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## **Risk Moderates the Outcome of Relationship Education: A Randomized Controlled Trial**

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# Risk Moderates the Outcome of Relationship Education: A Randomized Controlled Trial

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**Objective:** To test whether the effects of relationship education programs generalize across couples regardless of their baseline levels of risk for relationship distress, or whether intervention effects vary systematically as a function of risk. The former result would support primary prevention models; the latter result would support a shift toward secondary prevention strategies. **Method:** Engaged and newlywed couples ( $N = 130$ ) were randomized into 1 of 3 relationship education programs. Individual and relational risk factors assessed at baseline were tested as moderators of 3-year changes in relationship satisfaction, overall and in each of the 3 treatment conditions. **Results:** Treatment effects varied as a function of risk, and more so with variables capturing relational risk factors than individual risk factors. High-risk couples (e.g., couples with lower levels of baseline commitment and satisfaction) tended to decline less rapidly in satisfaction than low-risk couples following treatment. Couples with acute concerns at baseline, including higher levels of physical aggression and alcohol use, benefitted less from intervention than couples without these concerns. Comparisons across treatment conditions indicate that couples with relatively high baseline satisfaction and commitment scores declined faster in satisfaction when assigned to an intensive skill-based intervention, as compared with a low-intensity intervention. **Conclusions:** Outcomes of skill-based relationship education differ depending on premarital risk factors. Efficient identification of couples at risk for adverse relationship outcomes is needed to refine future prevention efforts, and deploying prevention resources specifically to at-risk populations may be the most effective strategy for strengthening couples and families.

### *What is the public health significance of this article?*

Among couples beginning their first marriage, those reporting some difficulties in their relationship generally respond better to educational interventions than those entering marriage with stronger relationships.

Well-functioning couples may not need intensive, skills-based relationship education, and it may actually hurt their relationship.

Classifying couples on the basis of their strengths and weaknesses would help ensure that the nature and intensity of their intervention corresponds with their area of need.

**Keywords:** couples, marriage, relationship education, moderators

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Motivated by evidence that roughly 43% of first marriages end within 15 years (Bramlett & Mosher, 2002) and that as many as 33% of all remaining couples are unhappily married (Whisman, Beach, & Snyder, 2008), relationship scientists have sought to determine whether educational interventions can prevent these adverse outcomes. Randomized controlled trials of these interventions, whether in the form of relatively small single-site studies (for a meta-analysis, see Hawkins, Blanchard, Baldwin, & Fawcett, 2008) or large-scale multisite projects (e.g., Lundquist et al., 2014), typically yield small effects on relationship satisfaction that dissipate with time. Although some scholars interpret these findings as evidence that current intervention paradigms have outlived their utility for preventing relationship dysfunction (e.g., Bradbury & Lavner, 2012; Johnson, 2012), an alternative possibility is that interventions work particularly well for some couples while yielding few benefits for others (e.g., Petch, Halford, Creedy, & Gamble, 2012). This study aims to clarify whether there are identifiable risk factors that differentiate between couples who do and do not benefit from preventive interventions, using data from couples randomly assigned to receive one of three preventive interventions and followed 3 years posttreatment.

Prevailing approaches to relationship education favor unselected or primary prevention, whereby all couples in a given catchment area or experimental condition receive essentially the same intervention, regardless of their background or risk for relationship problems. This approach assumes that couples with strong relationships will learn new ways to preserve their strengths, while couples at elevated risk for later difficulties will improve in their relationship or decline more slowly in relationship satisfaction than they would in the absence of intervention. As primary prevention assumes that all couples are able to benefit from preventive programs, albeit to varying degrees and in different ways, widespread dissemination of interventions is viewed as appropriate and desirable. However, the possibility remains that couples vary widely in whether they will benefit from preventive intervention. If high-risk couples benefit from an intervention while low-risk couples fail to benefit, for example, then resources devoted to the latter group might be shifted to the riskier group, thereby generating a broader impact on relationship outcomes. Under a secondary or selective prevention model, therefore, resources would be better deployed by targeting interventions to selected couples identified by the nature and extent of the risk factors that they bring to their marriage (see Halford, 2011, p. 66). Although primary prevention tends to be the current strategy of choice, modest results from controlled trials indicate that it may be timely to clarify how risk moderates intervention effects.

Risk may moderate intervention effects in two main ways. On one hand, couples at elevated risk for distress and dissolution may have the most to gain from an intervention, but the very nature of the risks couples possess might limit the gains they are able to achieve. Couples who readily revert to anger and defensiveness in the face of conflict, for example, might be excellent candidates for training in communication and emotional regulation, yet these same interactional deficits might also constrain their ability to benefit from such training. On the other hand, couples who are at low risk for adverse outcomes may have less room to improve their communication skills because they are already functioning at a high level, but their low level of risk may indicate that they have more interpersonal skills upon which training can capitalize. In this

case, the low-risk couples would be more likely to learn new skills and to implement the skills under challenging circumstances later in their relationship.

Which of these alternatives proves to be most tenable may depend upon the type of risk under consideration. Distress and divorce are foreshadowed by a range of factors in longitudinal studies, including personality traits (Karney & Bradbury, 1995), experiences in the family of origin (e.g., DiLillo et al., 2009), and stress and social disadvantage (Cutrona, Russell, Burzette, Wesner, & Bryant, 2011). Basic research of this sort provides an important foundation for understanding how specific forms of risk may affect treatment outcomes, and a few studies have focused specifically on enduring vulnerabilities, or risk factors that are essentially stable characteristics that individuals would bring to any relationship. Three studies conceptualized high-risk couples as those in which the wife's parents divorced or the husband witnessed physical aggression between his parents; these studies yielded conflicting results. In one case, high-risk couples achieved better outcomes than low-risk couples (Halford, Sanders, & Behrens, 2001), whereas two studies reported no difference in outcomes as a function of risk status (Halford & Wilson, 2009; Markman, Rhoades, Stanley, & Peterson, 2013). A fourth study defined risk solely as the presence or absence of parental divorce and found no difference in relationship outcomes between the high- and low-risk groups 2 years after treatment (Widenfelt, Hosman, Schaap, & van der Staak, 1996).

In contrast with studies that define risk in terms of enduring personal vulnerabilities, others conceive of risk as a characteristic of the relationship itself. Four studies of relationship education have adopted this approach in examining moderators of treatment outcome. One study classified couples as low- or high-risk on the basis of their self-reported communication, conflict resolution, and marital satisfaction (Barton, Futris, & Bradley, 2014), and demonstrated that high-risk couples had greater improvements than low-risk couples on a wide range of relationship outcomes 4 weeks posttreatment. In a study in which negative communication and physical aggression were considered as pretreatment risk factors, higher levels on both factors were associated with *higher* rates of divorce for couples who received a preventive intervention (Markman et al., 2013). In a third study, risk was defined as low relationship satisfaction and high levels of depressive symptoms; here, couples with a high-risk husband benefited more from intervention than couples with a low-risk husband (Schilling, Baucom, Burnett, Allen, & Ragland, 2003). Finally, a study examining various relational risk factors, including dyadic coping, communication, and conflict, found that couples who were low on these skills at pretreatment benefitted more from treatment than couples with better skills (Bodenmann, Hilpert, Nussbeck, & Bradbury, 2014). These studies lend support to the viability of selective interventions with at-risk couples, yet they leave open important questions about which dimensions of risk are most informative in identifying couples most likely to benefit from preventive interventions.

This study aims to build on the existing literature by examining possible moderating effects of several relatively stable and enduring risk factors (i.e., parental divorce, childhood family discord, education, race, income, alcohol use, trait anger, and depression) and several risk factors that are specific to the relationship (i.e., satisfaction, communication, hostile conflict, emotional support,

empathy, commitment, physical aggression, and relationship problems). As maintaining or improving relationship satisfaction is the primary goal of relationship interventions, these risk factors will be tested as moderators of 3-year posttreatment trajectories of relationship satisfaction.

In evaluating possible effects of various moderators on treatment outcomes, it is important to recognize that a given moderator might either operate identically across all types of interventions, or differently depending on the focus of the intervention. For example, couples reporting high levels of conflict may respond well to virtually any intervention that focuses on communication, or they may respond primarily to interventions that target conflict management directly. Initial research is consistent with this latter possibility: Low-risk couples benefit more from less intensive, relatively unstructured interventions, whereas high-risk couples benefit more from intensive, structured interventions that teach specific skills (Halford et al., 2001). We build on this work first by testing how moderators operate for relationship education in general (i.e., collapsing across treatment types), then by testing whether moderators operate in similar or different ways across distinct intervention types by comparing two 15-hr skill-based interventions (Prevention and Relationship Enhancement Program or PREP; Markman, Stanley, & Blumberg, 1994; and Compassionate and Accepting Relationships through Empathy or CARE; Rogge, Cobb, Johnson, Lawrence, & Bradbury, 2002) against a low-intensity intervention designed to increase relationship awareness (RA) without relationship skills training.

Extending a prior study of the main effects of these interventions (see Rogge, Cobb, Lawrence, Johnson, & Bradbury, 2013), we address four questions in this study, all subsumed under the broader aim of clarifying whether primary or secondary prevention is more promising for relationship education programs. First, are treatment outcomes moderated by pretreatment risk factors? The absence of moderating effects would suggest that primary prevention strategies should be continued (if couples benefit equally from relationship intervention) or discontinued (if couples experience no benefits or iatrogenic effects equally), while the presence of moderating effects would highlight the value of selecting couples on the basis of risk. Although prior research is inconsistent on this point, we believe there is sufficient evidence in the couples literature and in the larger literature on preventive trials (e.g., Howe, Reiss, & Yuh, 2002) to hypothesize that intervention effects will vary systematically as a function of baseline risk factors.

Second, are the predicted moderating effects stronger for individual risk factors or for relational risk factors? We hypothesize that relational risk factors would be more likely than individual risk factors to moderate treatment outcomes, based on similar moderating effects detected in couples therapy (e.g., Baucom, Atkins, Simpson, & Christensen, 2009) and based on the view that preventive interventions are designed specifically to address relational processes rather than personal vulnerabilities (Halford & Bodenmann, 2013).

Third, who will benefit most from intervention—low-risk couples (who have strong relationships and greater capacities to incorporate new skills into their repertoires) or high-risk couples (who have a greater need to learn new skills and more to gain from doing so)? Prior research (e.g., Bodenmann et al., 2014) suggests that high-risk couples will benefit more than their low-risk counterparts; low-risk couples will be closer to their ceiling for optimal

functioning whereas high-risk couples will have more opportunities for improvement and will find those improvements to be rewarding and valuable for future relationship maintenance.

Finally, from which specific treatments, if any, do high- and low-risk couples benefit the most? Following Halford et al. (2001), and given the difference in intensity and duration between the skill-building interventions (i.e., CARE and PREP) and the RA intervention, we predict that high-risk couples will benefit more from CARE or PREP than from RA whereas couples relatively low in risk will benefit equally from all three interventions.

## Method

### Participants

Participants were 174 engaged or newlywed couples. Men averaged 29.3 years of age ( $SD = 4.8$ ) and 15.2 years of education ( $SD = 3.8$ ), with modal incomes between \$30,000 and \$50,000; 94% were employed. Women averaged 27.9 years of age ( $SD = 4.9$ ) and 15.4 years of education ( $SD = 4.5$ ), with modal incomes between \$30,000 and \$50,000; 84% were employed. Most participants were Caucasian (55%), with 21% Latino, 11% Asian, 5% African American, and 8% "other." At the screening interview, 80% of these couples were engaged to be married; they participated an average of 6.8 months ( $SD = 4.0$ ) prior to their weddings. The remaining couples had been married an average of 3.2 months ( $SD = 2.7$ ) at the screening. At the time of screening, most couples (72%) had been cohabiting for an average of 2.6 years ( $SD = 2.0$ ). Forty-two couples (24%) had children, 18 of whom were from a previous relationship.

### Procedure

**Recruitment and screening.** Recruitment has been described in detail previously (Rogge et al., 2002). Following institutional review board approved procedures, one spouse from each couple was screened via a telephone interview to obtain informed consent and to assess interest, eligibility, demographics, and relationship satisfaction. Eligibility requirements were (a) both partners consented to participate, (b) both partners were fluent in English, (c) the couple was engaged to be married in the next year or married fewer than 6 months, (d) partners were starting first marriages, and (e) the couple was not distressed (by the interviewee's report). Distressed couples received appropriate referrals. Eligible couples received questionnaires (pretreatment, T0) with consent forms in separate envelopes and written instructions to not share or discuss their responses. Couples completing T0 ( $n = 183$ ) were no different from couples who did not ( $n = 155$ ) on relationship satisfaction, couples counseling, presence of children at marriage, and proportion of Asian spouses. There were fewer couples with an African American partner among couples who completed T0 (6%) compared with those who did not complete T0 (15%),  $\chi^2(1) = 7.6$ ,  $p < .01$ .

After completing T0, couples were randomly assigned to CARE, PREP, RA, or a No Treatment control condition and were scheduled by telephone for the workshops. Six couples assigned to CARE or PREP with work or commute schedules that prohibited attendance at the weeknight sessions accepted our invitation to participate in the RA condition. Fifty-two couples received CARE,

45 received PREP, 33 received RA, and 44 were in the control group. Sufficient follow-up data for the outcome variable (relationship satisfaction) was not available for the control group to support moderation analyses; those participants were excluded from these analyses, leaving the 130 couples in the three treatment conditions as focus of this study.

### Treatment Conditions

**PREP.** A psychoeducational program designed to strengthen relationships by teaching couples communication skills, PREP includes 16 lectures on a range of topics (e.g., problem-solving, time outs, and commitment; Markman et al., 1994); a forgiveness module was excluded to minimize overlap with CARE. Couples completed numerous exercises designed to practice PREP skills. Central to PREP is the speaker-listener technique, which slows the pace of communication by ensuring that one spouse's point of view is accurately reflected before moving on to discuss the partner's point of view; in many of the exercises couples discussed various topics while using the speaker-listener technique. The developers of the PREP program personally trained three of the graduate students who delivered PREP in this study.

**CARE.** CARE aims to strengthen relationships by teaching couples supportive and empathic skills (Rogge et al., 2002). Based on integrative behavioral couples therapy (IBCT; Jacobson & Christensen, 1996), CARE includes 16 lectures covering a core set of acceptance-based skills. As with PREP, lectures were interspersed with exercises designed to help couples practice new skills. CARE emphasizes skills designed to enhance empathy, compassion, and acceptance. Building on IBCT, couples were encouraged to use the language of acceptance (e.g., focusing on understanding one's partner, making soft disclosures, reframing) when discussing relationship problems, individual problems, and relationship transgressions. Couples also learned how to join empathically to tackle problematic interaction patterns.

**RA.** Developed for this study, the five-session RA condition was designed to heighten partners' awareness of their relationship and the importance of regular relationship maintenance. Rather than teach couples new skills, RA drew partners' attention to current behavior in their relationship and encouraged them to decide for themselves if their behavior was constructive or destructive. During an on-campus presentation, small groups of couples were informed about the importance of relationship awareness and maintenance, and they were introduced to the idea that regular everyday events—particularly those captured in commercial films—could be used as prompts to accomplish these goals. Couples then watched a movie, *Two for the Road* (Donen, 1967), in which a couple revisits earlier scenes from their marriage and recounts the joys and difficulties they experienced. In separate rooms, each couple then followed instructions for 50- to 60-min. semistructured discussions in which they addressed the themes of this film (including conflict, support, stress, and forgiveness) and how they could reflect on these themes in their own relationship. Coaches intervened minimally in the discussions and primarily focused couples on the task, encouraged partners to engage the questions thoughtfully, and answered questions. Couples then received a list of 47 movies with an intimate relationship as a major plot focus with instructions to watch 1 movie per week at home for the next month and to discuss the same set of open-ended ques-

tions following each movie. Couples completed and returned a questionnaire for each movie they watched; rental costs for movies were reimbursed.

### Treatment Implementation

**Treatment format.** Groups of 3 to 6 couples completed CARE and PREP workshops in an initial 6-hr weekend session followed by 3 weekly 3-hr evening sessions, for a total of 15 hours over a span of 1 month. Groups of 10–15 couples completed RA workshops in a single on-campus 4-hr session and 4 weekly home sessions. RA participation was assessed by weekly telephone calls, and couples provided brief notes on the movies and their semistructured discussions that were returned weekly to the project in self-addressed, stamped envelopes. Doctoral students in clinical psychology with at least 2 years of clinical training led the workshops. Advanced undergraduate research assistants served as coaches for the CARE and PREP exercises. Coach training and supervision, treatment adherence, and satisfaction with treatment are detailed elsewhere (Rogge et al., 2002).

**Treatment dropout.** Of the 130 couples, 27 attended fewer than 3 sessions, primarily because of time and travel constraints. Dropouts were evenly distributed across treatments; 8 couples withdrew from CARE, 10 from PREP, and 9 from RA,  $\chi^2(2) = 1.8$ , *ns*. Repeated measures analysis of variances (ANOVAs) with partners treated as a within-subject factor (and  $\chi^2$  analyses) indicated that withdrawing couples were very similar to completers. However, withdrawers had slightly lower levels of education ( $M = 15.2$  years,  $SD = 3.0$ ) compared with completers ( $M = 16.4$  years,  $SD = 3.1$ ),  $F(1, 128) = 5.7$ ,  $p < .02$ ,  $\eta^2 = .04$ , and withdrawers had more children ( $M = 2.6$ ,  $SD = 1.4$  among couples with children) than completers ( $M = 1.7$ ,  $SD = 0.6$ ),  $F(1, 27) = 5.5$ ,  $p < .03$ ,  $\eta^2 = .17$ . Following an intent-to-treat paradigm, these couples were retained in outcome analyses.

**Attrition.** Of the 130 couples, 7 in CARE, 8 in PREP, and 3 in RA provided no follow-up data; they were evenly distributed across conditions,  $\chi^2(2) = 1.2$ ,  $p < .55$ ,  $\phi = .10$ . Repeated measures ANOVAs with partners treated as a within subject factor and  $\chi^2$  analyses indicated that the couples who failed to provide follow-up data were not significantly different from couples who provided follow-up data on any measure.

### Measurement

Participants completed the Marital Adjustment Test (MAT; Locke & Wallace, 1959) 1 month before treatment (T0) on the first day of intervention (T1), and 6, 12, 24, and 36 months following the end of treatment (T2–T5, respectively). Coefficient alpha ranged from .67 to .75 with a median of .71 for men and .70 for women. Moderators were assessed at T0. Sample items, psychometric data, and descriptive statistics for all moderator variables are shown in Table 1. Couples received \$25 for each assessment except for T1.

### Analytic Plan

Analyses were conducted in Stata version 12.1 using the xt-mixed procedure. To address the first research question of whether

Table 1  
Description and Descriptive Statistics of Study Variables

Construct	Items	Sample item	Coding	Alpha		Mean (SD)		
				Husband	Wife	Husband	Wife	
<b>Individual risk factors</b>								
Parental divorce	1	“Are your parents divorced or separated?”	0 = <i>no</i> , 1 = <i>yes</i>	—	—	.40 <sup>†</sup>	.40 <sup>†</sup>	
Family discord	15	“I had a very unhappy childhood”	0 = <i>false</i> , 1 = <i>true</i>	.82	.83	6.0 (3.8)	6.9 (3.8)	
Education	1	“How many years of education have you completed?”	By years; e.g., 12 = <i>high school completed</i>	—	—	15.2 (3.8)	15.3 (4.2)	
Race	1	“What is your racial identity?”	0 = <i>non-White</i> , 1 = <i>White</i>	—	—	.40 <sup>†</sup>	.40 <sup>†</sup>	
Income	1	“What was your personal income last year, before taxes?”	0 = \$0–9,999, 6 = \$50,000+	—	—	4.5 (1.5)	3.6 (1.5)	
Alcohol use	20	“How often has the quality of your work (at home, school, or on the job) suffered because of drinking?”	0 = <i>never</i> , 4 = <i>4 or more times in past year</i>	.81	.78	24.7 (6.5)	22.7 (4.8)	
Trait anger	38	“I tend to get angry more frequently than most people.”	1 = <i>totally false</i> , 5 = <i>totally true</i>	.87	.84	124.5 (17.6)	121.8 (15.0)	
Depressive symptoms	20	“I am so sad or unhappy that I can’t stand it.”	Varies by item	.80	.81	5.6 (4.5)	7.0 (5.5)	
<b>Relational risk factors</b>								
Relationship satisfaction	15	“Do you confide in your partner?”	Varies by item	.72	.70	119.4 (20.4)	120.2 (19.3)	
Effective communication	7	“Both members try to discuss the problem.”	1 = <i>very unlikely</i> , 9 = <i>very likely</i>	.81	.82	49.2 (11.2)	50.0 (11.0)	
Hostile conflict	15	“I yell or shout at my partner.”	1 = <i>never</i> , 5 = <i>usually</i>	.87	.91	29.4 (8.9)	32.5 (10.3)	
Emotional support	7	“Said he/she would feel the same way in my situation.”	1 = <i>once in past 2 weeks</i> , 7 = <i>7+ times in past 2 weeks</i>	.84	.83	18.2 (13.6)	18.6 (13.2)	
Relationship empathy	12	“Before criticizing my partner, I try to imagine how I would feel if I were in his/her place.”	1 = <i>does not describe me well</i> , 5 = <i>describes me very well</i>	.82	.81	16.9 (5.9)	17.0 (5.6)	
Commitment	12	“My marriage is clearly part of my future life plans.”	1 = <i>strongly disagree</i> , 7 = <i>strongly agree</i>	.77	.72	6.1 (0.6)	6.1 (0.7)	
Physical aggression	4	“Have you pushed, shoved, or slapped your partner?”	0 = <i>never</i> , 6 = <i>20+ times</i>	.75	.63	4.7 (1.3)	4.4 (0.9)	
Marital problems	12	“Friends;” “Money management”	1 = <i>not a problem</i> , 11 = <i>major problem</i>	.81	.77	2.9 (1.4)	2.8 (1.3)	

Note. Alcohol use = Alcohol Use Inventory (Wanberg, Horn, & Foster, 1977); trait anger = Multidimensional Anger Inventory (Siegel, 1986); depressive symptoms = Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961); relationship satisfaction = Marital Adjustment Test (Locke & Wallace, 1959); effective communication = Communication Patterns Questionnaire (Christensen & Sullaway, 1984); hostile conflict = Conflict subscale of the Marital Coping Inventory (Bowman, 1990); physical aggression = Conflict Tactics Scale-Revised (Straus, Hamby, Boney-McCoy, & Sugarman, 1996); marital problems = Marital Problem Inventory (Geiss & O’Leary, 1981); emotional support = Support in Intimate Relationships Rating Scale (Dehle, Larsen, & Landers, 2001).

<sup>†</sup> Indicates percentage of responses coded as 1.

pretreatment risk factors moderate treatment outcomes in general, the data were fit with a three-level model in which repeated measurements over time were modeled at Level 1 (using a slope-intercept format and centering time at the start of treatment), individual partners (i.e., moderator variables) were modeled at Level 2, and dyads were modeled at Level 3. To address whether risk factors moderate differentially across treatment conditions, interaction terms for the three treatment conditions (with CARE coded as the reference group) were added to Level 3, with trajectories allowed to vary across treatment conditions. Intercepts were

treated as random effects at Level 2, and slopes were treated as random effects at Level 3.

Level 1

$$\text{Relationship Satisfaction} = \pi_0 + \pi_1(\text{Time}) + E \quad (1)$$

Level 2

$$\begin{aligned} \pi_0 &= \beta_{00} + \beta_{01} * (\text{Moderator}) + r_0 \\ \pi_1 &= \beta_{10} + \beta_{11} * (\text{Moderator}) \end{aligned} \quad (2)$$

Level 3

$$\begin{aligned}
 \beta_{00} &= \gamma_{000} + \gamma_{001} * (\text{PREP}) + \gamma_{002} * (\text{RA}) \\
 \beta_{01} &= \gamma_{010} + \gamma_{011} * (\text{PREP}) + \gamma_{012} * (\text{RA}) \\
 \beta_{10} &= \gamma_{100} + \gamma_{101} * (\text{PREP}) + \gamma_{102} * (\text{RA}) + U_{11} \\
 \beta_{11} &= \gamma_{110} + \gamma_{111} * (\text{PREP}) + \gamma_{112} * (\text{RA}) + U_{12}
 \end{aligned}
 \tag{3}$$

## Results

### Descriptive Statistics

Correlations for all moderator variables are presented in Table 2. The average correlation between the individual and relational moderator variables was  $r = .16$  for husbands and  $r = .13$  for wives, indicating that these two types of moderators are relatively distinct. The average correlation among the individual moderators was  $r = .14$  for husbands and  $r = .12$  for wives. Correlations among relational moderators averaged  $r = .36$  for husbands and  $r = .35$  for wives; thus the relational moderators shared more variance than did the individual moderators.

### Changes in Relationship Satisfaction

Relationship satisfaction declined over time (T0–T5 MAT scores for men: 119.4, 120.4, 118.0, 117.6, 105.4, 105.3, with *SDs* ranging from 19.0 to 20.4; T0–T5 MAT scores for women: 120.2, 119.6, 120.7, 121.2, 109.1, 106.6, with *SDs* ranging from 18.7 to 22.1). These declines occurred across all treatment conditions (Overall:  $\beta = -5.4, p < .001$ , CARE:  $\beta = -6.2, p < .001$ , PREP:  $\beta = -5.1, p < .001$ , RA:  $\beta = -5.1, p < .001$ ) to comparable degrees (all  $p$  values  $> .10$ ).

To determine whether changes in satisfaction differed as a function of risk, the individual and relational risk variables were tested as moderators of relationship satisfaction slopes, first with all three interventions combined and then with the interventions considered separately.<sup>1</sup>

### Associations Between Risk and Declines in Satisfaction: Effects Across Interventions

**Individual risk factors as moderators.** Analysis of the eight individual risk factors, presented in the omnibus test column in Table 3, yielded one significant effect: Couples reporting higher levels of alcohol use declined more quickly in relationship satisfaction compared with couples reporting lower levels of alcohol use. Thus, high levels of alcohol use appear to restrict couples' ability to benefit from these relationship interventions (see Figure 1).

**Relational risk factors as moderators.** Results for the eight relational risk factors, presented in the omnibus test column in Table 4, yielded two significant effects. In the first effect, risky couples—specifically, couples with lower levels of pretreatment relationship satisfaction—declined more slowly than couples who entered the study with higher levels of relationship satisfaction. The second relational effect operated in the opposite direction. When risk was marked by high levels of pretreatment physical aggression, risky couples declined more rapidly in their satisfaction compared with couples with low pretreatment levels of physical aggression (see Figure 1). In much the same way that alcohol

use appears to constrain treatment benefits, so too does baseline relational aggression.

### Associations Between Risk and Declines in Satisfaction: Effects Within Interventions

**Individual risk factors as moderators.** We next considered whether associations between a given risk factor and declines in satisfaction differed within the three interventions to which couples were randomized.<sup>2</sup> With regard to the eight individual risk factors, race was the only variable that functioned differently in different treatment conditions; these results are shown in the treatment contrast column and the boxed column in Table 3. Specifically, white couples assigned to the CARE condition experienced slower declines in relationship satisfaction compared with nonwhite couples. Satisfaction slopes for couples in RA and PREP were not moderated by any of the individual risk factors.

**Relational risk factors as moderators.** Four of eight relational risk factors moderated treatment outcomes differentially across the three interventions. In all four instances, higher-risk couples fared better than their lower-risk counterparts; the treatment contrast column and boxed columns in Table 4 provide details. Specifically, couples who were initially *lower* on four key indices of relationship functioning—satisfaction, effective communication, emotional support, and commitment—experienced slower declines in satisfaction than did couples with higher scores on these variables. One of these effects, for effective communication, occurred in the PREP group, indicating that couples receiving PREP experience slower declines in satisfaction to the extent that their baseline communication is relatively ineffective. The remaining three effects occurred in the CARE condition, indicating that couples receiving CARE experience slower declines in satisfaction to the extent that their initial reports of satisfaction, emotional support, and commitment are relatively low.<sup>3</sup> Figure 2 shows how commitment moderates effects within CARE, illustrating how highly committed couples in this group experience steep declines in satisfaction while less committed couples receiving the same intervention experience flatter declines; couples in PREP and RA, by comparison, decline at roughly the same rate regardless of initial commitment. Finally, all couples in the RA condition, regardless of their baseline score on any relational risk factor, declined to comparable degrees in satisfaction.

<sup>1</sup> Aggregate indices of normalized individual and relational risk variables were also evaluated. Although the 8 individual risk variables did not form a reliable index for women or men,  $\alpha < .26$ , the 8 relational risk variables did,  $\alpha = .84$  for women,  $.83$  for men. This index did not moderate outcomes when all interventions were combined, when interventions were separated and compared, or when different levels of risk were compared within interventions.

<sup>2</sup> Because analysis of all 16 risk factors in combination with all three treatments may lead to spurious findings, we adopted the more conservative approach of interpreting significant within-intervention differences only when the overall treatment contrasts, shown in Tables 3 and 4, were significant. Whereas the omnibus tests summarized above capture associations between a specific risk factor and changes in satisfaction over time, these treatment contrasts test whether the intervention conditions produced differences in these associations between risk and outcome.

<sup>3</sup> As Table 2 indicates, these are not independent effects; at T0, correlations among satisfaction, emotional support, and commitment range from .22 to .51, with a median of .26,  $p < .05$ .

Table 2  
Correlations Among Moderator Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Parental divorce	.16*	.40**	.01	.06	-.04	.07	.07	.13	.02	-.02	-.06	-.03	-.02	-.02	.12	.01
2. Family discord	.49**	.04	.11	-.14	-.22*	.09	-.23*	.21*	-.17	-.16	.06	-.01	-.20*	-.23*	.12	.20*
3. Education	-.02	-.01	.12	-.01	.17*	.01	-.01	-.02	-.09	-.06	-.05	-.04	-.05	.08	-.08	.04
4. Race	-.03	.02	.07	.57**	-.12	.21	.03	.09	.07	.08	-.06	.03	.14	.16	-.08	-.02
5. Income	-.22*	-.15	.26*	.04	.36**	-.19*	.13	-.28**	.09	.10	-.05	-.10	.05	-.08	-.17*	-.10
6. Alcohol use	.03	.11	-.12	.14	-.05	.54**	-.11	.16	-.10	-.32**	.23*	.02	-.18*	-.01	.37**	.32**
7. Trait anger	-.10	-.34**	-.04	-.07	.06	-.21*	.16*	-.32**	.21*	.28**	-.45**	-.09	.35**	.13	-.15	-.32**
8. Depressive symptoms	.13	.38**	-.10	.02	-.13	.21*	-.55**	.10	-.27**	-.23*	.26*	.04	-.26**	-.14	.11	.37**
9. Relationship satisfaction	-.02	-.04	-.01	.07	-.01	-.36**	.15*	-.19*	.53**	.69**	-.46**	.24*	.36**	.51**	-.35**	-.69**
10. Effective communication	-.18*	-.18	.02	.17*	.13	-.48**	.25*	-.19*	.61**	.68**	-.66**	.26*	.50**	.27*	-.50**	-.69**
11. Hostile conflict	.17*	.20*	.17*	-.06	.01	.37**	-.48**	.27*	-.37**	-.59**	.43**	-.11	-.57**	-.19*	.26*	.54**
12. Emotional support	.13	.22*	.11	-.03	-.13	.02	-.02	.09	.27**	.22*	-.18*	.20*	.11	.25*	-.03	-.09
13. Relationship empathy	-.02	-.11	.02	.07	.01	-.25**	.33**	-.20*	.27**	.45**	-.54**	.23*	.05	.25*	-.15	-.42**
14. Commitment	.08	-.09	-.01	-.02	-.22*	-.16	.21*	-.10	.50**	.33**	-.19*	.22*	.21*	.34**	-.04	-.37**
15. Physical aggression	.05	-.01	.03	.02	-.10	.22*	-.17*	.21*	-.25*	-.38**	.42**	.01	-.22*	-.19*	.44**	.47**
16. Marital problems	.07	.20*	.01	-.08	-.03	.43**	-.42**	.41*	-.68**	-.65**	.57**	-.23*	-.33**	-.46**	.30**	.50**

Note. Husband correlations are presented above the diagonal; wife correlations are presented below the diagonal; correlations between husbands and wives are presented on the diagonal.  $N = 130$  husbands and 130 wives.

\*  $p < .05$ . \*\*  $p < .001$ .

### Pairwise Comparisons of Simple Slopes: Effects Between Interventions

Results to this point address the extent to which couples' baseline variability in risk relates to change in satisfaction, across all interventions and within a particular intervention. Our final set of analyses makes explicit comparisons between interventions at specified levels of risk, testing the hypothesis that high-risk couples would experience better outcomes when assigned to a skill-based intervention (i.e., CARE or PREP) compared with couples assigned to the RA intervention, whereas low-risk couples would respond in similar ways across all three interventions. To test this prediction, the simple slopes within the five significant moderators were compared between each treatment condition; subscripts within the boxed results in Tables 3 and 4 indicate which comparisons are statistically reliable.

**Race.** Results for race, the single individual-level risk factor that moderated treatment outcomes, were not consistent with predictions. Although satisfaction slopes were comparable across all three interventions for white couples, nonwhite couples had significantly *faster* declines in satisfaction in CARE ( $\beta = -7.5$ ,  $p < .001$ ) compared with PREP ( $\beta = -7.0$ ,  $p < .001$ ; pairwise comparison coefficient = 3.0,  $p = .003$ ) and compared with RA ( $\beta = -7.0$ ,  $p < .001$ ; pairwise comparison coefficient = 2.7,  $p = .006$ ).

**Satisfaction.** Couples at elevated risk on the basis of their pretreatment levels of satisfaction had similar outcomes across the three treatment conditions, whereas couples with relatively high baseline levels of satisfaction (i.e., low risk) had different outcomes depending on which intervention they received. In the CARE condition, these couples declined 7.8 points in satisfaction, which was significantly more than low-risk couples in PREP ( $\beta = -5.7$ ,  $p < .001$ ; pairwise comparison coefficient = 2.0,  $p = .048$ ) and RA ( $\beta = -4.9$ ,  $p < .001$ ; pairwise comparison coefficient = 2.8,  $p = .004$ ).

**Commitment.** Results for commitment were similar to those obtained for satisfaction. Couples who were at high risk on pre-

treatment commitment had equivalent outcomes across the three interventions, but couples at low risk on commitment declined in satisfaction faster if they received CARE ( $\beta = -7.4$ ,  $p < .001$ ) compared with RA ( $\beta = -4.7$ ,  $p < .001$ ; pairwise comparison coefficient = 2.7,  $p = .007$ ).

**Communication.** Communication yielded a different pattern of results, as couples at low risk on communication were, as predicted, similar in their outcomes across all three interventions. Couples with risky communication declined less steeply in relationship satisfaction if they received PREP ( $\beta = -3.8$ ,  $p < .001$ ) rather than CARE ( $\beta = -7.0$ ,  $p < .001$ ; pairwise comparison coefficient = 3.2,  $p = .004$ ); for these couples the predicted contrasts between either PREP and RA or CARE and RA were not significant.

**Emotional support.** Finally, although pretreatment emotional support was a significant moderator of outcomes, the pairwise comparisons of simple slopes revealed no significant differences across treatments for low- and high-risk couples.

### Discussion

Relationship education programs yield reliable but small effects on relationship outcomes, raising new questions about whether intervention effects might be stronger or weaker depending on the risk factors that people bring to their marriage. We aimed to address these questions by collecting data on individual and relational risk factors from 130 couples in their first marriages, randomizing those couples to receive one of three interventions, and collecting self-reports of relationship satisfaction for 3 years after treatment. Satisfaction declined on average, and to comparable degrees across intervention conditions. (See Rogge et al., 2013, for additional details.)

With regard to our four main hypotheses, we showed first that changes in satisfaction are indeed moderated by baseline risk factors, consistent with the views that (a) a sole focus on treatment main effects is likely to obscure meaningful variability in treatment response and that (b) there may be advantages to screening

Table 3  
*Omnibus Tests, Treatment Contrasts, and Simple Slopes of Individual Risk Moderators for Each Treatment Group*

Moderator	Omnibus test	Treatment contrast	CARE	PREP	RA
Parental divorce		2.3			
Interaction term	0.1		-0.1	0.1	-1.5
No: Simple slopes	-5.4		-6.2	-3.9	-4.5
Yes: Simple slopes	-5.5		-6.2	-4.9	-4.7
Childhood family discord		5.0			
Interaction term	0.6		-0.1	0.3*	-0.1
Low: Simple slopes	-5.7		-5.8	-6.1	-4.9
Mean: Simple slopes	-5.6		-6.2	-5.0	-5.1
High: Simple slopes	-5.4		-6.6	-3.9	-5.3
Education		0.2			
Interaction term	-0.9		-0.1	-0.1	-0.1
Low: Simple slopes	-5.1		-5.7	-4.8	-4.4
Mean: Simple slopes	-5.4		-6.1	-5.0	-5.0
High: Simple slopes	-5.6		-6.6	-5.2	-5.6
Race		8.6*			
Interaction term	0.1		2.1*	-1.3	-1.5
Non-White: Simple slopes	-5.5		-7.5 <sub>2,3</sub>	-4.3 <sub>1</sub>	-4.3 <sub>1</sub>
White: Simple slopes	-5.4		-5.4	-5.6	-5.8
Income		2.6			
Interaction term	1.6		0.7*	-0.1	0.4
Low: Simple slopes	-5.9		-7.3	-4.9	-5.7
Mean: Simple slopes	-5.4		-6.3	-5.0	-5.1
High: Simple slopes	-5.0		-5.2	-5.0	-4.6
Alcohol use		0.3			
Interaction term	-2.8**		-0.1	-0.2*	-0.1
Low: Simple slopes	-4.7		-5.4	-5.5	-4.7
Mean: Simple slopes	-5.6		-6.2	-9.1	-5.2
High: Simple slopes	-6.4		-7.0	-9.1	-5.7
Trait anger		1.0			
Interaction term	-0.2		-0.1	-0.1	0.1
Low: Simple slopes	-5.4		-5.9	-5.0	-5.6
Mean: Simple slopes	-5.4		-6.2	-5.1	-5.1
High: Simple slopes	-5.5		-6.5	-5.1	-4.7
Depressive symptoms		1.5			
Interaction term	1.3		0.1	0.1	-0.1
Low: Simple slopes	-5.8		-6.8	-5.7	-4.9
Mean: Simple slopes	-5.4		-6.2	-5.1	-5.2
High: Simple slopes	-5.0		-5.5	-4.5	-5.6

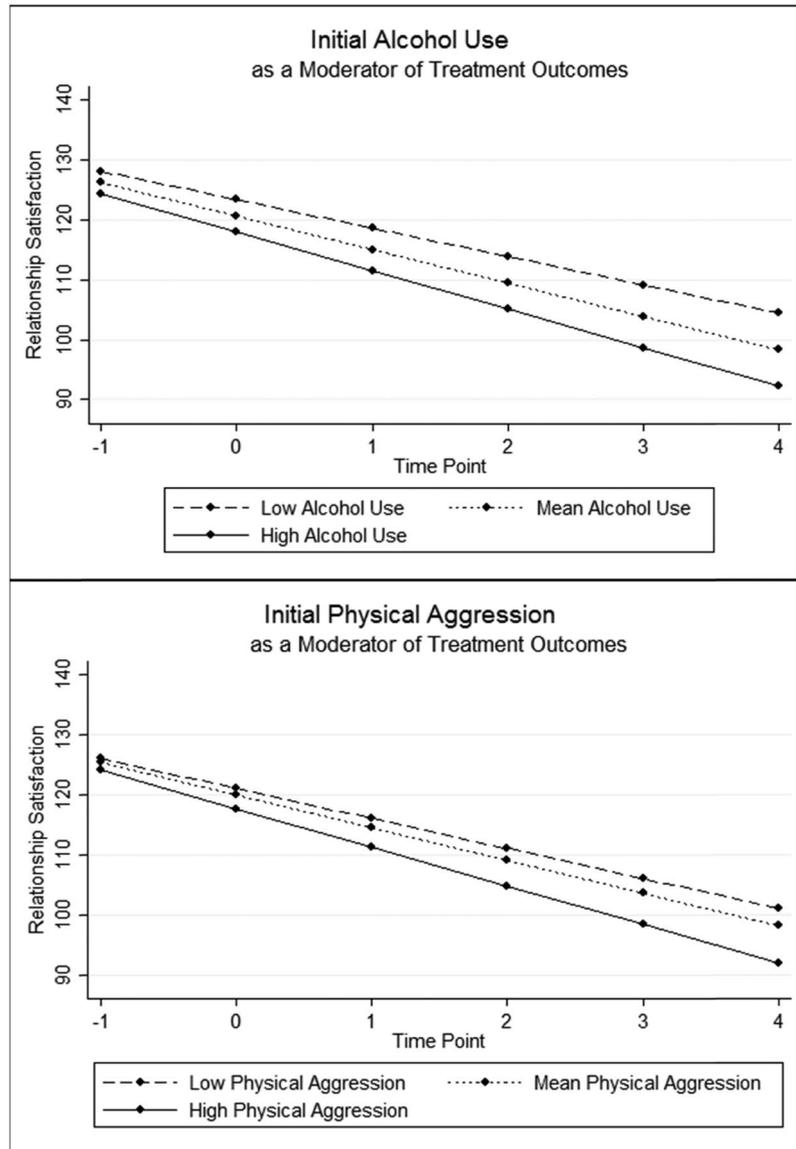
Note. Low =  $-SD$ , High =  $+1 SD$ . All simple slopes are significantly different from zero. For parental divorce and race, the omnibus test statistic is  $\chi^2$ , for all others it is  $z$ . For treatment contrast, the test statistic is  $\chi^2$ . Boxes indicate significant moderators within significant treatment contrasts. Subscripts indicate significant simple slopes pair-wise comparisons; 1 = CARE, 2 = PREP, 3 = RA.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

couples on the basis of risk prior to participation in relationship education programs. Second, and more specifically, relational risk factors were more likely than individual risk factors to differentiate couples' changes in satisfaction following intervention. Five of eight relational risk factors showed evidence of moderation—relationship satisfaction, effective communication, emotional support, commitment, and in the omnibus test, physical aggression (see Table 4)—consistent with predictions and with findings from the couples' therapy literature (e.g., Baucom et al., 2009). Conversely, among the eight individual risk factors, only race and alcohol use showed evidence of moderation, and the effect for race appears to be due specifically to poor performance by nonwhite couples in the CARE condition (discussed below; see Table 3). The absence of moderator effects for the six remaining individual risk factors suggests that the effects of relationship education may

generalize across a range of important sociodemographic and trait variables, including parental divorce, childhood family discord, education, income, trait anger, and depressive symptoms. This study thus adds to a growing body of work suggesting that parental divorce status does not moderate treatment outcomes (Halford & Wilson, 2009; Markman et al., 2013; Widenfelt et al., 1996), while expanding this idea to underscore the relative importance of immediate, relationship-based factors over more distal influences as treatment moderators.

Drawing attention to the apparent effect of relational risk factors is important, yet it leaves open the critical question of whether it is low- or high-risk couples who are most likely to benefit from treatment. Prior studies conducted over shorter intervals than ours (Barton et al., 2014; Bodenmann et al., 2014; Schilling et al., 2003) led us to the third hypothesis that high-risk couples would benefit



*Figure 1.* Two examples of moderation when couples are collapsed across treatments. In the top panel, couples reporting higher levels of alcohol use decline in relationship satisfaction more quickly posttreatment than couples with lower levels of alcohol use. In the bottom panel, couples reporting higher levels of physical aggression decline more quickly in satisfaction following treatment than couples with lower levels of physical aggression.

more from intervention than their low-risk counterparts. This prediction was partially correct. Contrary to prediction, better treatment outcomes were obtained with couples low in alcohol use and physical aggression (that is, with low-risk couples; see Table 3 and Figure 1). Consistent with prediction, better outcomes were obtained with couples low in baseline satisfaction (that is, high-risk couples; see Table 4). Both types of findings lend support to selected or secondary prevention strategies, while suggesting two distinct ways to prevent relationship distress: The former finding argues for the development of specialized interventions on focal or acute problems (such as alcohol use and aggressive outbursts) that are likely to undermine intervention effects and relationships, while the latter argues that couples relatively low in satisfaction

are especially likely to benefit from interventions that are already commonly available. This provides an empirical basis for devoting intervention resources to couples with specific risk profiles, a position that is reinforced by evidence that couples who are highest in baseline satisfaction actually respond better in the low-intensity RA intervention than the more intensive multisession skill-building provided by PREP and CARE (see Table 4).

Finally, because the manner in which a given moderator operates can vary with the intervention program under consideration, we tested whether the association between a given risk factor and changes in satisfaction was different across interventions. Though all three interventions performed quite similarly across levels of risk for nearly all of the individual and relational moderators (see

Table 4  
*Omnibus Tests, Treatment Contrasts, and Simple Slopes of Relational Risk Moderators for Each Treatment Group*

Moderator	Omnibus test	Treatment contrast	CARE	PREP	RA
Relationship satisfaction		6.2*			
Interaction term	-2.7**		-0.1**	-0.1	0.1
Low: Simple slopes	-4.5		-4.1	-4.2	-5.4
Mean: Simple slopes	-5.3		-5.9	-5.0	-5.2
High: Simple slopes	-6.1		-7.8 <sub>2,3</sub>	-5.7 <sub>1</sub>	-4.9 <sub>1</sub>
Effective communication		6.6*			
Interaction term	0.1		0.1	-0.1*	0.1
Low: Simple slopes	-5.5		-7.0 <sub>2</sub>	-3.8 <sub>1</sub>	-5.8
Mean: Simple slopes	-5.5		-6.3	-5.0	-5.2
High: Simple slopes	-5.5		-5.7	-6.2	-4.7
Hostile conflict		0.2			
Interaction term	-1.6		-0.1	-0.1	-0.1
Low: Simple slopes	-4.7		-5.2	-4.4	-4.7
Mean: Simple slopes	-5.2		-5.6	-5.1	-5.2
High: Simple slopes	-5.7		-6.0	-5.8	-5.7
Emotional support		6.8*			
Interaction term	-1.8		-0.1**	-0.1	0.1
Low: Simple slopes	-4.7		-4.5	-4.3	-6.1
Mean: Simple slopes	-4.8		-4.7	-4.5	-5.9
High: Simple slopes	-4.9		-4.9	-4.6	-5.8
Relationship empathy		2.9			
Interaction term	-1.7		-0.2*	-0.1	0.1
Low: Simple slopes	-4.9		-5.2	-4.4	-5.4
Mean: Simple slopes	-5.4		-6.2	-5.0	-5.1
High: Simple slopes	-5.9		-7.1	-5.7	-4.8
Commitment		6.5*			
Interaction term	-1.9		-1.9*	-1.6	0.7
Low: Simple slopes	-5.0		-5.0	-4.1	-5.6
Mean: Simple slopes	-5.5		-6.2	-5.1	-5.2
High: Simple slopes	-6.1		-7.4 <sub>3</sub>	-6.1	-4.7 <sub>1</sub>
Physical aggression		3.2			
Interaction term	-3.3***		-1.3***	-0.3	-0.9
Low: Simple slopes	-5.0		-4.6	-4.8	-4.2
Mean: Simple slopes	-5.5		-6.2	-5.1	-5.3
High: Simple slopes	-6.4		-7.8	-5.4	-6.4
Marital problems		0.2			
Interaction term	-0.6		-0.2	-0.1	-0.3
Low: Simple slopes	-5.1		-5.8	-4.8	-4.6
Mean: Simple slopes	-5.3		-6.0	-5.0	-5.1
High: Simple slopes	-5.5		-6.2	-5.2	-5.5

Note. Low = -1 SD, High = +1 SD. All simple slopes are significantly different from zero. For omnibus test, the test statistic is  $z$ . For treatment contrast, the test statistic is  $\chi^2$ . Boxes indicate significant moderators within significant treatment contrasts. Subscripts indicate significant simple slopes pair-wise comparisons; 1 = CARE, 2 = PREP, 3 = RA.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Tables 3 and 4), potentially important exceptions emerged. Specifically, nonwhite couples in the CARE group declined faster than white couples in the PREP and RA groups; couples reporting high levels of satisfaction and commitment who were assigned to the CARE group declined faster than couples in the RA group (see Figure 2); and couples reporting ineffective communication—that is, high-risk couples—experienced steeper slopes in the CARE condition than in the PREP condition. These findings demonstrate that there are meaningful differences in how couples respond even to different skill-based programs, and although the benefits attained by poor communicators in PREP are not surprising in light of this program's emphasis on teaching practical skills in communication and problem-solving, this finding suggests that it may

prove fruitful to match interventions to specific skill deficits or domains of risk. Additional credence for this point comes from the finding that couples low in emotional support respond better to CARE than couples high in emotional support, as CARE prioritizes skill training in supportive interactions. Once again, our findings highlight the value of selected or secondary prevention, as the least effective communicators receiving PREP declined less in satisfaction over the course of the study (slope = -3.8) than the most effective communicators (slope = -6.2; see Table 4).

Extending this point further, we see that the skill-based CARE intervention appeared to have an iatrogenic effect on low-risk couples compared with the RA intervention. Couples who were at low risk on pretreatment relationship satisfaction and commitment

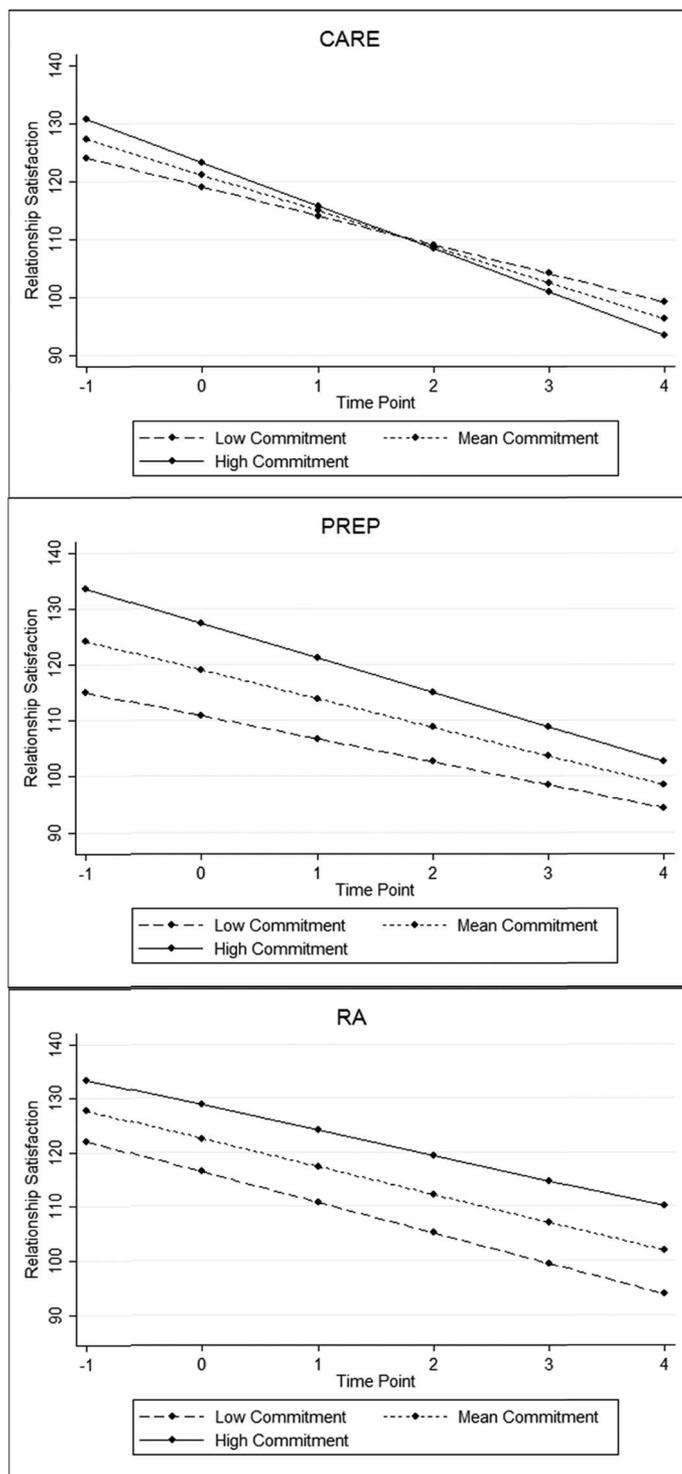


Figure 2. An example of moderation within a single treatment. In CARE (top), couples reporting high levels of commitment decline more rapidly in satisfaction than all other couples receiving CARE. In PREP (middle) and RA (bottom), couples reporting different levels of pretreatment commitment all decline in satisfaction at the same rate. Note that all slopes differ from zero and that only slopes in the CARE condition differ significantly from each other.

declined *more quickly* in satisfaction when they received CARE compared with RA. Echoing results of a 4-year study reported by Halford et al. (2001), this again supports a shift toward secondary intervention strategies, suggesting that couples who are already happy and secure in their relationship are better served by a self-guided, low-intensity intervention that allows them to use existing skills than by an intensive skill-building intervention that is designed to alter a behavioral repertoire that is already sustaining their partnership.

Interpretation of the present results should take into account the strengths of this study—assessment of a wide range of risk factors; an experimental design that includes randomization of couples to three theoretically distinct interventions; six assessments of satisfaction over 3 years—while recognizing important shortcomings. First, we relied exclusively on self-report data; observational data, though costly, might provide a different perspective on the key relational risk factors studied here. Second, the sampling procedures used here may have affected which variables emerged as moderators. Nearly half of the couples in this study were nonwhite, for example, and race moderated treatment outcomes. Broader sampling of populations with more risk, including couples with greater social, personal, and economic disadvantage, may reveal a different pattern of moderation. Third, our analysis of risk did not take into account possible actor and partner effects on relationship satisfaction, owing to a relatively small sample size and insufficient grounds for making predictions. Future studies are needed to disentangle contributions of husbands' and wives' risk factors to one another's outcomes, and the present findings suggest that substance use and aggression may be good starting points for such analyses. Finally, although our ability to detect effects is at least comparable with that of other university-based efficacy studies, we cannot rule out the possibility that null findings (e.g., the relative absence of effects with individual risk factors) are due to a lack of power. All results, but particularly those within a single treatment condition where power was lowest, require replication before they can be held with confidence.

Given that several of our findings support continued pursuit of moderators of couples' educational interventions, our study implies that appropriate targeting of high-risk couples will require a better conceptualization of risk. We have highlighted a number of factors that appear to be markers of risk, and present results suggest that characterizing couples on the basis of interpersonal variables holds particular promise. Nevertheless, additional research is needed to understand how those risk factors interact, and how they combine to affect intervention outcomes, especially over time (see Halford & Bodenmann, 2013, for an extended discussion of mediating effects in couple education programs). For example, future studies could adopt methodology from the scale development literature to determine which risk factors combine to form the most predictive baseline risk index.

A further implication of our work is that meta-analyses and review papers that aggregate across couples and interventions are likely overlooking meaningful between-couple differences in response to treatments. To advance understanding of how relationship interventions are operating, empirical studies are needed that go beyond an examination of main effects to include a consideration of couple- and treatment-based moderators. A more complete articulation of the diverse forms of relational risk would enable selection of couples most in need of preventive services, and most

likely to benefit from them. At the same time, development of comprehensive but efficient assessment packages would facilitate careful and systematic study of between-couple and between-study variability in risk.

By randomizing couples to three theoretically distinct active treatment conditions, we were able to demonstrate that a given moderator does not operate uniformly across all interventions. Had this study only included PREP, for example, we could have reasonably concluded that self-reported communication is the only relational risk factor that moderates treatment outcomes. Instead, we demonstrated that additional factors (including satisfaction, emotional support, and commitment) moderate different treatments, and that matching level of risk to treatment may improve outcomes. At the same time, future studies will need to reconcile the viability of matching couples to interventions with our finding that effects of our low-intensity RA intervention were not moderated by any risk factors, while yielding effects on satisfaction that were indistinguishable from the CARE and PREP interventions. Additional studies are needed to replicate these findings, of course, yet the present findings allow us to argue that future studies will benefit from comparisons between different kinds of skill interventions, and between interventions with and without active skill-training elements.

We conclude by noting that, while we did detect important patterns in moderator effects, even under the best of conditions, spouses nevertheless declined significantly and substantially in their judgments of relationship satisfaction. Greater appreciation of the assets and liabilities that couples bring to marriage will help to promote healthier relationships, yet the pronounced downward trends observed even for low-risk treated couples highlight the continuing need for new types of interventions that enable couples to exploit their strengths while circumventing the challenges that intimate partners routinely confront.

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