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Preventing Marital Distress Through Communication and Conflict Management Training: A 4- and 5-Year Follow-Up

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This article reports the 4- and 5-year follow-up results of evaluating the effects of a marital distress prevention program. The program, Prevention and Relationship Enhancement Program (PREP), is a 5-session program designed to teach couples effective communication and conflict management skills. At the 5-year follow-up, intervention, as compared with control, couples had a higher level of positive and lower levels of negative communication skills and lower levels of marital violence. Data are also presented on couples who declined the program. Issues are discussed concerning selection effects, change mechanisms, and future directions for prevention research.

A viable alternative to treating the problems of divorce and marital distress is to provide preventive interventions while the couple is still happy or at least in the early stages of distress (Markman, Floyd, Stanley, & Storaasli, 1988). The importance of prevention with couples is recognized by a recent National Institute of Mental Health (NIMH) report (Coie et al., 1991) that notes that destructive marital conflict is a generic risk factor for a variety of forms of psychopathology for both adults (e.g., depression) and children (e.g., conduct disorders). Accordingly, the prevention of marital discord is a high priority because of the radiating preventive effects for the entire family.

This article presents the 4- and 5-year follow-up results of an empirically based preventive intervention program for couples planning marriage. The program teaches couples a set of communication and conflict resolution skills linked to current and future marital success. The program extrapolates principles and procedures from behavioral marital therapy (BMT) with an emphasis on problem-solving skills. Additionally, a fundamental theoretical premise of the intervention is that couples need to learn a basic set of skills and procedures for handling negative affect and for resolving conflicts (Markman, 1991).

Earlier reports on the outcome of this intervention program have been encouraging. Couples learned the skills taught in the program (Floyd & Markman, 1984), and up to 3 years after the program, intervention couples showed higher levels of marital satisfaction and lower levels of relationship instability than did control couples (Markman et al., 1988). Despite the promising findings, these earlier reports included several limitations generally characteristic of intervention outcome studies. The major objective of this article is to address one of these limitations: the need for long-term evaluation. It is essential in building a prevention science to know if the posited active ingredients for change are indeed altered or sustained by the preventive intervention.

Specifically, because our theory of marital distress posits that the extent to which partners are able to regulate negative emotions is one of the most important components of marital success, results are presented on destructive and constructive means of handling conflict.

Method

Subjects

The subjects were 114 couples planning marriage for the first time who were selected from a larger sample participating in a study of relationship development (see Markman, Duncan, Storaasli, & Howes, 1987, for details). Subjects were recruited through community-wide publicity, and they were paid \$25 per research session. They were offered participation in three research sessions over a 3- to 4-month period, with the possibility of future involvement. They were not informed at recruitment of the option of participating in an intervention program. Following the first preassessment session, couples were assigned high or low ratings on each of four matching variables that have been found to be predictive of future marital stability and satisfaction in previous research (Markman, 1981). The four matching variables were (a) engaged versus planning marriage, (b) relationship satisfaction, (c) their own ratings of the impact of their communication on one another, and (d) confidence in getting married. The high and low designations were based on the couples' scoring above or below the median on each variable. The couples were then matched in either dyads or triads. One or two couples from each matched set were randomly selected to participate in the Premarital Relationship Enhancement Program (PREP; Markman & Floyd, 1980). The program was offered to 85 couples; 33 couples (39%) completed, 43 (50%) declined, and 9 (11%) partially completed. Fifty couples served as controls. Using the decline group as a different kind of control group allowed us to shed some light on the marital course of subjects who elected not to participate in the intervention.

This article focuses on 25 couples who completed the intervention, 42 couples who declined participation in the intervention, and 47 control couples. Eight of the 33 couples who completed the intervention were not included in these analyses because they received a different form of the program than the remaining 25 couples. Data from 1 decline couple were not available because of the death of a spouse. Of the 114 couples at Time 1, interaction data will be presented on 15 intervention, 24 control, and 14 decline couples at Follow-Up 3 and 12 intervention, 18 control, and 17 decline couples at Follow-Up 4. The remaining couples did not complete the interaction tasks, either because their relationship had ended or because they moved and were unable to attend the sessions. The out-of-town couples did mail in their questionnaires, however, and these data are included.

At Time I, the partners had known each other an average of 2.5 years (range = 4-84 months), the women's average age was 23 years (range = 18-31 years), the men's average age was 24 years (range = 18-32 years), the average years of education was 15.5 (range = 12-18 years), and the average personal income level was \$10,500 (range = \$5,000-\$20,000 or more.) Eighty percent of the couples were sexually active, 39% were living together, 60% were engaged, and 40% were planning marriage in the future but were not formally engaged at Time I. The average relationship satisfaction score on a modified version of the Locke-Wallace Marital Adjustment Test (Locke & Wallace, 1959) was 123 (SD = 14.4). Although this score would be very high for a long-term married group, we have found that satisfaction is highest before marriage (Markman & Hahlweg, in press); thus these couples were not happier than most who are planning marriage. There were no significant differences between groups on these demographic variables.

By the Follow-Up 4 assessment (5 years after the intervention), couples reported an average combined income of \$30,000-\$40,000 per year. The average age of the women was 29.5 years (range = 22-39 years) and the average age of the men was 30.3 years (range = 22-39 years). The average number of years of education for both men and women was 15.8 (range = 12-20 years), and couples had been married an average of 4 years.

Measures

For the purposes of this article, only a subset of measures are reported.

Self-Report Inventories

Marital Adjustment Test (MAT; Locke & Wallace, 1959). The Locke-Wallace Marital Adjustment Test is a 15-item self-report measure assessing such domains of marital functioning as areas of disagreement, perceived communication quality, leisure time activities, and regrets about having married their spouse. The MAT is the most frequently used measure of marital adjustment or satisfaction and has excellent reliability and validity for discriminating between distressed and non-distressed couples (Gottman, Markman, & Notarius, 1977). For premarital use, the MAT was revised to be applicable for unmarried couples (e.g., changing “mate” to “partner”). The revised MAT demonstrated adequate reliability and validity and is referred to as the Premarital Adjustment Test (PMAT; Markman, 1981).

Relationship Problem Inventory (Knox, 1970). The Relationship Problem Inventory assesses each partner’s perceived intensity of 10 common areas of potential difficulty within the (pre)marital relationship (e.g., communication, money). Previous studies have demonstrated adequate levels of reliability and validity of discriminating between distressed and non-distressed couples (Gottman, Notarius, Markman, et.al., 1976).

Conflict Tactics Scale (CTS; Straus, 1979). The Conflict Tactics Scale was used to assess three forms of marital and family conflict: (a) reasoning, (b) verbal aggression, and (c) physical violence. These scales have been widely used in family violence research and possess very good reliability and validity. Straus (1979) reported subscale reliability coefficients (coefficient alpha) ranging from .51 to .88. The CTS was administered at Follow-Ups 2, 3, and 4.

Communication Measures

The Interaction Dimensions Coding System (IDCS; Julien, Markman, & Lindahl, 1989) was developed to better assess the constructs of conflict management and intimacy. These have emerged as key interactional dimensions associated with marital distress from studies using microanalytic coding systems (Julien et al., 1989). The IDCS is a global interaction coding system that assesses four positive and five negative dimensions of communication. The positive dimensions are communication skills, support/validation, problem solving, and positive affect. The negative dimensions are withdrawal, denial conflict, dominance, and negative affect. Additionally, the IDCS taps two dyadic aspects of communication that assess the two partners as an interactive unit: negative and

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positive escalation. The system is scored on a scale of 1 to 9, with a score of 1 indicating no evidence of the communication behavior occurring and 9 indicating high behavioral frequencies. The complete interaction was used as the unit of observation for the nine individual and two dyadic dimensions for this study. Intercoder agreement for the IDCS assessed by Pearson's correlations is .43 and was considered acceptable. The codes have been found to discriminate between distressed and non-distressed couples (Julien et. al., 1989).

Procedure

As part of the larger evaluation project, the couples participated in research sessions at six points in time: a preassessment prior to marriage and participation in the intervention program; a postassessment following participation in the intervention program but prior to marriage; and follow-ups 1.5, 3, 4, and 5 years after the beginning of the study.

Research Sessions

Preassessment. Couples participated in two 2-hr research sessions that were scheduled 1 week apart. During these sessions, couples were interviewed, completed questionnaires, and participated in two 10- to 15-min videotaped problem-solving interaction tasks. The interaction tasks consisted of the couples engaging in a discussion of a vignette from the Inventory of Marital Conflicts (IMC; Olson & Ryder, 1970) and a discussion of one of their top three relationship problem areas (chosen from the relationship Problem Inventory). Each of these tasks was completed twice, once using the communication box procedure for rating their cognitive and affective reactions as they spoke and once without using the procedure. For the purposes of this article, only the interactional data from the problem discussion without the communication box are reported. This discussion is the most naturalistic and parallels interactional tasks used in previous marital interaction studies (Markman & Notarius, 1987).

Following the second preassessment session, couples assigned to the intervention group were invited to participate in the PREP (Marman & Floyd, 1980). Couples assigned to the control group were not informed about the intervention program and were scheduled for the postassessment session.

Intervention program. The PREP is described in detail elsewhere (Markman, Floyd, Stanley, & Lewis, 1986; Renick, Blumberg, & Markman, 1992) and is only briefly reviewed here. The program was designed to enhance or modify these dimensions of couples' relationships that have been found through theory and empirical research to be linked to effective marital functioning (e.g., communication and problem-solving skills). The program uses techniques of cognitive-behavioral marital therapy (Jacobson & Margolin, 1979) and communication-oriented marital enhancement programs (Guerney, 1977). Couples learned a set of skills, techniques, and principles designed to help them manage negative affect. For example, they were taught active listening and expressive speaking skills as well as how to separate problem-discussion for problem-solving interactions. They also practiced using the skills while receiving feedback from consultants and receiving videotape feedback on their interactions.

The program differs from marital therapy, however, in that it is oriented toward the future of the relationship and is not directly focused on current problems. The PREP can be distinguished from marital enhancement programs in that its primary objective is to maintain already high levels of functioning and to prevent problems from developing rather than to improve current functioning.

The program consisted of five sessions of approximately 3 hr each. Three to five couples participated in the PREP sessions at a time, and each couple worked with a trained consultant throughout the program. Consultants were advanced undergraduate psychology students or graduate students in clinical psychology who had received 20 hr of training and ongoing supervision in the program. Each of the five sessions in which the couples participated was devoted to one or two major content areas. Couples also completed homework assignments between sessions that required them to practice skills, read chapters, and complete exercises from *A Couple's Guide to Communication* (Gottman, Notarius, Gonso, & Markman, 1976).

Postassessment and subsequent follow-ups. All couples participated in the postassessment session 8 to 10 weeks after the preassessment session. At the postassessment, couples completed the same set of questionnaires and interaction tasks as in the preassessment. The four follow-up sessions were conducted approximately 1.5 years (Follow-Up 1), 3 years (Follow-Up 2), 4 years (Follow-Up 3), and 5 years (Follow-Up 4) after the postassessment. These sessions included the administration of questionnaires and interaction tasks similar to those given at the postassessment session. Couples who could not attend the sessions because they had moved from the area completed questionnaire measures and returned them by mail.

Results

Relationship Stability

Two sets of analyses were conducted to compare the relationship stability of intervention couples with control and decline couples. The first analyses addressed the hypothesis that significantly more control and decline couples would have broken up before marriage by both Follow-Up 3 and Follow-Up 4 than would intervention couples. At Follow-Up 3, only 1 (4%) of the intervention couples had broken up prior to marriage whereas 10 (21.3%) of the control couples and 11 (26.2%) of the decline couples had done so. A chi-square analysis revealed this difference to be significant, $\chi^2(2, N=114) = 6.48, p < .04$. Similarly, at Follow-Up 4, only 1 (4%) of the intervention couples had broken up prior to marriage whereas 12 (25.5%) of the control couples and 11 (26.2%) of the decline couples had done so. A chi-square analysis revealed this difference to be significant, $\chi^2(2, N = 114) = 7.23, p < .03$.

The second set of analyses compared the instances of divorce or separation of intervention, control, and decline couples at Follow-Ups 3 and 4. For these analyses, we examined separations that occurred after marriage, eliminating from the analysis both couples who had not yet married and couples who had broken up before marriage. At Follow-Up 3, 1 (4.2%) intervention, 3 (9.7%) control, and 2 (7.7%) decline couples had divorced or separated, $\chi^2(2, N = 81) = 0.65$. At Follow-Up 4, 2 (8.3%) intervention, 5 (16.1%) control, and 2 (8.0%) decline couples had divorced or separated $\chi^2(2, N = 80) =$

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1.18. Chi-square analyses showed that these differences were not significant ($p = .72$ and $p = .56$).

Relationship Functioning

A main goal of this study was to investigate differences across time in relationship functioning between couples who participated in the intervention program, those who declined such participation, and those in the control group. To study such differences, a series of 3 X 2 (Intervention vs. Control vs. Decline X Male vs. Female) analyses of covariance (ANCOVAs) and analyses of variance (ANOVAs) were conducted with contrasts. For each ANCOVA, the preintervention score was used as the covariate to examine change in communication from the initial level. Sex was a within-subjects factor in all analyses to take into account dependency between men’s and women’s scores (Kraemer & Jacklin, 1979).

Relationship Satisfaction

The first analysis investigated differences between intervention, control, and decline groups on self-reported relationship satisfaction (as measured by the MAT) 4 and 5 years after the intervention. These analyses tested the hypothesis that intervention couples would have higher levels of relationship satisfaction than would either control or decline couples. Although the 3 X 2 ANCOVA revealed no significant results at Follow-Up 3, contrast analyses showed a trend toward a significant interaction between group (intervention vs. control) and sex at Follow-Up 4, $F(1,67) = 3.30, p < .07$. A significant interaction between group (intervention vs. decline) and sex was obtained at Follow-Up 4, $F(1, 67) = 5.92, p < .02$. The means and standard deviations for these analyses are shown in Table 1.

	<u>Intervention</u>		<u>Control</u>		<u>Decline</u>	
Partner	M	SD	M	SD	M	SD
Husband	118.88	12.20	108.44	23.09	110.01	21.13
Wife	117.36	12.54	115.09	21.15	120.42	14.53

Simple effects analyses of these interactions revealed that husbands in the control group reported significantly lower relationship satisfaction than did intervention husbands $t(40.27) = -2.00, p < .05$. Control husbands and wives showed no significant differences in relationship satisfaction. For those couples declining intervention, husbands reported significantly lower satisfaction than did their wives, $t(23) = -3.47, p < .002$.

Couples' Communication During Interaction Tasks

The next research question was whether intervention couples in comparison with control and decline couples displayed more positive and less negative communication during a discussion of a relationship issue. Couples' communication during the problem discussion interactional tasks at the postassessment point and Follow-Ups, 1, 2, 3, and 4 were coded according to the Interaction Dimensions Coding System (Julien et. al., 1989). Means and standard deviations for the positive and negative communication codes for the intervention, control, and decline couples are shown in Table 2.

Positive communication. To test our hypotheses that intervention couples would show greater skill at positive communication behaviors (e.g., problem solving, communication skill) than would either control or decline couples, a series of 3 X 2 (Group X Sex) multiple analyses of covariance (MANCOVAs) and ANCOVAs were conducted. Additionally, planned contrasts were conducted to compare the intervention with the control couples as well as the intervention with the decline couples. Univariate analyses are presented here when a discernible pattern in the results is noted, even if the MANCOVAs are not significant. Results of the MANCOVAs revealed significant group main effects for the positive communication variables at Follow-Up 1, $F(10, 88) = 1.91$, $p < .05$, and Follow-Up 3, $F(10, 82) = 1.98$, $p < .05$.

Results of the univariate analyses revealed that at the postassessment, intervention couples displayed significantly greater use of support and validation, $F(1,61) = 4.89$, $p < .03$; positive affect, $F(1,61) = 11.08$, $p < .002$; positive escalation, $F(1,61) = 7.44$, $p < .008$; and overall positive communication, $F(1,61) = 4.05$, $p < .05$, than did control couples. No significant differences were found between the intervention and decline couples at the postassessment.

At the Follow-Up 1 assessment, intervention couples showed significantly greater use of communication skill, $F(1, 52) = 9.27$, $p < .004$, and problem-solving skill, $F(1, 52) = 8.93$, $p < .004$, than did control couples. Intervention and decline couples did not differ on the positive communication variables at Follow-Up 1.

At Follow-Up 2, intervention couples showed significantly greater use of support and validation, $F(1, 49) = 6.36$, $p < .02$; better overall positive communication, $F(1, 49) = 4.05$, $p < .05$; trends for more constructive communication skill, $F(1, 49) = 3.59$, $p > .06$; and positive escalation, $F(1, 49) = 2.96$, $p < .09$, than did control couples. Intervention couples also showed greater use of constructive communication than did decline couples, $F(1, 49) = 4.13$, $p < .05$.

At Follow-Up 3, intervention couples showed significantly greater use of communication skill, $F(1,49) = 10.61$, $p < .002$; positive affect, $F(1,49) = 7.90$, $p < .007$; use of problem solving, $F(1,49) = 6.19$, $p < .02$; support and validation, $F(1,49) = 9.17$, $p < .004$; overall positive communication, $F(1,49) = 9.13$, $p < .004$; and positive escalation, $F(1,49) = 3.97$, $p < .05$, than did control couples. Intervention couples also showed greater use of communication skill, $F(1, 49) = 7.64$, $p < .008$; support and validation, $F(1, 49) = 5.45$, $p < .02$; positive affect, $F(1, 49) = 3.95$, $p < .05$; and overall positive communication, $F(1, 49) = 4.07$, $p < .05$, than did decline couples.

At Follow-Up 4, although the overall MANCOVA showed no significant effects, a pattern in the planned univariate tests is noteworthy. These analyses revealed Sex X Group interactions on communication skill use for comparisons between intervention and control couples, $F(1,43) = 4.43$, $p < .04$, as well as for intervention versus decline couples, $F(1,43) = 5.67$, $p < .02$. These interactions showed significant group differences in the

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expected direction for men but not for women. Thus, they indicated that the effects of the intervention may be attenuating for women while intervention men continue to show its benefits, at least in terms of communication skill usage.

Negative communication. Our next hypothesis concerns the extent to which intervention couples showed fewer negative communication behaviors over time than did either the decline or the control couples. Results of the MANCOVAs showed significant group main effects only at Follow-Up 3, $F(12, 78) = 2.07, p < .03$. At the postassessment, intervention couples showed fewer instances of conflict, $F(1, 61) = 3.76, p < .05$, and overall negative communication, $F(1, 61) = 3.77, p < .05$, and trends for less denial, $F(1, 61) = 2.94, p < .09$, and negative affect, $F(1, 61) = 2.69, p < .10$, than did control couples. At the postassessment, a significant Sex X Group interaction was obtained, indicating that intervention women displayed lower levels of dominance than the intervention men of the control men and women, $F(1, 61) = 4.39, p < .04$. Intervention couples showed significantly fewer instances of withdrawal, $F(1, 61) = 14.32, p < .0004$; denial, $F(1, 61) = 4.31, p < .04$; conflict, $F(1, 61) = 6.47, p < .01$; and overall negative communication, $F(1, 61) = 9.57, p < .003$; and trends for less negative affect, $F(1, 61) = 3.16, p < .08$, and negative escalation, $F(1, 61) = 3.52, p < .06$, than did decline couples. No differences between either the intervention and control or the intervention and decline couples were found for negative communication at Follow-Up 1.

At Follow-Up 2, intervention couples showed less withdrawal, $F(1, 49) = 4.47, p < .04$; less negative affect, $F(1, 49) = 5.70, p < .02$; less overall negative communication, $F(1, 49) = 3.78, p < .05$; and trends for less conflict, $F(1, 49) = 2.72, p < .10$, and less dominance, $F(1, 39) = 3.02, p < .09$. No differences in negative communication were found between the intervention and decline couples at Follow-Up 2.

At Follow-Up 3, intervention couples showed fewer instances of withdrawal, $F(1, 49) = 4.46, p < .04$; denial, $F(1, 49) = 5.02, p < .03$; conflict, $F(1, 49) = 5.98, p < .02$; negative affect, $F(1, 49) = 3.83, p < .05$; and overall negative communication, $F(1, 49) = 8.47, p < .005$; and a trend for less dominance, $F(1, 49) = 3.61, p < .06$, than did control couples. Intervention couples also showed less withdrawal, $F(1, 49) = 3.77, p < .05$; negative affect $F(1, 49) = 10.62, p < .002$; and overall negative communication, $F(1, 49) = 4.90, p < .03$, than did decline couples. At Follow-Up 4, intervention couples showed a trend for less negative escalation, $F(1, 43) = 2.87, p < .10$, than did control couples.

Self-Reported Instances of Physical Violence

To further investigate differences in conflict management skills among the intervention, decline, and control couples, the frequencies of self-reported physical violence as measured by the Conflict Tactics Scale for the three groups were examined. The couples completed this measure every year since Follow-Up 2. Because of the low base rate of physical violence each year, rate scores calculated for each year were unstable within couples and tended to be bimodally distributed. To use scores more appropriate for parametric statistics, the mean frequency per year of physically violent behavior that husbands and wives reported displaying toward their partner across Follow-Ups 2 through 4 was calculated. A 3 X 2 (Group X Sex) ANOVA with contrasts was conducted. This analysis revealed that intervention couples reported significantly fewer instances of physical violence than did control couples, $F(1, 79) = 3.76, p < .05$.

Table 2
Means and Standard Deviations for Communication Variables for All Couples

Variable	Postassessment		Follow-Up <u>1</u>		Follow-Up <u>2</u>		Follow-Up <u>3</u>		Follow-Up <u>4</u>	
	M	SD	M	SD	M	SD	M	SD	M	SD
Intervention										
Communication skill	5.28	0.91	6.14	0.83	6.15	1.02	6.17	0.91	5.77	0.95
Support/validation	4.91	1.21	5.72	0.82	6.00	1.37	5.80	1.24	5.63	1.21
Problem solving	4.87	1.11	5.64	0.83	5.41	1.37	5.33	1.06	5.38	1.17
Positive affect	5.48	0.96	4.00	1.29	5.53	1.73	5.70	0.95	5.54	0.93
Positive escalation	5.44	1.31	4.56	1.34	5.47	1.55	5.67	1.23	5.75	1.66
Positive communication	5.28	0.91	5.50	0.66	5.85	1.05	5.83	0.91	5.83	0.96
Denial	2.46	1.03	2.11	0.89	1.82	1.42	2.43	0.94	2.50	1.10
Conflict	2.70	1.15	2.47	1.18	2.35	1.81	2.73	0.69	3.17	1.37
Dominance	2.89	0.97	2.53	0.81	2.71	1.17	2.67	0.66	3.33	1.15
Withdrawal	2.63	0.93	2.28	0.78	1.79	1.04	2.70	0.75	2.67	1.17
Negative affect	2.80	0.86	2.19	0.62	2.24	1.21	2.60	0.62	2.88	1.03
Negative escalation	3.13	0.97	2.44	0.98	2.47	1.63	3.07	0.26	2.50	0.80
Negative communication	2.70	0.81	2.19	0.77	2.12	1.12	2.50	0.51	2.96	1.00
Control										
Communication skill	4.97	0.94	5.35	0.95	5.54	1.20	5.23	0.93	5.67	1.04
Support/validation	4.23	1.21	5.25	1.12	5.04	1.28	4.83	1.12	5.67	1.41
Problem solving	4.56	1.13	4.81	1.22	5.00	1.36	4.54	1.11	4.92	1.30
Positive affect	4.77	1.02	4.56	1.41	4.78	1.42	4.88	1.04	5.36	1.02
Positive escalation	4.63	1.07	4.77	1.42	4.64	1.22	4.67	1.52	5.50	1.54
Positive communication	4.78	0.97	5.12	0.96	5.22	1.06	4.98	0.96	5.42	0.97
Denial	3.03	1.21	2.17	1.23	2.36	1.38	3.27	1.50	3.33	1.93
Conflict	3.23	1.18	2.42	1.19	3.38	1.87	3.60	1.47	3.33	1.59
Dominance	3.13	0.85	2.64	0.93	3.20	1.33	3.19	1.10	2.94	1.04
Withdrawal	2.94	0.97	2.33	1.10	2.48	1.27	3.27	1.14	2.61	0.80
Negative affect	3.06	1.04	2.06	0.70	3.10	1.73	3.10	0.88	2.78	0.83
Negative escalation	3.63	1.21	2.46	1.03	3.28	1.97	3.46	1.10	3.44	1.62
Negative communication	3.08	0.86	2.27	0.77	2.86	1.20	3.25	0.93	3.03	0.88

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Variable	Postassessment		Follow-Up 1		Follow-Up 2		Follow-Up 3		Follow-Up 4	
	M	SD	M	SD	M	SD	M	SD	M	SD
Decline										
Communication skill	5.60	0.99	5.71	1.12	5.50	0.86	5.32	1.25	5.47	2.05
Support/validation	5.20	1.20	5.63	1.01	5.55	1.22	4.96	1.26	5.44	1.83
Problem solving	5.46	0.98	5.46	0.98	5.36	1.00	5.04	1.26	5.15	1.60
Positive affect	5.20	0.83	4.50	1.18	5.05	1.62	5.07	1.25	5.27	1.73
Positive escalation	5.30	1.16	4.75	1.06	4.82	1.99	5.50	1.79	5.53	2.03
Positive communication	5.50	1.05	5.46	0.88	5.59	1.01	5.25	1.11	5.53	1.76
Denial	3.15	1.76	2.17	1.34	1.77	0.41	2.89	1.40	3.03	1.61
Conflict	3.45	1.61	2.25	0.94	2.23	1.02	2.75	1.18	3.06	1.77
Dominance	3.25	1.45	2.58	0.94	2.82	1.71	3.14	1.21	3.03	1.11
Withdrawal	3.65	1.46	2.38	1.10	1.55	0.96	3.25	1.21	3.09	1.31
Negative affect	3.20	1.32	2.38	0.50	2.14	1.39	3.68	1.68	3.41	1.93
Negative escalation	3.70	1.57	2.58	0.52	2.46	2.34	3.29	1.38	3.12	1.69
Negative communication	3.40	1.35	2.38	0.77	2.14	1.28	3.11	1.03	3.06	1.28

There were no significant differences between the intervention and decline couples on self-reported physical violence ($p < .65$). Across Follow-Ups 2 through 4, the mean frequency of physical violence per year for intervention couples was calculated as 0.39 (SD = 0.80) while that for control couples was 1.53 (SD = 4.0). The decline couples showed a mean frequency of physical violence of 0.68 (SD = 1.38). These data are shown in Figure 1.

Discussion

The results extend some of the positive findings from the earlier 3-year follow-up through a 5-year period and support the possibilities of preventing destructive marital discord through a short-term intervention focused on building skills in effective communication and conflict management. Although some of the findings are not as strong as the earlier report on this study (Markman et. al., 1988), there are effects clearly demonstrating a significant impact of the intervention on couples' functioning years after intervention.

Intervention Versus Control Group

In particular, the intervention program appears to give couples a significant advantage in communication and conflict management up to 4 years later. Specifically, at Follow-Up 3, intervention couples showed greater use of communication skills, greater

positive affect, more problem-solving skill, and more support and validation than did control couples. They also showed less withdrawal, less denial, less dominance, less negative affect, less conflict, and less overall negative communication than did control couples at the same time. Because the intervention directly targets such behavior, we can attribute this difference to the effect of the intervention.

By Follow-Up 4 (5 years later), however, the groups generally were not significantly different on these dimensions except for communication skill usage by men and a trend on negative escalation (a couple variable). There are at least two possible explanations for this attenuation of statistical effects. First, power may be compromised by the effect of break-up and attrition on sample size. Second, the effects of the intervention may diminish over time as a function, for example, of lack of practicing the skills. If so, this is particularly evident between Follow-Ups 3 and 4.

One of the more striking findings is the reduced tendency to resort to physical violence in the intervention group. Physical violence is partly a result of a couple's failure to handle conflict constructively (Markman & Kraft, 1989). Our data support this hypothesis in that intervention couples demonstrated greater positive and fewer negative communication and conflict management behaviors, which may lead to their reduced risk of resorting to physical violence. Although more research needs to be done directly linking positive conflict management to reduced violence, the possibility that the high rates of marital violence seen in our culture might be amenable to preventive intervention is exciting.

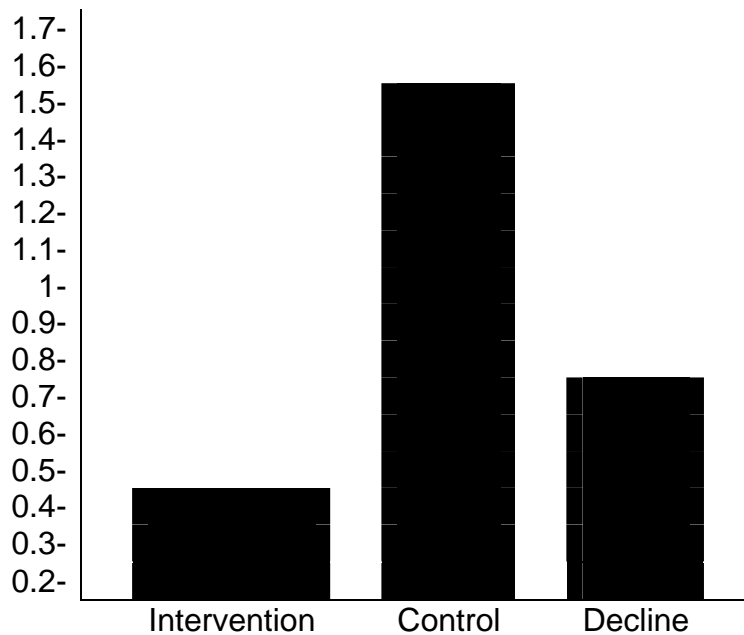


Figure 1. Mean yearly frequency of physical violence for intervention, control, and decline groups across 3 years.

The stability data suggest other effects of the intervention. First, taken as a whole, the results suggest that the intervention couples are less likely to dissolve their relationships than either the control or the decline couples. Whereas the differences on separation and divorce were nonsignificant, the discrepancies in rates were nonetheless noteworthy. Importantly, intervention couples were far less likely to break up before

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marriage than either control or decline couples. However, it is important to note that although many of the control couples broke up before marriage, the majority of these relationships were not short-term, with unmarried couples breaking up after years of being together ($M = 30.92$ months, range = 5-72 months). These findings suggest that intervention couples may have had greater confidence in their relationships such that they were more willing to go ahead with marriage than control or decline couples. Perhaps teaching couples skills boosts their confidence in the relationship. Notarius and Vanzetti (1983) found that learning to handle conflict and problem areas well leads to an increased sense of relationship efficacy. To verify this hypothesis, we are planning to directly assess the impact of the intervention on relationship confidence in future evaluations of PREP.

Consistent with the earlier findings (Markman et. al., 1988), differences between groups on relationship satisfaction were obtained 4 years after intervention. At the 5-year mark, the findings emerged only for men. This dovetails with the communication results that also showed differences for only men at the 5-year point. One possible explanation for this is that because men have greater difficulty handling conflict in personal relationships (Markman & Kraft, 1989), they are at the greatest risk without skills training.

Intervention Versus Decline Group

A somewhat different pattern of results was obtained when the intervention and decline couples were compared. Unlike the control couples, decline couples did not differ in positive communication from intervention couples until 3 and 4 years later. Furthermore, they did not significantly differ from intervention couples in physical violence over the 5-year period. The decline couples did, however, show significantly higher rate of break up before marriage than did intervention couples. These data suggest that couples who decline participation in an intervention program such as PREP may start out with fairly constructive communication skills, thus feeling that they do not need preventive intervention. However, these couples do not maintain their positive communication over time as intervention couples do. By Follow-Up 3, decline couples showed less communication skill, support and validation, positive affect, and overall positive communication than did intervention couples. It could also be that although decline couples communicated as well as intervention couples early on, they had lower levels of commitment: These factors may have been combined to lead to couples' declining the intervention and subsequently breaking up before marriage with greater frequency than did intervention couples.

Future Directions for Prevention Programs

Certainly by Follow-Up 4 the effects of the intervention seem to be weakening. This will fuel debate as to the most profitable avenues to achieve long-term marital distress prevention. Relevant to this debate, Jacobson (in press) has questioned the long-term effectiveness of programmatic interventions that offer all couples a standard treatment rather than tailoring specific interventions for specific couples. Jacobson suggests that the long-term effects could be more potent under four conditions: when the couples are less distressed, younger, less disengaged, and more compatible. Perhaps the effectiveness of the present program stems from the fact that all of these conditions are met by the preventive approach. Thus, whereas it is important to try to individualize programmatic approaches to couples, the present findings suggest that it is too early to

move away from such approaches completely, especially for preventive intervention with couples.

Furthermore, the key criticism that Jacobson (in press) levels against the BMT approach is that it teaches skills and ground rules for which there are few reinforcement contingencies naturally occurring in the environment. However, in a preventive approach, it is best to intervene at times when couples are looking for habits and new skills to form. To the extent that new skills produce successful outcomes, practicing the skills is naturally reinforcing. Analogously, although good tennis skills have to be learned and practiced, once learned the skills supplant poor form simply because they work, not because of external reinforcement. Yet even the best professionals practice and take lessons from their coaches. Similarly, future prevention programs should include booster sessions delivered to couples on a systematic basis, perhaps annually, as needed, or in connection with developmentally relevant points in the couples' lives (e.g., when they are planning their first child).

Our conclusions must be interpreted with caution because of the possibility of selection effects. All couples were volunteers, and 50% of those who were offered the intervention declined to participate. The best way to handle this problem is experimentally—for example, to recruit subjects for an intervention and then assign those willing subjects to an intervention or no-treatment control group. However, this method trades off one problem for another. Although all subjects would be involved because of interest in the program, the controls would be resentful about being asked not to participate for the good of science. Another option would be to randomly assign willing subjects to one of two plausible interventions that differ in a manner likely to advance our knowledge (e.g., skill-based vs. information-based premarital intervention). Blumberg (1991) did just that with a similar intervention and design. Such treatment of the selection problem has significant advantages for internal validity in that both groups are similarly motivated for intervention, but even this design cannot address the wider external validity issue: the concern that those subjects who need prevention least may be the ones most motivated to participate. However, it should be noted that the current control group is also a select group that is likely to be functioning better than most couples, given their interest in couples research and the benefits that accrue from participation in longitudinal studies (Rubin & Mitchell, 1976). Thus, we may be underestimating the effects of the intervention.

Despite these limitations and challenges, we are optimistic about the possibilities of attacking the problems of marital distress and divorce through empirically based prevention approaches. As shown by the other articles in this section, couples research is providing a growing conceptual and empirical foundation for future prevention efforts.

References

- Bloom, B. (1977). *Community mental health: A general introduction*. Monterey, CA: Brooks/Cole
- Blumberg, S.L. (1991). *Premarital intervention programs: A comparison study* (Doctoral dissertation, University of Denver, Colorado). *Dissertation Abstracts International*, 52, 2765.
- Coie, J., Watt, N., Hawkins, S., Ramey, S., Markman, H. J., Long, B., & West, S (1991, June). *Prevention research: Conceptual model of strategies and procedures*. Paper presented at the National Prevention Conference, Washington, DC.
- Floyd, F.J., & Markman, H.J. (1984). An economical observational measure of couples' communication skill. *Journal of Consulting and Clinical Psychology*, 52, 97-103.
- Gottman, J.M., Markman, H.J., & Notarius, C.I. (1977). The topography of marital conflict: A sequential analysis of verbal and nonverbal behavior. *Journal of Marriage and the Family*, 39, 461-478.

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- Gottman, J.M., Notarius, C.I., Markman, H.J., Banks, D., Yoppi, B., & Rubin, M.E. (1976). Behavior exchange theory and marital decision making. *Journal of Personality and Social Psychology*, *34*, 14-23.
- Gottman, J.M., Notarius, C., Gonso, J., & Markman, H.J. (1976). *A Couple's guide to communication*. Champaign, IL: Research Press.
- Guerney, B.G. (1977). *Relationship enhancement*. San Francisco: Josey-Bass.
- Hahlweg, K., & Markman, H.J. (1988). The effectiveness of behavioral marital therapy: Empirical Status of behavioral techniques in preventing and alleviating marital distress. *Journal of Consulting and Clinical Psychology*, *56*, 440-447.
- Jacobson, N.S. (1991). Behavioral versus insight-oriented marital therapy: Labels can be misleading. *Journal of Consulting and Clinical Psychology*, *59*, 142-145.
- Jacobson, N.S. (in press). Couple therapy: Integrating change and acceptance, *Behavior Therapy*.
- Jacobson, N.S., & Margolin, G. (1979). *Marital therapy: Strategies based on social learning and behavior exchange principles*. New York: Brunner/Mazel.
- Julien, D., Markman, H.J., & Lindahl, K.M. (1989). A comparison of a global and a microanalytic coding system: Implications for future trends in studying interactions. *Behavioral Assessment*, *11*, 81-100.
- Knox, D. (1970). *Marriage happiness*. Champaign, IL: Research Press.
- Kraemer, H., & Jacklin, C. (1979). Statistical analysis of dyadic social behavior. *Psychological Bulletin*, *86*, 217-224.
- Locke, H., & Wallace, K. (1959). Short marital adjustment and prediction tests: Their reliability and validity. *Marriage and Family Living*, *21*, 251-255.
- Markman, H.J. (1981). Prediction of marital distress: A 5-year follow-up. *Journal of Consulting and Clinical Psychology*, *49*, 760-762.
- Markman, H.J. (1991). Backwards into the future of couples therapy and couples therapy research: A comment on Jacobson. *Journal of Family Psychology*, *4*, 416-425.
- Markman, H.J., & Duncan, S. W. (1987, April). *Research on couples' communication and the transition to parenthood: Social policy implications for the prevention of marital distress*. Paper presented at the biennial meetings of the Society for Research in Child Development, Baltimore.
- Markman, H.J., Duncan, S.W., Storaasli, R., & Howes, P. (1987). The prediction and prevention of marital distress: A longitudinal investigation. In K. Hahlweg & M. Goldstein (Eds.), *Understanding major mental disorders: The contribution of family interaction research* (pp. 266-289). New York: Family Process.
- Markman, H.J., & Floyd, F. (1980). Possibilities for the prevention of marital discord: A behavioral perspective. *American Journal of Family Therapy*, *8*, 29-48.
- Markman, H.J., Floyd, F., Stanley, S., & Lewis, H. (1986). Prevention. In N. Jacobson & A. Gurman (Eds.), *Clinical handbook of marital therapy* (pp. 173-195). New York: Guilford Press.
- Markman, H.J., Floyd, F., Stanley, S.M., & Storaasli, R. (1988). The prevention of marital distress: A longitudinal investigation. *Journal of Consulting and Clinical Psychology*, *56*, 210-217.
- Markman, H.J., & Hahlweg, K. (in press). Prediction and prevention of marital distress: A cross-cultural perspective, *Clinical Psychology Review*.
- Markman, H.J., & Kraft, S.A. (1989). Men and women in marriage: Dealing with gender differences in marital therapy. *Behavior Therapist*, *12*, 51-56.
- Markman, H.J., & Notarius, C.I. (1987). Coding marital and family interaction: Current status. In T. Jacob (Ed.), *Family interaction and psychopathology* (pp. 329-390). New York: Plenum Press.
- Notarius, C. I., & Vanzetti, N. (1983). The marital agenda protocol. In E. Filsinger (Ed.), *Marital and family assessment* (pp. 209-227). Beverly Hills, CA: Sage.
- Olson, D.K., & Ryder, R.G. (1970). Inventory of Marital Conflicts (IMC): An experimental interaction procedure. *Journal of Marriage and Family Living*, *32*, 433-448.
- Renick, M.J., Blumberg, S.L., & Markman, H.J. (1992). The Prevention and Relationship Enhancement Program (PREP): An empirically based preventive intervention program for couples. *Family Relations*, *41*, 141-147.
- Rubin, Z., & Mitchell, C. (1976). Couples research as couples counseling. *American Psychologist*, *32*, 17-25.

- Snyder, D.K., Wills, R.M., & Grady-Fletcher, A. (1991). Long-term effectiveness of behavioral versus insight-oriented marital therapy. *Journal of Consulting and Clinical Psychology, 59*, 138-141.
- Straus, M. (1979). Measuring intra-family conflict and violence: The Conflict Tactics (CT) scales. *Journal of Marriage and the Family, 41*, 75-88.
- Vivian, D., & O'Leary, K.D. (1990). Physical aggression in marriage. In F.D. Fincham & T.N. Bradbury (Eds.), *The psychology of marriage: Basic issues and applications* (pp. 323-348). New York: Guilford Press.

Received January 7, 1992
Revision received July 6, 1992
Accepted July 27, 1992■