

Treatment

Couples were randomly assigned to receive one of two treatments: BMT or EBMT. Detailed therapy manuals were written and provided to therapists for each condition. The BMT approach focused on behavior exchange and communication and problem-solving training, as has been described by Jacobson and Margolin (1979). The EBMT approach added cognitive and affective change strategies and generalization enhancement procedures. Because EBMT combined several different recent enhancements to BMT, which have not previously been combined, we describe this treatment in the following section.

The EBMT approach included the cognitive restructuring described by Baucom and Lester (1986) and elaborated in Baucom and Epstein (1990). More specifically, couples’ maladaptive relationship beliefs and attributions were identified from their completion of the RBI, from the thought-listing forms, and from statements made during therapy. The therapists used usual cognitive procedures, such as socratic questioning and challenging, and self-instructional training to change such cognitions.

Affect exploration followed the procedures described by Jacobson and Holtzworth-Munroe (1986) and Jacobson (1989) to explore the meaning of high affect arousal marital interactions to participants. High-affect interactions were identified from couple’s self-monitoring of stressful interactions at home and interactions that occurred in therapy. The therapist used questions, paraphrases, and interpretations to identify each partner’s thoughts and feelings during the interaction. Therapist interpretations were used to highlight recurrent patterns of marital interaction, particularly those relating to closeness—distance and approach—withdraw patterns (Jacobson, 1989). The therapist thereby encouraged cognitive and
affective change about the interactions. The couple and therapist also discussed alternative patterns of interaction that were possible to change unhelpful and repetitive patterns.

Generalization enhancement consisted of couples completing communication tasks in identified high-risk settings at home and audiotaping these interactions for review with the therapist. In review sessions, the therapist encouraged each partner to identify their own strengths and weaknesses in communication and to identify specific strategies to overcome interactional problems. Identification and planning for future stressors and high-risk situations were undertaken to enhance generalization and maintenance of treatment effects.

Each treatment condition consisted of a minimum of 12 and a maximum of 15 weekly couple sessions, and each session lasted approximately 1½ hr. The treatment manuals were applied in a clinically flexible manner, which means that each couple received all the treatment components described in the manual for their assigned treatment condition but that the sequencing and time devoted to particular components varied according to the therapist’s assessment of couple’s needs.

There were five therapists in the study; two were doctoral-level psychologist with more than 10 years experience in marital therapy and three were master's-level psychologists with between 1 and 3 years experience. All therapists attended weekly peer supervision sessions in which videotapes of therapy sessions were reviewed to ensure adherence to the experimental protocol. In addition, the two least experienced therapists attended weekly individual supervision sessions with W. Kim Halford or Matthew R. Sanders. Each therapist was assigned an equal number of couples in each treatment condition.

Results

The dependent measures in this study fall into four areas: (a) self-reports of general relationship functioning, (b) observed behavior during dyadic interaction, (c) self-reports of cognition and affect during those interactions, and (d) self-monitored stressful marital interactions at home. Separate multivariate analyses of variance (MANOVAs) were conducted on each of these sets of variables.

Changes in Self-Report Measures

A three-way MANOVA of Treatment × Gender × Time, with repeated measures on the last two factors, was conducted on the self-report measures of the DAS, ACQ, PFQ, and the RBI. This analysis showed no main effect of treatment, but it did show significant main effects for time, \( F(8, 10) = 5.37, p < .01 \), and gender, \( F(4, 14) = 3.86, p < .05 \). None of the interaction terms was significant. Means and standard deviations at each of the time points for the treatment groups are presented in Table 1. Univariate ANOVAs showed significant increases over time in reported marital satisfaction on the DAS, \( F(2, 34) = 9.44, p < .001 \), and positive feelings on the PFQ, \( F(2, 34) = 11.1, p < .001 \). There were significant decreases in requested behavior change on the ACQ, \( F(2, 34) = 7.31, p < .01 \), and irrational beliefs on the RBI, \( F(2, 34) = 25.3, p < .001 \).

On each of the self-report measures there was evidence of relapse toward pretreatment levels at follow-up, but some improvements in relation to pretreatment were still evident on a number of measures. Univariate contrasts that were collapsed across treatments showed a trend toward higher reported marital satisfaction on the DAS at follow-up than at pretherapy for men, \( F(1, 19) = 3.91, p = .06 \), but there was no significant difference between pretreatment and follow-up for women. Men also reported significantly more positive feelings on the PFQ at follow-up than before therapy, \( F(1, 19) = 2.70, p < .01 \), but again there was no significant effect for women. In relation to pretherapy, at follow-up there were significant reductions in endorsement of irrational beliefs by men \( F(1, 19) = 10.34, p < .01 \), and
women, \( F(1, 19) = 17.85, p < .001 \), and significant reductions in requested behavior change on the ACQ for men, \( F(1, 19) = 11.35, p < .01 \), and a nonsignificant trend for women, \( F(1, 19) = 3.09, p = .09 \).

Women did not differ significantly from men on their mean reported marital satisfaction or requested behavior change, but women reported significantly lower positive feelings toward their spouse on the PFQ, \( F(1, 17) = 10.10, p < .01 \), and fewer irrational beliefs on the RBI, \( F(1, 17) = 6.44, p < .05 \), than did men. The nonsignificant interaction terms indicate there were no differences in treatment response associated with gender or treatment condition on the measures.

**Changes in Communication and Cognitions**

There were some missing data on the observational measures because of technical problems with home recordings and the failure of some couples to provide home recordings at follow up. Because a MANOVA uses listwise case deletion (i.e., a subject with any data point missing is deleted from all analysis), the result is a small sample size in which to analyze a four-way MANOVA of Treatment (BMT or EBMT) \times Time (pretreatment, posttreatment, and follow-up) \times Gender \times Setting (clinic or home). Consequently, we conducted the analysis using only two time periods of pre- and posttreatment. This analysis revealed no significant main effect of treatment or setting but significant main effects for time, \( F(1, 19) = 69.72, p < .05 \), and gender, \( F(1, 19) = 5.79, p < .05 \). The Treatment \times Time interaction was significant, \( F(1, 19) = 11.72, p < .001 \), but none of the other two-way or higher order interactions was significant.

The mean percentages of time intervals in which there was negativity for each treatment and gender are presented in Figure 1. Despite random assignment to treatments, the BMT group showed significantly higher levels of negativity in interaction before treatment in both the home and clinic settings. This difference was evident for both sexes. Consequently, a two-way analysis of covariance (ANCOVA) of Treatment \times Gender was conducted on the change scores from pre- to posttreatment, and pretreatment scores were used as covariates. This analysis revealed that the BMT group showed significantly greater reductions in negativity than the EBMT group even when the pretreatment differences were partialled out, \( F(1, 18) = 4.44, p < .05 \). We found no other main effects or interaction effects that were significant with the ANCOVA.

Two separate four-way MANOVAs (Treatment \times Time \times Setting \times Gender) were conducted on the thought-listing and affect ratings from the problem-solving interactions. The pattern of results is presented in Figure 2 and was the same for the two measures. There was a significant reduction over time in the percentage of negative partner-referent cognitions reported, \( F(1, 17) = 17.47, p < .05 \), and an increase in the positivity of reported affect, \( F(1, 17) = 31.11, p < .05 \). No other main or interaction terms were significant for either analysis. Thus, there were clear treatment effects, but the effects were not significantly different among treatments, settings, or gender.

Means of self-monitored frequency and intensity of stressful marital interactions are presented in Figure 3 and were analyzed with a three-way MANOVA (Treatment \times Time \times Gender). The main effect of time was significant, \( F(2, 15) = 3.42, p < .05 \), as was the Sex \times Time interaction, \( F(4, 13) = 3.30, p < .05 \). Univariate ANOVAs showed that the frequency of stressful interaction decreased significantly over time, \( F(2, 32) = 6.90, p < .005 \), but that the mean intensity of reported interactions did not change significantly over time. From Figure 3 it is evident that the reduction in reported number of stressful interactions at posttreatment was maintained to follow-up. Univariate contrasts showed that both men and women reported significantly fewer stressful interaction at follow-up than at pretreatment, \( F(1, 19) = 12.27, p < .01 \), and \( F(1, 19) = 6.85, p < .05 \), respectively. The significant multivariate Sex \times Time interaction was due to women reporting significantly smaller reductions in the frequency of stressful interactions over time than men, \( F(1, 16) = 9.43, p < .05 \).
In summary, each of the treatments produced significant improvements on the global self-report scales and significant decreases in observed interactional negativity, self-reported cognitions, and affect across settings. Relapse toward pretreatment levels was evident at follow-up for some of the self-report measures, but there was evidence of sustained reductions in irrational relationship beliefs, stressful marital interactions, and desired behavior change. The absence of significant setting effects demonstrates generalization of treatment effects. There also was a significant reduction in the frequency of self-monitored stressful marital interactions occurring in target settings. On most measures, there was little evidence of significant gender or treatment condition differences. However, the BMT treatment produced significantly greater behavior change on the interaction measures.

**Prediction of Response to Treatment**

A fundamental presumption of the communication skills training emphasis in traditional BMT is that change in communication mediates reductions in stressful marital interactions and increases in marital satisfaction (Iversen & Baucom, 1990). To assess this presumption, we conducted a series of multiple regression analyses with the extent of change of observed interactional behavior in the clinic and home settings as the predictor variables and with changes in other indices of marriage quality as the criterion variable. Bearing in mind that there may be gender differences in response to BMT, we analyzed the male and female self-report data separately.

In the first regression analysis, the differences in negativity of the male and female partners between pre- and posttherapy in the clinical and home setting were entered as predictors, and the change from pre- to posttherapy in the number of male-reported stressful interactions in the MID was entered as the dependant variable. The resultant equation did not account for a significant proportion of the variance. The same predictor variables were entered into a second regression equation and failed to account for significant proportions of variance in the women's reports of the number of stressful interactions.

Additional regression analyses were conducted in an attempt to predict the extent of first male-reported and then female-reported pre- to posttherapy changes on the DAS from the changes in communication behaviors. Again, the resultant equations failed to account for significant proportions of the variance in marital satisfaction.

A second set of four regression equations was conducted. In each analysis, the men's and women's reports of pre- to post-therapy changes in negative partner-referent cognitions during interaction in the clinical and home settings were entered as predictor variables. The criterion variables were, respectively, pre- to posttherapy changes in the male- and female-reported number of stressful interactions and marital satisfaction on the DAS. None of the resultant equations accounted for significant proportions of variance in the respective dependant variables. Thus, the changes in observed behavior and reported cognition during problem solving did not covary with the observed reductions in the number of stressful interactions or the increases in marital satisfaction.

**Clinical Significance of Outcome**

Jacobson and Revenstorf (1988) emphasized that simply reporting the mean group changes that occur after therapy does not describe the variability and clinical significance of change obtained. They suggested that when the magnitude of therapeutic change for a given subject exceeds 1.96 standard errors on a key dependent measure, then the change is unlikely ($p < .05$) to be due to measurement error and that a statistically reliable change has occurred. The percentage of subjects who evidence reliable change (called the Reliable Change Index; RCI) is a measure of variability in response to treatment. A second variable was defined as the Clinical Change Index (CCI), which is based on the assumption that the dependent measure has two distributions, one for the normal population and one for the clinical population of interest. On the basis of normative data, the point at which the two distributions intersect...
can be calculated, and this denotes a criterion score beyond which the subject is more likely to have been drawn from the normal than from the clinical population. Subjects exceeding this criterion score are regarded as no longer clinically distressed.

The DAS scores have been used in several previous studies to assess the variability and clinical significance of effects of BMT using the RCI and CCI variables (e.g., Jacobson et al., 1984). A series of 2 × 2 (Treatment × Changed vs. Not Changed) chi-square analyses was conducted comparing the numbers of subjects who changed to a statistically reliable extent with those who were no longer maritally distressed at posttreatment and at follow-up. None of these analyses were significant, which indicated that there were no significant differences between the treatment groups on these indices of outcome. Consequently, we present the data collapsed across treatment groups.

Nineteen of 26 males' scores (73%) and 17 of 26 females' scores (65%) on the DAS increased to a statistically reliable extent from pre- to posttreatment. There was evidence of relapse at follow-up, though many couples still reported improved satisfaction, with 11 of 26 men (42%) and 10 of 26 women (39%) still reporting significant improvement at the time of follow-up. Fourteen of 26 men (54%) and 11 of 26 women (42%) met the stricter criterion of being in the nondistressed range of marital satisfaction at posttherapy. Again, there was evidence of some relapse in that 8 of 26 men (31%) and 7 of 26 women (27%) were nondistressed at follow-up. Thus, over two thirds of subjects showed statistically reliable improvement over the course of treatment, but only approximately one third showed sustained functioning in the nondistressed range of marital satisfaction through follow-up.

**Discussion**

This study examined the generalization effects of BMT and EBMT. Both therapies produced significant reductions in levels of communication negativity, reported negative cognitions, and reported negative affect clinic and home settings. Significantly reduced numbers of stressful marital interactions were reported at home after both treatments. Contrary to predictions, there was no evidence to support the superiority of EBMT in enhancing generalization effects across settings or response modalities. Indeed, the pattern of results of the two interventions was very similar. When the pre- to posttreatment changes are considered, the major conclusion from the study is that both forms of treatment resulted in impressive generalization across settings for the behavioral, cognitive, and affective domains.

The results of this study are consistent with those of several other studies, which have failed to show superior treatment effects when adding cognitive interventions to BMT (Baucom & Lester, 1986; Baucom et al., 1990), and this is the first study to assess the generalization of these changes. The combination of the affect-focused and generalization-enhancement strategies with the cognitive strategies did not add to therapeutic efficacy. However, these findings need to be interpreted cautiously. As is the case for almost all comparative therapy outcome studies in the literature, the sample size in the current study lacked statistical power to detect modest magnitude differential treatment effects (Kazdin & Bass, 1989). Furthermore, because differential outcome in marital therapy sometimes is only evident at longer term follow-up (e.g., Snyder et al., 1991a), differences between treatments in the current study may develop after the 3-month follow-up. However, it is clear that no large differences were evident in the short term.

Some recent marital therapy outcome studies have assessed the accuracy of therapy implementation by coding recordings of therapy (e.g., Snyder et al., 1991a). We lacked the resources to do such coding, which raises the possibility that the treatments may not have been delivered as planned. We did write extensive therapy manuals, select therapists who were well trained in behavior therapy, and hold weekly group supervision during which videotapes of sessions were reviewed. Adherence to these procedures
seems to minimize the effects of therapist divergence from treatment protocols (Crits-Christoph & Mintz, 1991). However, given the considerable overlap between most marital therapy approaches, direct observational assessment of treatment integrity is desirable in future comparative marital therapy outcome research.

The additive components in the EBMT condition probably are valuable to only some couples, and these effects may not be evident in a general group comparison. Most couples in the BMT condition showed significant improvement, and some showed very large gains. For those couples with good response to BMT there may be a ceiling effect limiting the impact of additive interventions. A study in which couples who did not respond to BMT were randomly assigned to either further BMT or EBMT could address the additive value of interventions to such a subgroup of couples. This design would be enhanced if outcome was assessed after an initial course of BMT and then used to match the additive interventions to couples' needs at that point.

Limitations in our measures of marital interaction may have obscured a relation between generalization of behavior change and change in satisfaction. We demonstrated that BMT reduced couples' negative communication and reported cognitions in planned interactions at home, but the representativeness of these interactions for all marital interactions is questionable. Couples may not have generalized demonstrated changes to unobserved, unplanned interactions. The reductions in self-monitored stressful interactions suggest that some generalized changes in communication did occur. However, given the biases in couples' perceptions of their own marital interactions, the validity of these data can be questioned. Given that we know some setting variables associated with high risk for stressful marital interaction, observation of unstructured interaction in these settings would enhance assessment of generalization. However, reactivity of observation might influence results. A combination of couple monitoring and observational measures, such as we used in this study, is likely to remain the best assessment procedure.

The labels describing marital therapy may be misleading by implying that specific interventions have specific effects. For example, it seems implicit that communications skills training is expected to affect behavior, cognitive interventions are expected to affect cognitions, and so forth. However, the reciprocal influences among behavior, cognition, and affect make it unlikely that any treatment will affect just one aspect of marital distress. For example, traditional skills training unavoidably includes some focus on couples' cognitions and affect (e.g., the very act of providing communication skills training to both partners implicitly challenges the attribution that the blame for marital problems exists exclusively with one's partner). The current finding that traditional BMT produced generalized change in reported cognition and affect underscores this point. Strategies labeled as cognitive or affective also will have wideranging effects. Thus, marital therapy affects the dyadic system rather than specific components of marital interaction.

The regression analyses failed to find any association between improvements in communication and either self-monitored reductions in marital conflict or marital satisfaction, nor was cognitive change predictive of these latter changes. The modest sample size may have given insufficient power to detect associations that exist. However, Iversen and Baucom (1990) also reported asynchrony between changes in communication and marital satisfaction. They suggested that combinations of social desirability biases in reported marital satisfaction, lags in the impact of communication skills training on satisfaction, and decisions to separate could account for this asynchrony. The mechanisms of change associated with improvements in marital satisfaction are complex. A linear model assuming that improved communication and cognitions during marital problems are necessary and sufficient for improved marital satisfaction is overly simplistic.

As in previous research (e.g., Jacobson et al., 1984, 1987), we found that some couples did not increase
marital satisfaction significantly after BMT, and there was some relapse in some couples who made initial gains. Only about one third of couples reported sustained absence of marital distress through follow-up despite demonstrated generalized changes in behavior and cognition during therapy. The attempts to improve outcome by additions to BMT were not successful in this study or in previous studies (Baucom & Lester, 1986; Baucom et al., 1990). This seeming asymptote to BMT effectiveness prompts the question, How can one improve therapy outcome?

Jacobson (in press) argued for a substantial paradigm shift in social learning conceptualization of marital therapy to improve outcome, which included a change in emphasis from behavior change to promotion of greater acceptance between partners of their differences. Greenberg and Johnson (1986), Snyder et al. (1991b), and other argued that more insight-oriented therapy produces better outcome than BMT. Although new concepts may be needed, it is important to note that BMT is still the best replicated effective marital therapy (Hahlweg & Markman, 1988). Two major contributions of BMT have been the emphasis on empirical evaluation of outcome and assessing change in couples by observation. The current study builds on that tradition by assessing the generalization of therapeutic change to home settings. Future research needs to evaluate the impact of new suggestions to improve marital therapy on the actions, thinking, and feeling of distressed couples in their daily marital interactions.

A potentially effective focus for marital interventions involves greater emphasis on individual partners' skills, responsibilities, and choices through the systematic application of self-management procedures. Partners could be taught to take concurrent individual responsibility for their relationship difficulties by acquiring skills such as self-selection of relationship goals, self-monitoring, self-determination of performance standards, self-evaluation, and self-reinforcement, which focus on self-change as a complement to the commonly advocated dyadic focus in the delivery of BMT. Although most BMT manuals include mention of individual self-management, greater emphasis on this may foster more balanced attention to both self- and partner-change by those entering marital therapy.

References

Crits-Christoph, P. & Mintz, J. (1991). Implications of therapist effects for the design and analysis of


Table 1.

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Note: DAS = Spanier Dyadic Adjustment Scale; ACQ = Areas of Change Questionnaire; PSQ = Positive Feeling Questionnaire; EBMT = Enhanced Behavioral Marital Therapy; M = male; F = female.

Figure 1. Percentage of observation periods including negative communication. (EBMT = enhanced behavioral marital therapy; BMT = behavioral marital therapy; pre = before treatment; post = after treatment.)


11/27/2000
Figure 2. Male and female reports of negative partner referent cognitions and affect during problem solving. (EBMT = enhanced behavioral marital therapy; BMT = behavioral marital therapy; pre = before treatment; post = after treatment.)

Figure 3. Male and female reports of the mean intensity and number of stressful marital interactions. (EMBT = enhanced behavioral marital therapy; BMT = behavioral marital therapy; pre = before treatment; post = after treatment; f/u = follow-up.)