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The Marriage Checkup: An Indicated Preventive Intervention for Treatment-Avoidant Couples At-Risk for Marital Deterioration

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This manuscript is currently in press at Behavior Therapy

Author Note

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Abstract

Prior to dissolution, it is likely that couples that become severely distressed first pass through an at-risk stage in which they experience early symptoms of marital deterioration but have not yet suffered irreversible damage to their marriage. It is during this “at-risk” stage when couples might benefit most from early intervention. In response to this need we have developed an indicated intervention program called the Marriage Checkup (MC) based on the principles of motivational interviewing. The current randomized study provides preliminary evidence for the attractiveness, tolerability, efficacy and mechanisms of change of the MC.

The Marriage Checkup: An Indicated Preventive Intervention for Treatment-Avoidant Couples At-Risk for Marital Deterioration

Marital deterioration is one of the leading causes of human suffering. Relationship difficulties are among the most common reasons that people seek psychological services (Consumer Reports, 1995). Even so, the vast majority of people suffering from relationship difficulties do not seek the help of mental health professionals and those who do seek help most frequently see clergy or physicians (Doherty, Lester, & Leigh, 1986; Veroff, Douvan, & Kulka, 1981). It has been estimated that at any one time 20% of all marriages in the U.S. are significantly distressed (Beach, Arias, & O'Leary, 1987). Given an estimate of 56 million married-couple family households in 2000 (Fields & Casper, 2001), that is approximately 11.2 million marriages that may be in serious jeopardy of dissolution at any one time. In addition to the suffering inherent in marital deterioration and divorce, these processes have been associated with a number of other sources of human suffering. For example, it has been estimated that the risk of experiencing a major depressive episode is somewhere between 10 and 25 times greater for those experiencing significant relationship distress (Weissman, 1987; Whisman, 2001).

It seems likely that, prior to reaching the dissolution stage, couples that become severely distressed and eventually dissolve their marriages first pass through an at-risk stage. During this stage, they experience early symptoms of marital deterioration but have not yet suffered irreversible damage to their marriage (Cordova, Warren, & Gee, 2001). Couples in this at-risk stage are unlikely to seek conventional, tertiary marital therapy either because they have not yet become distressed enough to see the need or because the time, expense, or stigma of therapy present too great a barrier. Such couples are also not likely to seek premarital or newlywed interventions because they are in established marriages and do not perceive themselves as

preparing for married life. It is during this “at-risk” stage, however, that couples might benefit most from early intervention. Such indicated early intervention programs have the potential to a fill a niche between the inoculation against marital distress provided by prevention programs and the intensive treatment of severe distress provided by couple therapy.

Indicated early intervention with at-risk couples has several goals, each with attendant challenges. The first goal is to reach populations that are at-risk for relationship deterioration. However, involving such couples in an intervention program presents unique challenges. Whereas couples seeking marital therapy and premarital education are motivated to pursue these interventions either by their distress or by their desire to start their married lives on the right foot, at-risk couples in established marriages are motivated by neither. Such couples are unlikely to perceive themselves as distressed enough to seek marital therapy. They may also be suspicious of therapy or may not think of it as a viable or desirable option for economic, time or social reasons. Any successful intervention must overcome these barriers to attract at-risk couples.

The second goal is efficient assessment of risk potential, meaning that brief and effective means for identifying the demonstrated predictors and correlates of marital deterioration must be constructed. The attendant challenge involves bridging the gap between the available empirical literature concerning predictors and correlates of marital deterioration and couples presenting from within the community of laypersons.

The third goal is to effectively promote marital health in the short run, meaning that the intervention should work to immediately improve the relationship satisfaction of participating couples. The challenge for such interventions is that they must be brief in order to be attractive to at-risk couples, and yet they must also be sufficiently powerful to stimulate quick relationship improvement. This goal is important because a quick boost in marital health and emotional

closeness may be a necessary part of motivating partners to work collaboratively toward stable marital health.

In response to both the need for early intervention with at-risk couples and the challenges presented by that need, we have developed an intervention program called the Marriage Checkup (MC; Cordova, Warren, & Gee, 2001). The MC is a brief, two-session, assessment and feedback intervention utilizing Miller and Rollnick's (2002) motivational interviewing strategies and Jacobson and Christensen's (1998) acceptance promotion strategies. Research on the MC to date has demonstrated that this format is effective at attracting couples that can be considered at-risk for ongoing marital deterioration, but that are otherwise not seeking relationship treatment. In addition, research has demonstrated that the MC is easily tolerated (97% completion rate) and safe for use with at-risk couples (Cordova, Warren, & Gee, 2001). Longitudinal follow-up demonstrated that (1) relationship distress remained significantly improved two-years following the intervention; (2) receiving a treatment recommendation as part of the MC predicted subsequent treatment seeking for wives; and (3) couples' affective tone following the MC predicted later marital satisfaction (Gee, Scott, Castellani, & Cordova, 2002).

The previous studies were uncontrolled, however, so observed improvements could not be confidently attributed to participation in the MC. Therefore, it remains to be demonstrated that the MC is an efficacious indicated intervention for promoting the relationship health of participant couples. In addition, previous research has not addressed the mechanisms by which the MC is theorized to promote relationship health.

Theoretically, the MC should improve relationship satisfaction and stability by increasing couples' motivation to pursue maritally healthy habits and by increasing intimacy and acceptance of common differences. Specifically, the MC is expected to facilitate couples' progress through

the stages of change (Prochaska & DiClemente, 1984), from stages in which they are less motivated to work on improving their marriages to stages in which they are more motivated to pursue and maintain marital health. According to theory (Miller & Rollnick, 2002), motivational feedback facilitates movement through several successive stages of change (Prochaska & DiClemente, 1984). The first is a pre-contemplative stage, in which partners suffering from problem areas in their relationship do not recognize these areas as problematic or subject to change. The second is a contemplation stage in which partners recognize that they have relationship problems but are ambivalent about what, if anything, to do about those problems. The third stage is a determination stage in which partners recognize their relationship problems, are determined to address those problems, but may not know what to do. The fourth stage is an action stage, in which partners recognize their problems and are taking specific steps to address them. At this stage, efforts to change may or may not be effective. The fifth stage is a maintenance stage, in which changes have been made, and partners work to maintain those changes. The sixth stage is either an escape stage, in which the problems are resolved, or a relapse stage, in which the problems recur, and the couple moves back into one of the former stages.

In addition, the MC is designed to improve intimacy by facilitating partners' expressions of emotional vulnerability (Cordova & Scott, 2001). The MC is also designed to facilitate greater acceptance of common differences by highlighting the softer emotions and understandable reasons associated with partners' behavior (Cordova, Jacobson, & Christensen, 1998). Theoretically, these in turn facilitate partners' motivation to work collaboratively toward greater marital health.

Several hypotheses were tested in the current study.

First, it was hypothesized that the MC would attract couples that could be categorized as at-risk for ongoing relationship deterioration.

Second, it was hypothesized that participants would tolerate the intervention well and would neither refuse to participate nor drop out of treatment in substantial numbers.

Third, it was hypothesized that couples participating in the MC would report increases in relationship satisfaction and that a no-treatment control group would not show comparable improvement.

Fourth, it was hypothesized that MC couples would demonstrate increases in intimacy and acceptance, as well as increases in motivation to improve the quality of the relationship, and that no-treatment control couples would not report such increases.

Fifth, it was hypothesized that intimacy, acceptance, and increased motivation would mediate the effect of treatment on relationship satisfaction.

Method

Participants

The study involved 74 couples responding to newspaper advertisements. Because we were interested in non-tertiary-level couples, only couples with no previous history of couple therapy were included in the study. All couples, prior to being randomly assigned, were asked if they would be willing to continue in the study even if assigned to the control condition. Those couples that agreed were randomized to either the MC or no-treatment control group. Couples assigned to the control group were thanked for their willingness to contribute to the project and informed that they would be paid $50 for their participation[1].

The sample was 92.5% White. Husbands' mean age was 37.6 years (*SD* = 12.3), and wives' mean age was 35.7 years (*SD* = 11.9). Couples were married on average 9.8 years (*SD* =

10.45), and had an average of 16 years of education for both husbands and wives. Couples had an average of 1.1 children (*SD* = 1.1).

Procedures

Treatment couples were mailed questionnaires and returned them at their assessment session. Details of the MC procedure are provided below. Following feedback, couples were given another battery of questionnaires to complete. Control group couples received the same battery of pre-treatment questionnaires and returned those questionnaires by mail. Control couples subsequently received the same battery of questionnaires following an interval designed to match that of the MC couples, and again returned those questionnaires by mail. Control couples were paid $50 for their participation. Treatment couples did not receive monetary compensation for participating in the MC.

Measures

The Marital Satisfaction Inventory-Revised (MSI-R; Snyder, 1997). The MSI-R is a 150-item, 13 subscale self-report measure of marital satisfaction. It measures the amount of marital distress along 11 relationship dimensions (e.g., global distress, sexual dissatisfaction, affective communication). Cronbach's alpha derived from a combined sample of 2,040 individuals in the general population and 100 individuals in marital therapy ranged from .70 (Dissatisfaction with Children Scale) to .93 (Global Distress Scale) with a mean coefficient of .82. Test-retest reliability over a 6-week interval in a sample of 210 individuals in the general population ranged from .74 (Global Distress Scale) to .88 (Role Orientation Scale) with a mean coefficient of .79 (Snyder, 1997). In the current sample, the Cronbach’s alpha for our composite MSI-R variable was .92.

The Intimate Safety Questionnaire (ISQ; Cordova, Gee, Warren, & McDonald, 2004). The ISQ is a 13-item self-report scale designed to measure intimate safety as defined by Cordova and Scott (2001). The ISQ measures degree of comfort being vulnerable with an intimate partner across a range of relationship domains. Items include "When I need to cry, I go to my partner," "I feel uncomfortable talking to my partner about our sexual relationship," "I feel comfortable telling my partner things I would not tell anybody else," and "It's hard to apologize to my partner." Respondents rated each statement on a 5-point scale (0 = Never, 4 = Always). Internal reliability has been found to be adequate with alphas of .84 and .92 for men and women, respectively, and test-retest reliabilities of r = .89 and r = .91 for men and women, respectively. In the current sample, coefficient alpha was .88 and .91 for men and women respectively. The ISQ has been found to be significantly correlated with all of the subscales of the Personal Assessment of Intimacy in Relationships Questionnaire (PAIR; Schaefer & Olson, 1981) and was found to be particularly highly correlated with the emotional intimacy subscale of the PAIR (r = -82 and r = -.80 for wives and husbands respectively). In addition, the ISQ has been found to be significantly correlated with the Global Distress Scale of the Marital Satisfaction Inventory (Snyder, 1979) and the Marital Status Inventory (Weiss & Cerreto, 1980), providing support for its construct validity. We use the ISQ as our measure of intimacy in this study because it is a theory-driven questionnaire most consistent with our theory of change with regard to the MC. Additional details regarding the ISQ can be obtained from the first author.

The Couples Stages of Change Questionnaire (C-SCQ; Dorian & Cordova, 2001). The degree to which partners were in each of the four stages of change was measured using the 32-item C-SCQ. The C-SCQ was adapted from the original 32-item Stages of Change Questionnaire (McConnaughy, Prochaska, & Velicer, 1983) to reflect issues regarding partners' marital

relationship. Four scales of eight items each measured four of the theoretical stages of change. Each partner rated how strongly he or she agreed or disagreed with each item on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Sample items from each stage include (1) Precontemplative: “As far as I'm concerned, I don't have any problems in my marriage that need changing”; (2) Contemplative: “I think my marriage might be ready for some improvement”; (3) Action: “I am doing something about the issues in my marriage that have been bothering me”; and (4) Maintenance: “I'm working hard to prevent the reoccurrence of problems we've already worked out in our marriage.” Internal consistency for the measure as a whole was high (α = .90 and .82 for husbands and wives respectively). Internal consistency for the four subscale varied from α = .82 to α = .90, except for wives’ precontemplation subscale which produced a relatively low alpha (α = .64).

The Areas of Change Questionnaire (Weiss, Hops, & Patterson, 1973). The Areas of Change Questionnaire is a 34-item scale asking spouses to rate how much change they want from their partners across a range of content areas. Sample items include, “I want my partner to participate in decisions about spending money,” “I want my partner to spend time keeping the house clean,” and “I want my partner to have meals ready on time.” Questions are answered on a scale from -3 (much less) to +3 (much more), with ratings of 0 reflecting no desire for change. Internal consistency was adequate with alphas of .82 and .85 for wives and husbands respectively. In the current study the ACQ is used to assess level of overall acceptance of the partner, with higher change scores reflecting less acceptance. Although change and acceptance need not necessarily be regarded as opposite ends of the same continuum, the desire for less change should be an adequate representation of greater acceptance in most cases.

The Marriage Checkup

The MC is a two-session intervention. The MC was advertised as an informational health service available to all married couples interested in learning more about the health of their marriage. Advertisements for the MC deliberately made no mention of marital distress or relationship problems in order to attract couples that may have been at-risk but that may not have perceived themselves as distressed or suffering from any particular problems. The MC is deliberately designed to attract both distressed and nondistressed couples, because some at-risk couples may still self-evaluate as nondistressed (17% of our current sample). Advertisements specifically noted that the MC was not marital therapy, in order to attract couples suspicious of marital therapy. The MC was brief and offered free of charge in order to diminish economic and time barriers. Finally, it was made clear that couples would be provided with information and that it would be up to them what, if anything, to do with that information. This was done in order to assure couples that were ambivalent about seeking help that the MC required nothing of them beyond the assessment and feedback sessions. The specific wording of the MC advertisement was:

> The University Couples Research Program is offering for a limited time a free Marriage Checkup (MC) for couples who would like to find out more about the health of their marriage and whether their relationship is suffering from any common problems. The MC is not part of any treatment program. Rather it is an informational marital health service. Consultation is completely confidential. Objective personal feedback of results will be provided. It is up to the couple to determine what, if anything, to do with the feedback received.

The MC assesses for variables that the literature has found are associated with marital distress and/or deterioration, including marital satisfaction, domestic violence, intimacy, commitment,

and communication style. Completion of questionnaires required approximately two hours. The assessment session involved an interview about the history of the relationship (Buehlman, Gottman, & Katz, 1992). Two problem-solving interactions were also used in order to assure that (1) the two most problematic issues were discussed, and (2) both the husband and wife chose an issue of particular significance. Finally, a post-interaction interview probed for the understandable reasons and soft emotions associated with the problems discussed by the partners as a means of fostering greater intimacy and acceptance (Christensen, Jacobson, & Babcock, 1995). The entire in-lab assessment session required approximately two hours.

The feedback session was provided approximately two weeks following the assessment session. The format used for the feedback session was a modification of that proposed by Worthington (Worthington et al., 1995). The same format was followed for all written and face-to-face feedback; however, the content of the feedback was individualized for each couple. Feedback was provided based on a motivational interviewing model (Miller & Rollnick, 2002) in which participants were provided with objective information stemming from the research literature about the strengths and risk factors detected in their marriage. Feedback began with an overview of the couple's early history together designed to (1) highlight the characteristics that originally attracted the partners to each other; (2) highlight the partners' shared history; and (3) begin the session with a positive emotional tone.

The next section of the feedback reviewed the partners' strengths as a couple. Indications from the questionnaires, relationship history, or problem-solving interaction of particular strengths such as high intimacy, we-ness, and effective communication were emphasized. An attempt was made to make the strengths section at least as long as the weaknesses section in order to draw partners' attention to the positive qualities of their relationship.

The next section presented the partners with their scores on the questionnaires. Therapists discussed each set of scores with the partners and solicited their feedback regarding the accuracy of the general interpretation.

For the next section, entitled “areas for potential improvement,” two of the partners’ most problematic issues were presented. Problematic behavior or interpersonal patterns were discussed in relation to the relevant empirical and therapeutic literature in an attempt to educate partners about the potential negative long-term interpersonal consequences. Provided in this way, such information is thought to foster motivation to actively address the target issues by developing discrepancies between those problematic issues and partners’ valuing of the long-term health of their relationship. Next, partners were presented with a menu of suggestions for how they might actively cope with the presented issues. In addition, partners were encouraged to share their own ideas for how best to address or cope with the issues at hand. It was emphasized that partners were free to choose which, if any, course of action best appealed to them.

The entire feedback session generally required two hours. Overall, participants invest between five to six hours in the MC. In practice, outside the context of a research project, it is possible to shorten the length of the MC considerably by limiting the number of assessment instruments and limiting the number of questions asked in the interview.

Results

Protocol adherence

Therapists included four of the authors (J.C., R.S., M.D., and S.M.) and three advanced clinical doctoral students, all whom were trained and supervised by the first author. In order to assess therapist adherence to the MC protocol, an adherence scale was developed. Nineteen codes reflected therapist behavior during the assessment and feedback sessions of the MC. Four

undergraduate students served as coders, and one of the authors (D.Y.) served as the coding trainer and supervisor. Weekly meetings were held where ratings were discussed and consensus ratings were agreed on. Ten of the 39 treatment couple tapes (26%) were randomly selected and those ten tapes were rated by each of the four coders. Each behavior was rated on a 5-point scale of therapist adherence ranging from 1 (*not at all*) to 5 (*extensively*). Intraclass correlations ranged from .31 to 1.00, with an average of .79. Because intraclass correlations for some items did not adequately reflect the degree of consensus between raters, percent agreement within one level of the scale was also calculated across all raters. Percent agreement ranged from .72 to 1.0. The average adherence rating for most of the codes was at the upper end of the 5-point scale, indicating that therapists were able to adhere to the MC manual[2].

Proportion of At-risk Couples Attracted to the MC

The first hypothesis was that a substantial proportion of the couples self-referring for the MC would belong to the theoretically proposed group of couples at-risk for marital deterioration. The assumption being tested was that such treatment-avoidant at-risk couples exist, and that they will volunteer to participate in an informational checkup. In order to attract couples that might be at-risk, but not yet self-evaluating as distressed, participation was not limited to distressed partners; thus, there was a possibility that the recruited sample would consist entirely of low-risk couples. We operationally defined at-risk couples as those in which at least one partner scored in the moderately to severely distressed range on the Global Distress Scale (T scores above 50) or scored in the severely distressed range on any of the other satisfaction relevant subscales of the MSI-R (T scores above 60). This definition allowed us to include as at-risk those partners who were either: (1) severely globally distressed; (2) moderately globally distressed; or (3) globally

satisfied but severely distressed in at least one area of their relationship. Individuals who did not meet any of these criteria were classified as nondistressed.

Across the sample, 77% of the couples that self-referred to the MC (N = 57) were classified as at-risk and 23% (N = 17) as nondistressed. In addition, of the at-risk couples, 56% (N = 32) did not meet conventional severe distress criteria as measured by the GDS ($T > 60$) and 26% (N = 15) had at least one partner that met conventional non-distress criteria as measured by the GDS ($T < 50$). Thus, a substantial percentage of those couples presenting for participation in the MC met our criteria for being considered at-risk for continued relationship deterioration.

To begin exploring the validity of our operational definition of at-risk couples, we compared the means for our at-risk sample to those reported by Snyder (1997) for a sample of 100 therapy couples and 154 community couples. Results generally fit the prediction that in terms of deterioration of relationship functioning, at-risk couples would be between average community couples and treatment seeking couples (see Table 1). T-tests revealed that the mean GDS score for our at-risk sample was significantly smaller than the mean couple GDS score in Snyder's therapy sample and significantly larger than the mean couple GDS score in Snyder's community sample. The same pattern held for AFC, PSC, TTO, SEX, and FIN. Although significantly different from Snyder's therapy couple group, our sample was not significantly different from Snyder's community sample for AGG.

Treatment Tolerance

The second hypothesis was that the MC would be easily tolerated by participant couples, resulting in low refusal to participate and dropout rates. Of the 120 couples that called expressing interest in the MC, 44 (37%) declined to participate. Of those, 20 stated that they were no longer interested (e.g., some had changed their minds since calling, others had found that their spouse

was not interested), 14 reported scheduling difficulties or that they did not have enough time, eight were moving or lived out of state, one stated they had family problems, and one provided no reason for refusal. All 39 couples assigned to the MC condition completed the protocol. Of the 35 control couples, 32 returned the post-assessment questionnaires.

Efficacy of the MC

The third hypothesis was that the MC would be efficacious at quickly lowering relationship distress from pre- to post-intervention and that a no-treatment control condition would not be equally efficacious. The main outcome variable used was a broad measure of relationship distress derived from the MSI-R. In order to use the questionnaire as a broad measure of relationship distress reflecting our working definition of "at-risk," as well as to minimize measurement error, intercorrelations between the subscales of the measure were examined; those subscales that correlated above $r = .70$ were averaged together to create a composite relationship distress score. Among the subscales included in this composite score were the Global Distress Scale, the Affective Communicate Scale, the Problem-Solving Communication Scale and the Time Together Scale. The correlation between the couples' composite score and the couples' GDS was $r\,(74) = 0.92$.

With regard to gender, paired t-tests on the demographic variables age, education, and income revealed only one difference; husbands were significantly older than wives ($t(73) = -4.02$, $p < .001$). Similar analyses on the dependent variables revealed that husbands scored higher on the Aggression Scale of the MSI-R ($t(73) = -2.97$, $p < .01$) and that wives scored higher on the Areas of Change Scale ($t(72) = 2.70$, $p < .01$), and the Contemplation Scale of the Stages of Change Inventory ($t(69) = 3.43$, $p < .001$). None of these differences resulted in notable effects in later analyses.

Because gender effects were minimal, husbands' and wives' data were combined into couple summary scores to minimize measurement error and to simplify reporting of the results. The average correlation for husbands' and wives' pre-intervention scores was $r = .66$. All reported analyses were conducted on those couple scores[3]. Analyses of mean differences between the treatment and control groups on the demographic variables revealed that the two groups differed on wives' age and that there was a trend toward a difference in husbands' age ($t(72) = -2.22$, $p < .05$ and $t(72) = -1.96$, $p = .053$ respectively), with wives and husbands in the control group being on average 6 years older than the wives and husbands in the treatment group. Further analyses revealed, however, that neither wives' nor husbands' age correlated with any of the dependent variables, and therefore there was no need to use these variables as covariates.

A series of mixed-design ANOVAs with relationship distress, intimacy, acceptance, and motivation to change serving as dependent measures were conducted to *directly compare groups* on degree of pre to post-intervention change. Treatment (MC vs. Ctrl) served as a between-subjects factor and Time (pre vs. post-intervention) served as a within subjects factor[4]. In these analyses the effect of interest is the Treatment X Time interaction term. A significant interaction indicates that the degree of change in pre- versus post-treatment scores for a dependent measure varied according to treatment condition. These analyses revealed significant Treatment X Time interactions for relationship distress, intimacy, acceptance, and motivation to take direct Action to improve the quality of the relationship (see Table 2). Inspection of the pre- to post-intervention means suggested that the degree of positive change was greater in the MC condition than in the control condition on each of these variables, providing preliminary evidence in favor of the MC relative to the control condition[5].

Mediation of the Treatment Effect

The fourth hypothesis concerned mechanisms of change. We hypothesized that changes in intimacy, motivation to change, and acceptance would each mediate the association between participation in treatment and changes in relationship distress. Pre/post change scores were calculated for relationship distress, intimacy, areas of change (our acceptance measure), precontemplation and action. Correlations were calculated between these change scores and treatment group membership (0 = No Treatment, 1 = MC) as a convenient way to assess whether the assumptions for conducting a mediation regression analyses were met (Baron & Kenny, 1986). Correlations supported testing change in intimacy as the sole mediator. Regression analyses were conducted following Baron and Kenny (1986), regressing the potential mediator (change in intimacy) on the independent variable (treatment group), regressing the dependent variable (change in relationship distress) on the independent variable, and regressing the dependent variable on both the independent variable and on the mediator. Results revealed that the association between treatment group and change in relationship distress was no longer significant after accounting for the effects of change in intimacy (see Figure 1). The results suggest that changes in intimacy mediate the association between treatment and changes in relationship distress.

Discussion

The Attractiveness and Tolerability of the MC

The data presented here suggest that a population of couples at-risk for marital deterioration does exist and that such couples will participate in the MC. Comparisons to treatment seeking and community samples support the assumption that at-risk couples are more distressed than community couples, but less distressed than couples that are actively seeking therapy. Theoretically, at-risk couples are in a stage between healthy relationship satisfaction and

marital distress severe enough to motivate therapy or divorce seeking. This is one of the first studies to suggest that at-risk couples in established marriages exist in the population and that they can be successfully recruited into a targeted intervention (Cordova, et al., 2001). Additionally, these data demonstrate that the format of an intervention like the MC is easily tolerated by participants, resulting in very high participation rates and no dropout. Thus, it appears that the MC has the potential to reach and deliver services effectively to a population of at-risk couples that are unlikely to otherwise seek or receive early intervention.

The Efficacy of the MC as a Brief Intervention

The data suggest that the MC may effectively provide a quick boost to the relationship satisfaction of otherwise treatment-avoidant couples. This quick boost may ultimately prove to be an important component of an intervention designed to prevent future relationship deterioration in at-risk couples, by contributing to partners' motivation to work collaboratively toward stable marital health. In this study, participation in the MC appeared to quickly promote broad improvements in marital health, including a general sense of improved relationship satisfaction, feelings of deeper intimacy, a greater acceptance of partners for each other, and an increase in motivation to actively attend to the quality of the relationship.

Compared to MC couples, control couples actually reported a *decrease* in marital intimacy over time. On the one hand, this decrease may reflect the continuing decline in relationship health that theoretically characterizes at-risk couples. On the other hand, this decrease may reflect a negative reaction to confronting relationship distress outside the context of an active intervention like the MC. This potentially iatrogenic effect should be taken into account in future research in this area, as assessment without intervention may cause undue stress on already at-risk relationships.

Mechanisms of Change

Mediation analyses supported the intimacy theory of change. Specifically, intimacy theory suggests that events that increase opportunities for engaging in interpersonally vulnerable behavior can set in motion those processes that develop and sustain more stable intimate partnerships and deeper feelings of intimate safety that in turn contribute to partners' relationship satisfaction (Cordova & Scott, 2001). The MC is designed to foster those intimacy processes by uncovering interpersonal vulnerabilities at the heart of partners' most pressing issues and helping couples to develop a more compassionate understanding of each other and the relationship as a whole.

Neither changes in acceptance nor motivation to change mediated the treatment effect. Future research will explore the potential of both of these processes as mechanisms of change given their centrality to the premises of the MC and the modest sample size of the current study.

Future Directions

Clearly this study provides only preliminary evidence for the efficacy of the MC as an indicated preventative intervention. Work remains to be done to determine how to maximize the potential strengths of this type of intervention approach and minimize the potential weaknesses. However, at this early stage, it appears to be a fruitful avenue to pursue as this early evidence suggests this approach may be providing marital health benefits that might otherwise be absent from the lives of at-risk couples. Couples attracted to participate in the MC pilot studies had not ever previously engaged in any form of help seeking for their relationship and were not at the time of first contact interested in any form of tertiary treatment. Given that, the number of positive relationship changes initiated by participation in the MC likely benefited the overall health of these marriages more than no intervention at all.

Our plans for future studies include the addition of an attention control condition to actively control for demand and placebo effects and to more directly test the motivational, intimacy facilitating, and acceptance promoting change mechanisms. In addition, future studies will include greater scaffolding of couples' motivation to take action to improve their marital health. For example, couples that indicate during their feedback session that they might be interested in pursuing a recommendation for marital therapy would receive assistance from the consultant in making the initial phone calls to recommended therapists before leaving the office. Finally, future studies will include a booster checkup to further assess the quality of the relationship, to follow-up on initial recommendations, and the reinforce efforts toward greater marital health.

Limitations

One limitation of this study is the lack of ethnic diversity, limiting its generalizability. In addition, the sample size was modest; limiting the study's potential to detect smaller effects and to fully test all relevant mechanisms of change. We also introduced at least one group difference prior to the first assessment by informing couples of their group assignment following their screening, rather than following their completion of the first assessment. Finally, longitudinal follow-up will be required to test the durability of the treatment effect versus relapse.

References

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.

Beach, S. R. H., Arias, I., & O'Leary, K. D. (1987). The relationship of marital satisfaction and social support to depressive symptomology. *Journal of Psychopathology and Behavioral Assessment, 8,* 305-316.

Buehlman, K., Gottman, J. M., & Katz, L. (1992). How a couple views their past predicts their future: Predicting divorce from an oral history interview. *Journal of Family Psychology, 5,* 295-318.

Christensen, A., Jacobson, N. S., & Babcock, J. C. (1995). Integrative behavioral couple therapy. In N. S. Jacobson & A. S. Gurman (Eds.), *Clinical handbook of couples therapy* (pp. 31-64). New York: Guilford Press.

Consumer Reports. (1995, November). Mental health: Does therapy help? 734-739.

Cordova, J. V., Gee, C. G., Warren, L. Z., & McDonald, R. P. (2004). *Intimate safety: Measuring the private experience of intimacy in men and women*. Manuscript in preparation.

Cordova, J. V., Jacobson, N. S., & Christensen, A. (1998). Acceptance versus change interventions in behavioral couples therapy: Impact on couples' in-session communication. *Journal of Marital and Family Therapy, 24,* 437-455.

Cordova, J. V., Warren, L. Z., & Gee, C. B. (2001). Motivational interviewing with couples: An intervention for at-risk couples. *Journal of Marital and Family Therapy, 27,* 315-326.

Cordova, J. V., & Scott, R. (2001). Intimacy: A behavioral interpretation. *The Behavior Analyst, 24,* 75-86.

Dorian, M., & Cordova, J. V. (2001). *The couples stages of change questionnaire*. Unpublished questionnaire.

Doherty, W. J., Lester, M. E., & Leigh, G. K. (1986). Marriage Encounter weekends: Couples who win and couples who lose. *Journal of Marital and Family Therapy, 12,* 49-61.

Fields, J., & Casper, L. M. (2001). America's families and living arrangements: March 2000. *Current Population Reports, P20-537*. U.S. Census Bureau, Washington, DC.

Gee, C. B., Scott, R. L., Castellani, A. M. & Cordova, J. V. (2002). Predicting 2-year marital satisfaction from partners' reaction to a marriage checkup. *Journal of Marital and Family Therapy, 28,* 399-408.

Heyman, R. E., Sayers, S. L., & Bellack, A. S. (1994). Global marital satisfaction versus marital adjustment: An empirical comparison of three measures. *Journal of Family Psychology, 8,* 432-446.

Jacobson, N. S. & Christensen, A. (1998). *Acceptance and change in couple therapy: A therapist's guide to transforming relationships.* New York: W. W. Norton & Co, Inc.

Margolin, G., Talovic, S., & Weinstein, C. D. (1983). Areas of change questionnaire: A practical approach to marital assessment. *Journal of Consulting and Clinical Psychology, 51,* 944-955.

McConnaughy, E. A., Prochaska, J. O., & Velicer, W. F. (1983). Stages of change in psychotherapy: Measurement and sample profiles. *Psychotherapy: Theory, Research & Practice, 20,* 368-375.

Miller, W. R., & Rollnick, S. (2002). *Motivational Interviewing: Preparing people for change*. New York: Guilford.

Prochaska, J. O., & DiClemente, C. C. (1984). *The transtheoretical approach: Crossing traditional boundaries of therapy*. Homewood, IL: Dow Jones/Irwin.

Schaefer, M. T., & Olson, D. H. (1981). Assessing intimacy: The PAIR inventory. *Journal of Marital and Family Therapy, 7,* 47-60.

Snyder, D. K. (1979). Multidimensional assessment of marital satisfaction. *Journal of Marriage and the Family*, *41*, 813-823.

Snyer, D. K. (1997). *Marital satisfaction inventory, revised*. Los Angeles: Western Psychological Services.

Veroff, J., Douvan, E., & Kulka, R. A. (1981). *The inner American: A self-portrait from 1957 to 1976.* New York: Basic.

Weiss, R. L., & Cerreto, M. C. (1980). The Marital Status Inventory: Development of a measure of dissolution potential. The American Journal of Family Therapy, 8, 80-86.

Weiss, R.L., Hops, H., & Patterson, G.R. (1973). A framework for conceptualizing marital conflict, a technology for altering it, and some data for evaluating it. In L.D. Handy & E.L. Mash (Eds.), *Behavior change: Methodology, concepts and practice* (pp. 309-342). Champaign, IL: Research Press.

Weissman, M. M. (1987). Advances in psychiatric epidemiology: Rates and risks for major depression. *American Journal of Public Health*, *77*, 445-451.

Whisman, M. A. (2001). The association between depression and marital satisfaction. In S. R. H. Beach (Ed.), *Marital and family processes in depression: A scientific foundation for clinical practice*. (pp. 3-24). Washington, DC: American Psychological Association.

Worthington, E. L., McCullough, M. E., Shortz, J. L., Mindes, E. J., Sandage, S. J., & Chartrand, J. M. (1995). Can couples assessment and feedback improve relationships? Assessment as a brief relationship enrichment procedure. *Journal of Counseling Psychology, 42,* 466-475.

Footnotes

1. As noted later, this procedure was found to be problematic. Pre-treatment differences in Areas of Change and Precontemplation were found and may have resulted from participants' knowledge of their group assignment. Control couples appear to have muted their desire for change and treatment couples appear to have felt freer to report greater desire for change.
2. Interested readers can contact the first author for a table of the adherence codes, mean ratings, intraclass correlations, and percent agreement within one level.
3. Analyses of the data for husbands and wives separately did not result in substantially different results from those reported for the couple as the unit of analysis. These results are available from the first author.
4. Analyses including gender as an additional repeated measures variable reveal no significant interactions with gender. Therefore, we continue presenting analyses with couple as the unit of analysis.
5. In order to assess whether treatment effects were greater for distressed versus non-distressed couples as defined by conventional scores on the GDS, we compared the pre to post-treatment change scores for distressed versus non-distressed couples and found no significant differences in terms of amount of change between the distressed and non-distressed group..

Table 1

Group Comparison of At-risk, Therapy Seeking, and Community Couples

	At-Risk	Therapy	Community	*t*	*p*<
GDS	57.5 (8.1)	64.9 (6.9)	47.7 (7.8)	5.81/-8.12	.001/.001
AFC	55.4 (7.5)	61.3 (7.7)	47.6 (8.7)	4.69/-6.40	.001/.001
PSC	55.1 (7.3)	62.5 (7.8)	47.3 (9.4)	5.93/-6.39	.001/.001
AGG	49.6 (7.4)	56.9 (10.3)	49.8 (9.3)	5.16/0.20	.001/ns
TTO	54.0 (9.0)	60.1 (8.2)	49.1 (8.9)	4.25/-3.50	.001/.001
FIN	52.6 (7.6)	57.4 (10.6)	50.3 (8.9)	3.27/-0.97	.01/.06
SEX	52.8 (8.6)	56.3 (10.3)	49.4 (9.6)	227/-2.49	.05/.05

Note: Therapy and community data from Snyder (1997). Numbers before the slash are for the comparison between at-risk and therapy couples. Numbers after the slash are for the comparison between at-risk and community couples. All degrees of freedom were 155 for comparisons to the therapy couples and 209 for comparisons to the community couples.

Table 2

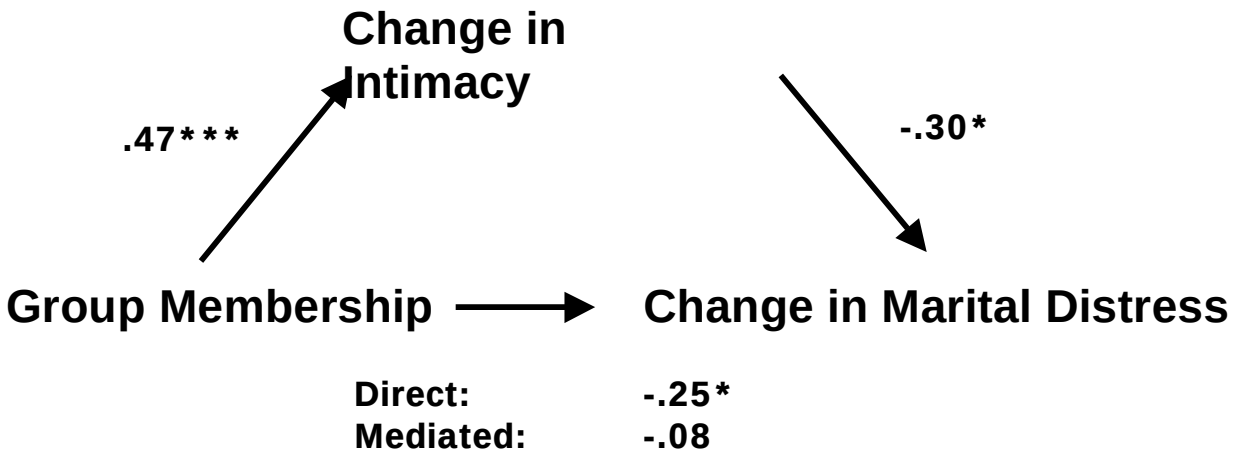
Primary Outcome Analyses Comparing MC with CTRL on Relationship Distress, Intimacy, Acceptance, and Motivation to Change.

		MC		CTRL	Treatment X Time	
Measure	*n*	*M (SD)*	*n*	*M (SD)*	*F(df), p*	η_p^2
Distress						
Pre	39	54.1 (8.1)	35	51.3 (7.8)		
Post	39	51.7 (8.3)	35	50.3 (7.4)	F(1, 72) = 4.24*	.06
Intimacy						
Pre	38	3.0 (0.5)	31	3.1 (0.4)		
Post	38	3.1 (0.5)	31	2.8 (0.7)	F(1, 67) = 21.6***	.24
Acceptance						
Pre	37	19.2 (9.8)	29	12.3 (5.6)		
Post	37	15.0 (8.3)	29	11.8 (6.5)	F(1, 64) = 9.40**	.13
Action						
Pre	37	3.3 (0.7)	27	3.3 (0.6)		
Post	37	3.7 (0.5)	27	3.4 (0.6)	F(1, 62) = 9.62**	.13

Note: Acceptance = *Lower scores indicate greater partner acceptance.* η_p^2 = partial Eta squared is a measure of effect size equaling the proportion of the effect + error variance that is attributable to the effect. * $p < .05$, **$p < .01$, ***$p < .001$.

Figure Caption

Figure 1. Change in intimacy as mediator of the association between treatment group and change in marital satisfaction. Betas are presented next to the appropriate pathways. * $p < .05$. ** $p < .01$. *** $p < .001$.


Change in Intimacy
.47***
-.30*
Group Membership
Change in Marital Distress
Direct: -.25*
Mediated: -.08