

Community-Based Premarital Prevention: Clergy and Lay Leaders on the Front Lines*

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This study reports on the results of the dissemination of an empirically-based, premarital education program within religious organizations. The following major results are discussed with respect to premarital prevention: (a) Clergy and lay leaders were as effective in the short run as our university staff; (b) couples taking the more skills-oriented intervention showed advantages over couples receiving naturally occurring services on interaction quality; and (c) couples reported that the communication skills components of premarital education were the most helpful.

The staggering costs of marital failure have led religious, political, and policy leaders to call for a variety of efforts to strengthen marriages, a key example being calls for couples to undergo preventive premarital training (e.g., McManus, 1993; Parrott & Parrott, 1995). But will such calls to “do something” be answered with wisely guided interventions based on empirical data? This report is part of a project designed to help to answer relevant questions: Who is best poised to provide prevention services to couples premaritally? How effective can the services be when provided in the community? What factors affect the adoption and ongoing implementation of prevention services in community-based settings?

With roughly 75% of first marriages occurring in religious organizations (ROs), religious leaders are a logical point of action for broad-based, premarital *prevention* efforts. Although there is a compelling rationale for the role religious leaders can play in prevention efforts (Stanley, Markman, St. Peters, & Leber, 1995), less than half of religious organizations currently provide premarital services of any consequence (Trathen, 1995). Additionally, researchers have raised concerns about the effectiveness of much of the premarital training that currently is provided to couples (Schumm & Silliman, 1997; Sullivan & Bradbury, 1997). As part of a larger project, this report presents short-term outcomes for couples receiving either conventional premarital services from their religious organizations or PREP (Prevention and Relationship Enhancement Program; e.g., Markman, Stanley, & Blumberg, 1994).

The goal of this study was to assess the degree to which a program that has demonstrated promising preventive efficacy in university settings (clinical trials) could yield similar results in more natural, community-based settings. As such, this research is designed to test the effectiveness of dissemination in the community by assessing the extent to which clergy and lay leaders can readily and successfully implement the program in their set-

tings. Furthermore, this design addresses weaknesses found in some other studies on PREP (and other programs), for example, weaknesses due to possible selection effects, lack of random assignment, and measurement quality. To be clear, however, this study is community-based research, focused on the effectiveness of the intervention when transported into religious organizations, not a tightly controlled laboratory study of program efficacy. Religious organizations were recruited for participation and then randomly assigned to one of three tracks: (a) PREP delivered by trained religious leaders (RO PREP); (b) PREP delivered by our University of Denver team (DU PREP); and (c) naturally occurring premarital intervention services (NO), wherein the ROs employed whatever premarital services they normally use. Because less than half of ROs provide any premarital counseling, this track where ROs do provide training reflects better than average prevention efforts across the universe of ROs (adding to external validity for this design).

Brief Review of Research on PREP

The Prevention and Relationship Enhancement Program was designed as a program to prevent marital distress and divorce, based on an empirical analysis of risk factors (see overviews in Floyd, Markman, Kelly, Blumberg, & Stanley, 1996; Stanley, Blumberg, & Markman, 1999). In PREP, we attempt to help couples lessen known risks and increase protective factors (key aims of prevention; e.g., Coie et al., 1993) based on an analysis of longitudinal studies of marriage (e.g., Gottman & Krokoff, 1989; Karney & Bradbury, 1995; Kurdek, 1993; Larson & Holman, 1994; Markman & Hahlweg, 1993). A hypothesis underlying PREP is that various kinds of negative interaction are particularly corrosive to the positive bond between partners over time, and therefore, they represent key risk factors for marriages. In this model, a watershed point on the path to marital failure occurs when one or both partners begin reliably to associate the presence of the other with pain and stress rather than support and safety (Stanley et al.). Hence, reducing negative interaction and maintaining elements of the positive bond are crucial aims of prevention in this model. Along with the use of behavioral techniques (e.g., Baucom & Epstein, 1990), PREP also targets key protective factors, such as friendship, commitment, teamwork, fun, spiritual connection, and sensuality (e.g., Markman et al., 1994; Stanley, Trathen, McCain, & Bryan, 1998), mirroring advances in the field targeted at helping couples build and deepen the positive side of their relationships (e.g., Jacobson & Christensen, 1996).

In one of the most extensive, long-term studies on PREP, couples who took the program (the version existing at that time)

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before marriage had less negative interaction, more positive interaction, lower rates of relationship aggression, lower combined rates of breakup or divorce, and higher levels of relationship satisfaction compared with control couples receiving no premarital intervention (e.g., Markman, Floyd, Stanley, & Storaasli, 1988; Markman, Renick, Floyd, Stanley, & Clements, 1993). Because of differential attrition (more couples in the control group dropped out of the study) and the probable wearing off of the effect over years of time, however, differences between control subjects and PREP couples beyond 5 years are equivocal. Also, because not all couples offered the training chose to take it, the findings are open to various interpretations.

A long-term study of a German adaptation of PREP was undertaken in Germany (Thurmaier, Engl, & Hahlweg, 1999). Compared with control couples (who took either no premarital training or that normally offered through their churches), couples taking PREP had substantially lower divorce rates, as well as more positive and less negative interaction up through 5 years following training. Using different methods of analysis, Bradbury et al. (1998) found that these PREP couples displayed slower increases in negative verbal behavior over time and that PREP wives showed slower declines in satisfaction over time in comparison to control subjects.

Another premarital study compared PREP with a version of Engaged Encounter, with results showing an advantage for PREP couples on both objectively coded interaction and self-reported satisfaction at post assessment (Renick, Blumberg, & Markman, 1992). In a PREP-style intervention, Halford and colleagues found that high-risk couples who took the intervention showed advantages in maintaining satisfaction, whereas high-risk couples who took the alternate, bibliotherapy intervention declined in satisfaction over 4 years (Behrens & Halford, 1994).

In a study of an adaptation of PREP for Holland that used a higher risk group of premarital couples, van Widenfelt, Hosman, Schaap, and van der Staak (1996) found no advantage for those taking PREP. Hence, their findings suggest such preventive efforts might not be worth the resources with some couples. The results of this study are hard to interpret, however, because of differential attrition, differences in age of relationship between the groups, and a lack of objective assessment of interaction. In an unpublished study, Trathen (1995) compared a Christian version of PREP with a less interaction-oriented intervention, finding no advantages for the PREP intervention. Couples in both groups gained in confidence. As with the study in Holland, the lack of objective assessment of interaction makes interpretation difficult. Nevertheless, the results suggest that other well delivered programs may yield positive results.

Hypotheses

In the future, we plan to report on the degree and nature of adoption of the research-based intervention into ROs over time. Future reports on longer term outcome effects are contemplated as well. Three major hypotheses are evaluated in this report.

Hypothesis One

We expected that clergy and lay leaders would be more effective, at least in the short run, when using the more empirically founded, skills-based training when compared with what is more typically done in ROs. Hence, we predicted that couples in the RO PREP track would show advantages relative to the NO couples on objective ratings of interaction quality from pre- to pos-

tassessment. This hypothesis follows directly from earlier studies on PREP wherein differences most likely to emerge between PREP and various control groups, in the short run, are those based on objectively rated communication quality (e.g., Hahlweg, Markman, Thurmaier, Engl, & Eckert, 1998; Markman et al., 1988; Renick et al., 1992). We were less confident of self-reported communication differences but hypothesized finding such results as well.

Hypothesis Two

We predicted that couples in the DU PREP track would show advantages over the RO PREP track on objective measures of communication quality at postassessment. We did not expect the performance of the religious leaders to rival that of our staff.

Hypothesis Three

We predicted that the three groups would not differ on various other measures of relationship functioning from pre- to postassessment. This prediction was made for both theoretical and historical reasons. It is our experience that pre-to-post differences in outcome studies on forms of PREP with premarital couples are generally likely to occur only on measures of objectively coded interaction. We believe this is because such measures are sensitive to changes resulting from the interaction components of the intervention. Conversely, happy premarital couples tend to rate their premarital relationships high on global self-report measures of relationship quality. Hence, the initial ratings are so high that an intervention would have to cause immediate deterioration to see pre-post changes on such measures. Hence, we expect differences on other outcomes to take longer to develop.

Method

Subjects

The subjects were 138 couples who were formally engaged or planning marriage from the Denver Metro area. At preassessment, the partners of the couples participating in this study had known each other an average of 2.93 years. Overall, the average age was 25.47 for women and 26.96 years for men. The average years of education was 13.17, and average personal income level was in the \$20,000–\$29,000 range. Of this sample, 88.2% were formally engaged and 9.3% were planning marriage in the future. The average relationship satisfaction score at preintervention on the Locke-Wallace Marital Adjustment Test (Locke & Wallace, 1959) was 123.97 ($SD = 16.87$) for men and 125.35 ($SD = 16.76$) for women, scores that are typical for premarital couples (e.g., Markman et al., 1993; Trathen, 1995). There were no significant differences between intervention groups on these demographic variables. The subpopulations included in the study are as follows: .3% Asian, .3% Black, 6.2% Hispanic, .3% Native American, 90.4% White, .6% multicultural, and 1.2% other. All subjects were recruited through their ROs. Clergy were asked to strongly encourage the next four premarital couples that came to them to participate in the study, but the couples could select not to participate. Forty-five ROs contributed 138 couples to the project who have completed both preintervention and postintervention assessments. The findings presented here are based on the data from these couples: 52 in DU PREP, 54 in RO PREP, and 32 in the NO track. Two couples were removed because of language problems.

Recruitment of Religious Organizations

Much effort was made here to avoid recruiting a convenience sample. From the entire universe of ROs in the six-county Denver metro area, we identified those ROs that met the following criteria: (a) membership of 400 and up (a rough guideline for the size of ROs needed) and (b) a history of conducting at least four weddings for first-time married couples within a wedding season. Certain churches with high minority membership did not meet the criteria for inclusion (these churches were typically smaller than average) but were retained in an attempt to adequately sample minority couples. From the identified universe, 202 eligible ROs became the focus of our intensive recruitment efforts. Of the ROs that met the criteria above, 105 agreed to participate, including 6% Baptist, 23% Catholic, 7% Episcopal, 15% Lutheran, 18% Methodist, 13% Presbyterian, and 2% Jewish (the rest are various groups). When an RO joined the study, it was then randomly assigned to one of the three tracks. This means that all couples from any given RO in this report experienced the same experimental condition. The 45 ROs on which this report is based are those that have followed through and contributed couples.

The gender breakdown of the clergy and lay leaders participating in this research was 90% male and 10% female (68% clergy and 32% lay leaders). The clergy averaged 48 years of age, with 18.7 years of education and 14.6 years experience in counseling couples. The lay leaders were pastors' wives, retired couples, or trained counselors, with an average age of 46.6 years, 17.2 years of education, and 10.3 years of experience working with couples.

Measures

The measures used in the pre- and postassessment sessions were virtually identical and included, but were not limited to, the following:

Descriptive information. A demographics questionnaire gathered descriptive information about our sample (e.g., age, race, income, years of education, religiosity, etc.).

Assessment of religious dimensions. Religiosity was measured by the simple question, "All things considered, how religious would you say that you are?" This question tends to yield similar information to more complex measures (e.g., Stanley & Markman, 1992).

Commitment Inventory (CI). An updated and modified version of the CI assessment was used to assess dimensions of commitment. The CI has high levels of internal consistency across a range of samples (e.g., Stanley & Markman, 1992) and has shown theoretically consistent relationships with many variables (e.g., Adams & Jones, 1997; Stanley & Markman). A short, 14-item version of the broader dedication instrument was employed here; this version has demonstrated both reliability and validity in various studies (e.g., Renick et al., 1992; Trathen, 1995) and has a coefficient alpha of .75 in this study.

Confidence Scale (CS). This measure was developed by Stanley, Hoyer, and Trathen to measure a person's level of confidence that they (the couple) can handle what is in their future and stay together. This is the first study to be published using this measure, but it has shown promise in various others. For example, scores on this measure increased as a result of premarital education (Trathen, 1995). In that same data set, the measure was a particularly good predictor of breakup. In our current premarital research, the measure shows theoretically meaningful

and strong association with the development of female depression in the first year of marriage. The coefficient alpha for the measure in this study is .85.

Relationship Dynamics Scale (RDS). This is an eight-item measure developed for a nationwide random phone survey of 947 adults in 1996, conducted by Stanley and Markman (1997). The items are designed to assess danger signs in interaction and thought, such as escalation, invalidation, withdrawal, as well as one item that assesses alternative monitoring. In the nationwide sample, the measure demonstrated excellent validity, and in the sample here, it has a coefficient alpha (reliability) of .73.

Communication Skills Test (CST). This is a new measure of self-reported communication behavior developed by Jenkins and Saiz in our laboratory. Thirty-two questions about various negative and positive communication patterns are answered on a 7-point Likert scale. Based on factor analyses of the items and reliability analyses, seven subscales were formed from the items available. The resulting scales and the coefficient alphas for this sample are withdrawal (.72), problem-solving skills (.81), negative conflict (.88), escalation (.80), forbearance (.66), raising concerns (.71), and invalidation by partner (.84). Initial analyses in both this data set and Trathen's (1995) data set suggest adequate reliability and validity.

Marital Agendas Protocol (MAP). The MAP (Notarius & Vanzetti, 1983) assesses the intensity of couples' problems in common areas of potential difficulty (e.g., communication, money, sex), each rated from a scale of 0 to 100. Here, we analyzed data using the mean of the ratings for the problem areas. Coefficient alpha is less appropriate for this type of measure, so we report no reliability estimate based on this sample.

Marital Adjustment Test (MAT). The MAT (Locke & Wallace, 1959) is a widely used measure of marital adjustment with acceptable reliability and validity (e.g., Stanley & Markman, 1992), as well as the ability to discriminate between distressed and nondistressed couples (Gottman, Markman, & Notarius, 1977). Although the usefulness of such omnibus (and aging) measures of global adjustment has been validly questioned (see Fincham & Bradbury, 1987; Schumm & Hemesath, 1999), we used the measure here because it provides numbers that are directly comparable with earlier research in this field. Although the MAT has historically demonstrated high levels of reliability, the coefficient alpha in this project tends to be somewhat lower (.65). Sample characteristics (ceiling effects in a study of relatively happy premarital couples) may have constrained the estimate in this research, although detailed discussion of such matters is beyond the scope of this report.

Program Satisfaction Rating (PSR). Couples in all tracks rated the degree to which they were satisfied with the premarital services that they received using a simple 7-point Likert scale in answer to the question, "Overall, how satisfied are you with the premarital training you received?" Additionally, couples were asked at postassessment to identify aspects of training that they "found most helpful." These open-ended responses were categorized as follows: assessment (standardized personality test), homework, reference materials, insight-oriented counseling, counselor support and coaching, leader presentation style, format, communication skills training (e.g., speaker-listener technique), and lectures related to married life (e.g., communication, finances, fun and friendship, spirituality, sexuality, expectations, and other).

Interaction Dynamics Coding System (IDCS). The IDCS (Julien, Markman, & Lindahl, 1989) codes four positive dimen-

sions (i.e., communication skills, support/validation, problem solving, and positive affect) and five negative dimensions (i.e., withdrawal, denial, conflict, dominance, and negative affect). In addition, two dyadic aspects of communication (i.e., negative and positive escalation) are scored. Each code is scored on a 9-point scale and assigned for the complete interaction as a unit of observation. These are dimensions of communication identified by previous research as central components of constructive and destructive interaction (e.g., Gottman, Coan, Carrere, & Swanson, 1998; Markman & Hahlweg, 1993). In the current research project, kappas for the global codes ranged from .80 to .92. Based on the formula for calculating the reliability for composite scores using reliability scores of the individual variables in the composite (given by Nunnally, 1978), the estimated reliabilities of the summary codes reported here (female positive communication, male positive, female negative, and male negative) all exceeded .90. Use of the IDCS codes has discriminated between distressed and nondistressed couples (Julien et al.; Prado & Markman, 1998). In an earlier study of premarital intervention, it discriminated between couples receiving PREP and control couples over various follow-ups (Markman et al., 1993).

Procedures

Pre- and postintervention assessment. Partners completed a short interview, a computerized version of the questionnaires that allowed online data collection, and engaged in one videotaped problem-solving discussion and one open-ended discussion as friends. Based on scores on the MAP, couples were asked to discuss their top problem area for 10 to 15 minutes. These discussions were videotaped for later coding with the IDCS—the ratings that are reported in the results section. Coders were not informed about subjects' track identification. Couples were paid \$40 for coming.

Premarital Interventions

Naturally occurring ROs. The ROs participating in the NO track presented their couples with a wide array of premarital programs representative of practice in the field. We classified the training as follows (the number of participants and amount of time couples spent in the program are given in parenthesis):

1. Minimal contact in which couples met with clergy to discuss wedding logistics (four couples; average 1 hour or less)
2. Assessment, such as administering standardized personality tests (six couples), including such instruments as PREPARE (Olson, Fournier, & Druckman, 1989) and FOCCUS (Markey, Micheletto, & Becker, 1985)
3. Diffusion of information, including required readings, lectures, or discussion of various topics, such as communication, family planning, finances, and so forth (five couples; average 4 hours)
4. Combination of assessment and diffusion of information; (11 couples; average 4 hours)
5. Assessment or diffusion of information combined with some communication skills training similar to the skills taught in PREP (six couples; average 7 hours).

Only 19% of the NO couples received services with any interaction modification component.

PREP. A version of PREP formatted into three sessions was employed in the DU PREP and RO PREP tracks. For most couples, this 12-hour version consisted of 1 full, weekend day fol-

lowed by 2 weeknight sessions, 1 week apart from each other. Groups of four couples at a time were attempted in the DU PREP track and suggested in the RO PREP track, although group size was also variable based on attendance, cancellations, and availability of couples. The version used in this study calls for the playing of videotaped material for four (out of 14) of the central content lectures comprising two (out of 12) hours of material (danger signs, speaker-listener technique, problem solving, and issues and events). Both DU and RO track presenters were taught the program in 3-day, 18-hour training workshops. On the 3rd day of training, the trainees were assessed on their ability to present a piece of a PREP lecture and adhere to the major themes and educational model of PREP. All clergy and lay leaders trained to present PREP were judged as being able to present the material and coach couples in the basic communication skills.

Clergy and lay leaders in the RO PREP track were asked to provide audio tapes of their presentations so we could attempt to assess adherence to the PREP model. Adherence ratings were based on analysis of coverage of content in PREP. Seventy-five percent of these presenters delivered the program in a manner highly consistent with their training. The remaining 25% showed somewhat lower levels of adherence, for example, by introducing concepts that are not part of (or incompatible with) the PREP material (e.g., comments about personality compatibility).

Results

Most of the analyses presented here are based on a factorial model with one between-subjects factor (track: DU PREP, RO PREP, NO) and two within-subjects factors (time, that is, pre- and postassessment, and gender). For hypotheses one and two, where specific predictions were made, we modified the between-subjects variable so that it would only include the relevant groups.¹ Where noted, we used a Bonferroni² correction to control Type I errors with unplanned comparisons.

*Hypothesis One: RO PREP versus NO on Pre-Post Communication Quality*³

We hypothesized that couples from the RO PREP group would show advantages on communication quality from pre- to postassessment in comparison with the NO group.

Positive communication. For the composite code for positive interaction from the IDCS, a significant main effect was found for gender [$F(1,84) = 7.97, p < .05$], with women having a higher score ($M = 4.24$) than men ($M = 3.93$). More important, a significant group \times time interaction was found [$F(1,84) = 11.89, p < .05$], with the RO PREP group showing an increase in positive communication at postassessment relative to the NO group (see Figure 1).

As assessed by t tests conducted using the Bonferroni correction, mean pre and post scores were significantly different only for the RO PREP group [$t(53) = -2.71, p < .05$], showing that the RO PREP group increased in positive communication from pre- to postassessment. There was also a trend for a significant difference between RO PREP and NO at postassessment [$t(84) = -2.44, p = .068$], with RO PREP being greater than the NO group.

Negative communication. The composite code for negative interaction based on IDCS coding showed a significant group \times time interaction [$F(1,84) = 13.68, p < .05$], with group NO showing an increase in negative communication at postassessment relative to the RO PREP group (see Figure 1). As assessed

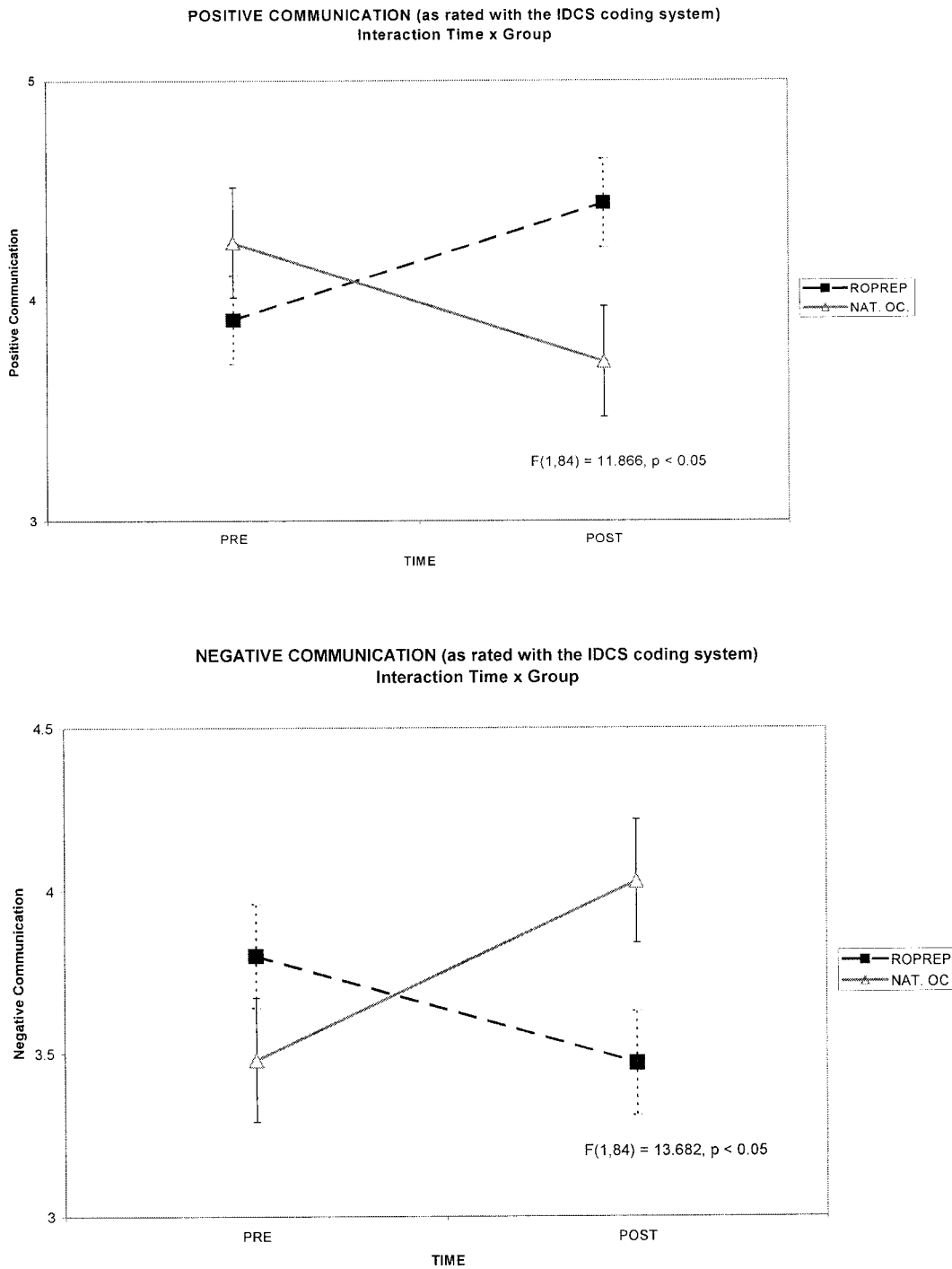


Figure 1. Interaction Dynamics Coding System (group \times time)

by *t* tests using the Bonferroni correction, differences in mean scores between RO PREP and NO at time postassessment were significant [$t(84) = -2.58, p < .05$], with RO PREP couples having less negative interaction than NO couples at postassessment. Similarly, paired pre- and postassessment scores were significantly different only for the NO group [$t(31) = -3.04, p < .05$], showing that the NO group increased in negative interaction from pre- to postassessment. There were also two trends for significant differences: (a) between pre and post scores for the RO

PREP group [$t(53) = 2.18, p = .12$], suggesting that the RO PREP group decreased in negative communication from pre- to postassessment; and (b) for the main effect of the difference for gender [$F(1,84) = 3.5, p = .06$], with women showing less negative interaction ($M = 3.61$) than men ($M = 3.79$).

Communication Skills Test. Only the problem-solving subscale showed a significant group \times time interaction [$F(1,74) = 7.99, p < .05$], with the RO PREP group showing an increase in rated problem-solving skills at postassessment relative to the

NO group. To further assess the pattern of interaction, *t* tests were conducted using the Bonferroni correction. Paired pre and post scores were significantly different only for the RO PREP group [$t(53) = -2.88, p < .05$], showing an increase in their self-perceptions of problem-solving skills from pre- ($M = 18.76$) to postassessment ($M = 19.91$).

Taken together, these results support hypothesis one. The couples who have taken PREP delivered by the clergy and lay leaders within the ROs show favorable patterns of communication over time when compared with the NO group.

Hypothesis Two: DU PREP versus RO PREP On Pre to Post Communication Quality

We hypothesized that the couples taking PREP delivered by our staff at the university would do somewhat better in terms of short-term communication changes than those taking PREP delivered by clergy and lay leaders within their religious organization. In these comparisons, there were significant results related to interaction, but no group differences. Hence, these results did not confirm the hypothesis.

Positive communication. The composite code for positive scores for interaction quality as rated with the IDCS showed a significant main effect for time [$F(1, 104) = 6.14, p < .05$], with scores at postassessment being higher ($M = 4.20$) than at preassessment ($M = 3.88$). There was a trend for a significant group \times time interaction [$F(1, 104) = 2.36, p = .13$], with group RO PREP showing a larger increase in positive communication from pre- to postassessment (pre: $M = 3.92$; post: $M = 4.44$) compared with DU PREP (pre: $M = 3.85$; post: $M = 3.97$).

Communication Skills Test. Significant differences were observed for problem solving and invalidation, but not with regard to group. Regarding problem solving, only a main effect for Time was observed [$F(1,92) = 4.19, p < .05$], with lower scores at preassessment ($M = 18.77$) than at postassessment ($M = 19.46$). Regarding invalidation by partner, a main effect for time was observed [$F(1,92) = 9.20, p < .05$], with lower invalidation scores at preassessment ($M = 3.38$) than at postassessment ($M = 3.84$). There was also a significant gender \times time significant interaction [$F(1,92) = 4.88, p < .05$] with men showing a larger rated increase in invalidation by partner from preassessment to postassessment (pre: $M = 3.34$; post: $M = 4.03$) compared with women (pre: $M = 3.42$; post: $M = 3.64$). As assessed by *t* tests using the Bonferroni correction, pre and post scores were significantly different for men [$t(100) = -2.57, p < .05$], showing an increase in their feeling of invalidation from pre- to postassessment.

Hypothesis Three: No Significant Differences From Pre to Post Assessment on Other Measures of Couple Functioning

Hypothesis three predicted no differences across groups at postassessment for the self-report measures (e.g., Relationship Dynamics Scale, Commitment Inventory, Marital Adjustment Test, Marital Agendas Protocol, Confidence Scale) of aspects of the couples' relationships. This hypothesis was supported by an absence of significant differences.

Other Analyses and Findings

Satisfaction with premarital training. Subjects at postassessment were asked how satisfied they were with their premar-

Table 1
Percentage of Subjects Mentioning Various PREP Program Features as Most Helpful

Responses Coded in These Categories	Percent Women	Percent Men
Communication skills training	90%	89%
Format features	22%	19%
Expectation clarification	21%	14%
Communication lectures	14%	15%

Note: Format features refers to respondent saying things like the arrangement of the schedule was most helpful. PREP = Prevention and Relationship Enhancement Program.

ital training on a simple, 7-point Likert scale. Only the main effect for group was significant [$F(2, 128) = 3.60, p < .05$]. *t* tests conducted using the Bonferroni correction showed that RO PREP was significantly different from NO [$t(77) = 2.34, p < .05$], with NO satisfaction ratings being lower ($M = 5.17$) than RO PREP ratings ($M = 5.86$). Similarly, satisfaction ratings were higher for DU PREP ($M = 5.80$) than the NO track [$M = 5.17$; $t(77) = 2.12, p < .05$].

Ratings of most helpful features of premarital training. Each subject was asked an open-ended question about what features of their premarital training they found most helpful. They could list up to three features (hence percentages in columns can exceed 100%), and answers were coded into categories as described in the method section. The rankings for both PREP tracks were essentially the same, so they are presented together. Table 1 shows the percentage of subjects in the PREP groups who mentioned each feature. As can be seen, PREP couples ranked the communication skills as the most helpful feature of their training, with the speaker/listener technique specifically listed by many subjects as the most helpful feature of their training (men = 78%, women = 75%).

Men in the naturally occurring track reported the following features as most helpful: communication lectures (35%), insight-oriented counseling (24%), and structured assessment (12%). Women in the naturally occurring track reported the following features as most helpful: communication lectures (39%), insight-oriented counseling (33%), with a tie for third place between five other features (all rated at 11%).

Dedication commitment. Analysis of this measure showed a significant gender \times time interaction [$F(1, 126) = 7.04, p < .05$]. To further assess the pattern of interaction, *t* tests were conducted using the Bonferroni correction. Differences were significant only at postassessment [$t(130) = 4.07, p < .05$], with women scoring higher ($M = 90.05$) than men ($M = 87.15$) on this measure of dedication. There was also a trend for the main effect for gender across time [$F(1, 126) = 6.63, p = .07$], with women reporting higher levels of dedication commitment ($M = 89.35$) than men ($M = 87.48$).

Religiosity. A model with one between-subjects factor (track: DU PREP, RO PREP, NO) and one within-subject factor (gender) was used to test group differences across gender on religiosity. Main effects for both group [$F(2, 133) = 5.22, p < .05$] and gender [$F(1, 133) = 16.56, p < .05$] were significant. *T* tests conducted using the Bonferroni correction showed that women rated themselves as more religious ($M = 4.31$) than men ($M = 3.78$). Regarding Group, only DU PREP was significantly different from RO PREP [$t(133) = 3.21, p < .05$], with DU PREP couples being somewhat less religious ($M = 3.55$) than RO PREP couples ($M = 4.47$), but RO PREP couples were no more religious than the NO couples ($M = 4.12$).

Age. A model with one between subjects factor (track: DU PREP, RO PREP, NO) and one within subjects factor (gender) was used to test group differences across gender on age. Main effects for both group [$F(2, 135) = 5.05, p < .05$] and gender [$F(1, 135) = 33.11, p < .05$] were significant. *t* tests conducted using the Bonferroni correction showed that for gender, women were younger ($M = 25.37$) than men ($M = 26.99$). Regarding group, only DU PREP was significantly different from RO PREP [$t(135) = 3.13, p < .05$]. These findings suggest that the DU PREP couples were somewhat younger ($M = 25.03$) than the couples in the RO PREP group ($M = 27.63$), but that the RO PREP couples were not significantly different in age than the NO couples ($M = 25.89$).

Discussion

A major goal of this research project was to test the effectiveness of a program that has shown promise in prior clinical trials in more natural, community-based settings. As such, the findings have bearing on both program effectiveness and on the degree to which couples can benefit from such services when they are delivered by clergy and lay leaders in their own settings. Regarding the latter, we did not find any differences between the RO PREP and DU PREP tracks in terms of changes in couple interaction over time or on couple ratings of satisfaction with premarital training. In contrast, in the comparison of the two tracks where religious leaders presented the premarital training, we found statistically significant differences in interaction between the RO PREP group and the NO group from pre- to post-assessment. The measurable differences for both couple interaction as well as satisfaction with premarital training suggest that the clergy and lay leaders presenting PREP in the RO PREP track are providing as effective a service as the university staff—a least with regard to pre-post changes in couple functioning. Whatever these leaders may have lacked in experience with this specific program seems to have been offset by their skill at marriage education, the user-friendly program format, and the fact that they were working in settings familiar to them and the couples they serve. Given that there is little, if any, systematic research on the effectiveness of religious leaders in the provision of premarital services (Silliman & Schumm, 1999), these findings take on added importance.

The other major findings presented here are that the couples who have taken PREP delivered by their clergy and lay leaders were moving in the direction of interacting less negatively and more positively at postassessment in contrast to changes in interaction for the NO couples. These findings replicate those found in a number of earlier studies on PREP, including studies that did not employ random assignment. Furthermore, these contrasts between the RO PREP and NO tracks provide a strong basis for comparison of intervention effects because these groups were otherwise identical, especially in that the couples were working with religious leaders in their religious setting.

Although the differences in objectively coded interaction may seem rather small based on examination of Figure 1, some context is important in understanding their potential meaning. First, for whatever reasons, our coders have historically used a relatively small portion of the available range on these codes. From a scaling standpoint, it would be better if they used more of the scale, but they have not done so. Second, and more important, the effect sizes for these communication differences are of the same magnitude (and mostly greater) than those seen in

the pre-post data presented in Markman et al. (1993) using the same coding system and in the Germany study using a different coding system (Hahlweg et al., 1998). For the data in Figure 1, the effect size of the group differences are .78 and .82. Therefore, these are moderately strong effects. Third, our theory is that early, small differences in interaction quality can grow over time to affect other major aspects of couple functioning (e.g., Stanley et al., 1999). Only longer term data in this study will reveal if this is so for these couples. There was only one self-reported dimension of communication and interaction where significant group differences were obtained: problem-solving skills. These findings suggest that the couples' perceptions of how they have changed in terms of interaction quality are in the domain of improved problem solving. As a new finding, however, the result needs replication.

Post hoc testing revealed no group differences between the RO PREP and NO tracks on age of couples, religiosity, or on any other variable measured. This, along with the lack of differences in interaction patterns between the couples in the DU PREP and RO PREP tracks at postassessment, bolsters the interpretation that the communication differences between the RO PREP and NO tracks were due to program content. Therefore, the initial evidence suggests the successful dissemination of a program in the community with these front-line marriage educators obtaining good results. These findings must be replicated and extended with tests involving more couples over time and for longer follow-up periods.

The finding that the couples of the DU PREP track were less religious on average than couples in the other tracks points to the difficulties of removing self-selection effects from outcome research (Stanley & Markman, 1998). Even though ROs were randomly assigned to track, we could not compel couples to comply with their RO's participation in this research. It seems likely that some sort of self-selection led to less religious couples being more likely to attend a program delivered in a university setting. Although an interesting finding for follow-up, this difference does not bear on the interpretation of the differences between the RO PREP and NO tracks because those tracks do not differ on any dimension at preassessment, leaving interpretation of group differences entirely in the realm of treatment effects.

In summary of the major findings reported here, the couples receiving the empirically based PREP intervention showed clear, early advantages relative to those couples receiving more traditional premarital services in terms of interaction quality. More important, the lack of differences between the two PREP tracks on program satisfaction ratings or couple interaction outcomes suggests that clergy and lay leaders can be effectively trained to present this program in the community. Furthermore, couples taking PREP in either track were more satisfied with their premarital education than were couples receiving the more traditional offerings, although couples in all three tracks were generally pleased with the services received. The PREP couples in this study were also more likely to report that their leaders were working with goals and staying on tasks that were meaningful to them (findings reported in Wilkens, 1998).

Changes in Reported Invalidation and Commitment

The self-reported increases in invalidation from pre- to post-assessment for couples in all tracks may reflect a general effect of this phase of couple development. Impending weddings, as well as the introduction of issues in premarital education, may

stir up more disagreements than many of these couples have had in the past, exposing the partners to greater invalidation as issues arise. Furthermore, men may be particularly sensitive to such increases in negative interaction, consistent with evidence from some studies that men may be more susceptible to some kinds of negative affect in marriage over time (e.g., Gottman et al., 1998).

Regardless of group assignment, the male and female dedication scores appear to go in different directions from before premarital training to afterward. If it were found to be generally true that women tend to increase their levels of commitment as marriage approaches and men tend to decrease theirs, several hypotheses might be entertained. First, it may be that women's overall sense of dedication is particularly enhanced by seeing the participation of the men in premarital training, which they view as signs of investment in the marriage, leading to increasing female dedication in return. Men may not be similarly affected by seeing women's participatory investment, perhaps taking it for granted. It is also possible that some men decline in dedication as a result of having to deal with issues in the relationship as marriage approaches. Such hypotheses need to be evaluated further.

Limitations

First, the findings presented here represent short-term results of programs designed to accomplish long-term outcomes. We predict that results at follow-ups at 1 and 2 years will continue to show communication advantages for the couples taking PREP. We must test this, however, and also test whether such advantages extend to other aspects of couple functioning. Second, despite random assignment of ROs into tracks, the couples of the DU PREP track ended up being less religious and a bit younger than couples in the other two tracks. Although it is possible to obtain such differences by chance, it seems more likely that some self-selection effect occurred. Because both lower age and lower religiosity are factors associated with increased risk in marriage, couples in the DU PREP track might be at slightly greater risk than the other couples. It is possible that these differences could affect testing of the second hypothesis. Nonetheless, analyses adding age and religiosity as covariates yielded nearly identical results.⁴ Third, it is hard to say if fidelity of presentation of PREP was high or low relative to what would be obtained with other programs available to religious leaders because, to our knowledge, there is virtually no comparable data. Fourth, there are potential limits to the generalizability of these findings. For one thing, all of the couples in this sample have come to religious organizations for marriage. Also, the current sample is far from ideal in terms of minority representation. Initially, we experienced higher decline rates for minority ROs; however, we have shifted to a more culturally sensitive recruitment mode with more success, which we can report as the project continues.

Finally, this study did not employ a control group that is matched for time of contact with the PREP tracks, in contrast to the design used by Blumberg and McCain (reported in Renick et al., 1992). They did match treatment groups for time of contact, and they obtained similar communication differences by postassessment as those found here. Also, with regard to attention-placebo concerns, we assessed nonspecific factors having to do with the quality of the relationship between the various program presenters and the couples, which is the first time this has been done in an educationally oriented intervention study (see

Wilkins, 1998). A lack of differences on the domain of bonding with leaders suggests there was no relationship between amount of contact time and this important nonspecific factor. Furthermore, we calculated the correlations between the number of hours in the training couples received in the NO track and the major outcome measures, finding no relationship between time of contact and the outcome variables (however, the range of contact time was from 1 to 8 hours in the NO track, not up to 12 hours). This suggests that the differences in outcomes between RO PREP and NO tracks are not likely to be affected by time of contact.⁵

Finally, although it is possible that even the strong showing of the RO PREP couples on interaction changes could reflect an attention-placebo dynamic, it would be far easier to imagine such placebo effects influencing more global, self-report measures of well-being (differences we do not find at postassessment) than objective measures of interaction. Instead, the differences in objectively rated interaction point to the differences in program content as the major explanation for the findings. Nevertheless, in favoring a control group with high external validity but lower internal validity (NO), room for interpretation remains.

Implications for the Practice of Premarital Education

The overall implications of these findings are in line with conclusions reached by others in this area of study (Schumm & Silliman, 1997). Stanley (1997) has argued that the more successful premarital training programs are those that show advantages on three key dimensions: results, relevance, and reality. The results obtained here add to a growing body of evidence suggesting that certain kinds of premarital preventive efforts may be worth the effort. The longer term findings from this project will be more important in evaluating this question, including if the relative investment of resources is worthy of the actual benefit. It would also be important to know if more traditional premarital training efforts—those that are relatively non-interaction-oriented—may, for some couples, cause deterioration by raising issues in a context where little guidance is offered for how to deal with them.

With regard to relevance, the couples taking the PREP training perceived it as somewhat more relevant than the offerings of the NO track to their needs and desires, as reflected by higher program satisfaction ratings. Furthermore, couples overwhelmingly rated the communication training, and especially the speaker/listener technique, as the most useful aspects of their training (findings consistent with survey data; Center for Marriage and Family, 1995). These ratings add an important dimension to the current controversy about the value of active listening strategies in interventions with couples. Whereas Gottman et al. (1998) have argued for the abandonment of such strategies, we could not disagree more strongly with the position they took. First, the evidence here and in other studies like this is that such strategies can be helpful in modifying interaction. Second, although we are not doing a dismantling study looking at the specific effectiveness of components of the programs, it is striking that couples are singling out this technique as the most helpful, whereas Gottman et al. are suggesting such strategies are of no value (see Stanley, Bradbury, & Markman, 2000, for further discussion of this controversy). The position of Gottman et al. in this regard requires the belief that what couples see as highly relevant in preventive training is not relevant at all.

There is good reason to believe that the religious leaders also perceived the type of intervention tested here as highly relevant. Although data on the ongoing use of PREP is not the focus of this report, to date in this project, 88% of the religious leaders have reported continued use of PREP (or parts of it) with many couples—including more than 310 nonstudy couples thus far.

Whatever the potency of effects obtained here (or from other currently available materials for couples), preventive efforts with couples will only become more effective in the future if program developers take advantage of ongoing research on marital success and failure. What we and others currently believe to be the most effective ingredients to include in broad-based prevention efforts will likely be refined with future research in this field. For example, although concepts such as acceptance play a strong role in the current versions of PREP, research may well lead us and others to modify the role and emphasis of such constructs in materials for couples. More specifically, future research on various positive dynamics (acceptance, e.g., Jacobson & Christensen, 1996; forgiveness, e.g., McCullough, Worthington, & Rachal, 1997; friendship; or sacrifice, Whitton, Stanley, & Markman, in press) will lead us and others to revise offerings for couples according to new knowledge gained. Such empirical advances have the potential to make all of our collective efforts increasingly relevant to the needs of couples.

Finally, in noting the need for such training to meet the standards of reality, Stanley (1997) called attention to the fact that any premarital or early-marital intervention that will be of ultimate use to religious institutions must consist of procedures that can be employed without undue obstacles. The success of the RO PREP track clergy and lay leaders is encouraging on this score. The short-term findings suggest that clergy and lay leaders can be efficiently trained to present an empirically based program for the prevention of marital distress and divorce.

Endnotes

¹We also ran these analyses with all three groups in the between-subjects factor, although we focus here on the two specific hypotheses (one and two) for which the analyses presented are more statistically proper (and, in this case, more conservative). Nevertheless, analyses with all three groups yielded similar results. We anticipate enough subjects in the future of the project that we will be able to test hypotheses using analyses at the level of the RO, as well as at the level of couples, over various assessment points including long-term follow-up.

²Although we set our significance alpha to 0.05 throughout, we ran some tests with the Bonferroni correction, which reduces the likelihood of Type I errors by increasing conservatism when multiple analyses are being run. For convenience sake, as reported here, “ $p < .05$ ” for a corrected analyses means the difference is significant after taking into account the correction.

³Although not a hypothesis in the study, we tested the difference between the DU PREP and NO tracks for all the measures of communication. The results and findings were essentially the same as those found when testing the RO PREP track versus NO track.

⁴We do not report the results of the analyses comparing DU PREP and RO PREP using religiosity and age as covariates here for sake of space, but the statistical findings were virtually unchanged.

⁵It has been suggested, in comparing NO and PREP tracks, that we add time of contact as a covariate to control for dosage. This would be pointless, however, because we know that there is virtually no variability for the PREP groups on time of contact; there is no relationship between time of contact and any of the outcome variables for the NO group. Not only does this imply that there is not a dosage effect in operation with regard to the non-skills-oriented,

NO-track programs, there is simply no variance here that could affect the outcome of those analyses.

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