THE EFFECT OF CHANGES IN INDIVIDUAL COMMUNICATION BEHAVIORS
DURING PREP ON COUPLES' RISK FOR BECOMING MARITALLY DISTRESSED

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ABSTRACT

WILLIAM ALLEN ALDRIDGE II: The Effect of Changes in Individual Communication
Behaviors During PREP on Couples' Risk for Becoming Maritally Distressed
(Under the direction of Donald H. Baucom, Ph.D.)

The recent findings of Schilling, Baucom, Burnett, Allen, and Ragland (2003) and Baucom,

Hahlweg, Engl, Thurmaier, and Schilling (in press) suggest that increasing female positive

communication or decreasing female negative communication during the Prevention and

Relationship Enhancement Program (PREP) may *increase* risk for marital distress among

program participants. The current investigation re-examines the couples studied by Schilling

et al., using ratings on individual communication behaviors, not composite communication

scores, to predict risk for marital distress in both males and females participating in a

weekend version of PREP. Results suggest that increasing females' clear and constructive

communication, decreasing their argument-encouraging behaviors, or decreasing their denial

behaviors *increases* risk for distress in PREP participants. Results concerning male

individual communication behaviors as well as participants' initial risk for marital distress

are also discussed and new hypotheses regarding the effects of communication change in

PREP females on risk for marital distress are outlined.

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TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1

INTRODUCTION

Premarital intervention and relationship education formally began in the early 1950s

in the Catholic Church and by the late 1990s, one-quarter to one-third of engaged couples in

the United States, Australia, and Great Britain were attending a relationship enhancement

program in some form, whether provided by the Church or by a secular organization

(Halford, 1999; Hunt, Hof, & DeMaria, 1998; Simons, Harris, & Willis, 1994, Sullivan &

Bradbury, 1997). However, divorce rates remain high; in the United States, Australia, and

Great Britain, 40% to 50% of first marriages are projected to dissolve and in Germany the

figure is about 35% (Australian Bureau of Statistics, 2001; McDonald, 1995; United States

Census Bureau, 2002). Furthermore, marital discord has been linked to higher rates of

depression and relationship aggression, and children from maritally distressed families are at

greater risk for development of conduct problems (Markman & Jones-Leonard, 1985;

O'Leary, Barling, Arias, Rosenbaum, Malone, & Tyree, 1989). Conversely, couples satisfied

with their marriage have lower instances of psychological distress, higher rated life

happiness, and greater resistance to the potentially damaging effects of negative life events

(Bradbury, 1998; Gore, 1978; Gove, Hughes, & Style, 1983; Halford, 2001; Halford, Kelly,

& Markman, 1997). In an effort to provide better premarital programs and decrease the rate

of marital distress and dissolution, there currently exists a strengthening movement within

marital psychology that uses empirical evidence to evaluate, revise, and create new programs

for distress prevention and relationship enhancement among premarital couples.

Perhaps the best known and researched premarital intervention, and currently the only

intervention with long-term empirical reports, is the Prevention and Relationship Enhancement

Program (PREP; e.g. Markman, Renick, Floyd, Stanley, & Clements, 1993; Stanley,

Blumberg, & Markman, 1999). Although built upon over the years, the foundational

hypothesis of PREP continues to be "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" (Stanley, Markman, Prado, Olmos-Gallo, Tonelli, St. Peters et al.,

2001, p. 67). Accordingly, the main intention of PREP is to reduce known risk factors and

increase protective factors among couples (e.g., Coie, Watt, West, Hawkins, Asarnow,

Markman et al., 1993). In an effort to achieve this objective, PREP focuses on teaching

communication and conflict-management skills designed to benefit couples both when

discussing relationship issues and during daily interactions (Hahlweg, Markman, Thurmaier,

Engl, & Eckert, 1998). However, Schilling, Baucom, Burnett, Allen, and Ragland (2003)

suggested that, in some cases, the acquisition of PREP communication skills may not predict

future marital satisfaction. Furthermore, their findings suggest that increases in female positive

communication during PREP may actually increase the risk for marital distress in both males

and females. Baucom, Hahlweg, Engl, Thurmaier, and Schilling (in press) found similar

results in a German version of PREP: the investigators suggested that the more females

increase positive or decrease negative communication from pre- to post-intervention when they

are less maritally satisfied at post-intervention, the greater their risk of future marital distress.

While this has been surprising news considering the efficacy of PREP in preventing distress

and dissolution over the first three to five years of marriage (e.g. Schilling, 1999; Hahlweg, Markman, Thurmaier, Engl, & Eckert, 1998; Markman et al., 1993), a close review of the marital communication literature reveals that this pattern of findings is not unprecedented. Furthermore, by breaking down the composite communication scores used by Schilling et al. and reexamining the predictive ability of communication skill acquisition on PREP participants' risk for marital distress, the current study is able to better define the unexpected relationships reported by Schilling et al. and hopefully further current understanding of the impact of PREP on program participants.

Early Predictive Models of Marital Satisfaction

In the 1970s, the empirical study of marriage within psychology was just beginning. Among the initial contributions to marital psychology was the application of behavioral principles to the study and enhancement of marital satisfaction and stability. As described by Jacobson and Margolin (1979), the basic premise of traditional behavioral marital theory is that marital satisfaction is a function of the rate of reinforcing and/or punishing behaviors exchanged by partners and the manner by which reinforcing and punishing behaviors are delivered. Thus, it is not surprising that a heavy focus has been placed on couples' communication behaviors in behavioral marital therapy, particularly during problem solving interactions, when couples are engaged in negotiations and strategic management. In support of this emphasis, Geiss and O'Leary (1981) reported that problems in communication and problem solving are the most common complaints by couples entering marital therapy. Furthermore, in a survey of the literature regarding cross-sectional assessment of couple functioning, Schaap (1984) reported that distressed couples are consistently characterized by more negative affect, greater exchange of negative communication, more negative problem

solving, and longer lasting conflict. Similarly, Schaap noted that non-distressed couples are

consistently characterized by more positive affect, greater exchange of positive

communication, and more facilitative and responsive problem solving. Later cross-cultural

examinations of communication found that these patterns, with few cultural differences, also

held in Germany, Australia, and Switzerland (Bodenmann, Kaiser, Hahlweg, & Fehm-

Wolfsdorf, 1998; Halford, Hahlweg, & Dunne, 1990). Taken together, these findings are

broadly supportive of the rationale underlying behavioral marital theory.

While the empirical literature supporting the relationship between marital satisfaction

and communication began to mount in the 1970s and 80s, a paucity of longitudinal research

within the literature was apparent. In particular, Markman and colleagues (e.g. Markman &

Floyd, 1980) noted that, despite the emphasis researchers were placing on good

communication in marriage, there was scare evidence that early communication patters

impacted the development of a couple's relationship over time. In response to the need to

establish this association, Markman and colleagues set on a course of longitudinal research to

assess the impact of couples' early communication patterns over time. Consistent with

behavioral marital theory, Markman and colleagues proposed a social

exchange/communication model of marital distress that predicted that two factors – (a) the

exchange of messages with positive impacts and (b) the matching of the speaker's intent of

communication with the listener's experience of the communication – were important in

developing and maintaining a happy relationship (e.g., Markman, 1984). Initial investigation

suggested some limited support for this model. In a longitudinal study of 26 couples who were

planning marriage, Markman (1979) reported that couples who were more satisfied two-and-a-

half years after the initial assessment were more likely to have rated the impact of their

communication as highly positive and less negative during the initial assessment. Furthermore, in building predictive models of relationship satisfaction two-and-a-half years after the initial assessment, Markman and Floyd found that the impact of females' communication on males, the impact of males' communication on females, and the intensity of the couples' problems were among four variables in the model that best accounted for the variance in couples' relationship satisfaction, although none of these predictors were independently significant. In addition, Markman (1981) reported that couples who rated their communication as more positive during the initial assessment also reported higher relationship satisfaction five-and-a-half years later.

Whereas this series of studies was among the first to attempt to longitudinally discriminate between distressed and satisfied couples based on early communication patterns, there are a few limitations that undermine the utility of these findings. First, analyses in these studies were based on fractions of the original sample (14 couples through the two-and-a-half year follow-up and only nine couples through the five-and-a-half year follow-up); couples who did not complete all follow-up assessments or dissolved their relationship during the study were not included. The exclusion of couples who dissolved their relationship presents particular reason for caution, considering relationship dissolution has been linked to decline in relationship satisfaction (Karney & Bradbury, 1997). Second, Markman's use of self-reported communication impact raises the possibility that couples' communication ratings may have been influenced by subjective factors. This possibility was confirmed by Markman (1984) when he reported that observer communication ratings of the couple interactions used in his seminal series of longitudinal studies were significantly different from the couples' self-report ratings, particularly for distress couples. Third, Markman (1981) did not present results from

analyses to support his interpretation that couples who rated their communication as more positive at the initial assessment also reported higher relationship satisfaction five-and-a-half years later. Fourth, "Female Problem Impact," which had the largest *F* ratio of any predictor in Markman and Floyd's (1980) best prediction model, was not discussed, leaving unclear the meaning of the overall model. In addition and as mentioned above, none of Markman and Floyd's predictors reached significance, limiting their interpretation that communication measures predicted the development of future relationship competency. In all, Markman and colleagues' original investigations aiming to study the relationship between couples' early communication and future satisfaction demonstrate some methodological and interpretational shortcomings.

Noting the limitations of their initial research, Markman and colleagues started a new longitudinal study designed to address many of these concerns. The researchers also simplified their original social exchange/communication model of marital distress, hypothesizing that "premarital couples who are unable to handle differences in their relationship will be those at highest risk for future divorce and distress" (Markman & Hahlweg, 1993, p. 31). As Clements, Cordova, Markman, and Laurenceau (1997) expounded, "destructive patterns of handling conflict actively erode the positive factors that bring partners together and fuel relationship satisfaction" (p. 343). In 1980 and 1981, Markman and colleagues recruited 135 couples planning marriage for a longitudinal study, the Denver Family Development Project (DFDP; Stanley, Markman, St. Peters, & Leber, 1995; Clements, Stanley, & Markman, 2004). The researchers still continue to follow these couples, assessing both self-report and observer reports of communication, behavior exchange, relationships problems, and marital satisfaction and stability (Clements et al., 2004; Markman & Hahlweg, 1993). To date, results have been

reported for follow-up at 6 years and 13 years (Clements et al., 2004; Markman & Hahlweg, 1993). Markman and Hahlweg reported that, at the 6-year follow-up, males who had divorced or became distressed were more likely to have had lower levels of problem solving facilitation and higher levels of problem solving inhibition during observer-rated premarital interactions. Furthermore, both males and females who had divorced or become distressed were more likely to have had higher levels of observer-rated invalidation during premarital interactions. The only effect that maintained at 13-year follow-up was the latter; males and females who had divorced by this time were more likely to have engaged in observer-rated invalidating behaviors during premarital interaction (Clements et al., 2004). Together, these results provide some support for the hypothesis that the way couples handle their differences effects marital outcome. However, both problem solving variables and the invalidation variable are composite scores of observer-ratings, leaving the specific behaviors that contribute to these results unclear. Furthermore, only invalidation continued to show significance over time, suggesting that problem solving facilitation and inhibition may have shorter-term effects on marital outcome.

There were also some methodological limitations in this project, again making the interpretation of some results difficult. First, many couples in the DFDP were either offered or participated in an early form of PREP, which includes a strong communication skills training component. Therefore, the DFDP sample as a whole may not be representative of naturally-occurring communication patterns, making it difficult to generalize the findings to couples outside the study and leaving unclear whether results may have been different between couples with learned communication versus naturally-occurring communication. Second, analyses at 6-year follow-up were based on only 76 of the original 135 couples. Couples in which one

partner scored below 100 on the Marital Adjustment Test (Locke & Wallace, 1959) prior to the

6-year follow-up but subsequently rebounded in time for the 6-year follow-up were excluded

from analysis (Markman & Hahlweg, 1993). These couples might have been better classified

as distressed, consistent with other longitudinal research on marital satisfaction (e.g. Schilling

et al., 2003). In addition, it is unclear whether couples in which both partners were classified

as distressed at the 6-year follow-up were included in the analysis. In comparison, the 13-year

results were based on a larger sample of 100 couples, which *only* excluded couples who ended

their relationships before marriage, and the study also included a clearer, more inclusive

operationalization of marital distress compared to the 6-year study (see Clements et al., 2004

for details). Still, the reasoning for excluding couples who ended their relationships before

marriage was not clear, and this exclusion criterion may have led to a less than representative

distressed group.

Considering the limitations in early research, there was clear need for continued

investigation from multiple researchers using refined or alternate methods and models of how

communication impacts the development and maintenance of marital satisfaction and stability.

At the same time, Markman and colleagues began a preliminary pursuit to develop

preventative programs that might be effective in reducing the onset of marital distress in

couples. As Markman, Floyd, Stanley, and Jamieson (1984) stated:

> To summarize, our efforts to understand the etiology of marital
> distress are at a primitive stage, constrained by problems in construing and
> measuring social interaction. Increased knowledge about the etiology of
> marital distress, in general, and dysfunctional marital interaction, in particular,
> is clearly needed. Preventative efforts with couples, however, need not wait
> until these data are in. As already mentioned, there is a vast array of
> impressive empirical and clinical suggestions concerning elements of
> distressed and nondistressed marriages that relate to the couples' interactions,
> and these provide a preliminary data base for premarital intervention. (pp.
> 398-399)

The result of these seminal efforts to develop premarital interventions was the development of PREP, which is reviewed below.

The Evolution and Efficacy of PREP

Maintaining the hypothesis that the most important concern in developing and maintaining marital satisfaction and stability is the way that couples communicate about their differences, Markman and Floyd (1980) designed the Premarital Relationship Enhancement Program (PREP; later re-named the Prevention and Relationship Enhancement Program; also PREP), a premarital program for the prevention of marital distress that focuses on teaching communication and problem solving skills that (a) are based on empirical marital research and (b) behavioral marital therapists had been using to treat distressed couples in treatment programs. During PREP, couples meet in a group format for presentations and examples of the communication skills they are learning, interspersed with private work with a trained consultant who promotes skill acquisition and adaptive cognitive restructuring consistent with marital communication research and the mutual goals of the couple (Markman & Floyd, 1980). By the early 1990s, PREP included 12 presentation modules covering communication skills training, cognitive expectations in marriage, and factors in relationship enhancement. As discussed by Renick, Blumberg, and Markman, (1992) the first, second, and third modules of PREP consist of an introduction to the program and presentation of communication research and skills. Specifically discussed are constructive and destructive styles of communication, skills for effective speaking and listening, and gender differences in communication, such as the common female approach/male withdrawal pattern. The fourth and fifth modules cover the role of both explicit and hidden expectations in communication and relationships in general. In the sixth lecture, the importance of fun in relationship maintenance and stability is discussed.

The focus turns back to communication in the seventh presentation, with an emphasis on problem solving skills. Team-building strategies used to increase commitment among partners are covered in the eighth module. Again, an emphasis is placed on communication behavior, specifically on how good communication can revitalize and maintain commitment. The next two presentations focus on the impact of spiritual values and beliefs on relationships, with a focus on how good communication can enhance the positive impact of these variables. In the eleventh module, strategies for enhancing communication around sensual and sexual activities are covered. In the final presentation, the program is reviewed and couples are encouraged to continue using their communication skills at times when they are most needed (e.g., times of conflict and decision making). Most treatment outcome research on PREP to date, including the current study, uses this version of PREP or a close adaptation.

Original research on the short- and long-term efficacy of PREP was performed by Markman and colleagues (Markman & Floyd, 1980; Markman, Floyd, Stanley, & Storaasli, 1988; Markman et al., 1993; Renick et al., 1992; Stanley et al., 1995). Aside from the Markman and Floyd investigation, in which 10 couples were recruited via clergy and newspaper announcements offering a communication enhancement program for couples planning marriage, data for these studies were collected through the Denver Family Development Project (DFDP). As part of the DFDP, which is discussed above, premarital couples were matched in dyads or triads on four variables (engaged vs. planning marriage, relationship satisfaction, communication impact, and confidence in getting married) and then 1 or 2 couples in each matched set were randomly offered participation in PREP (Markman et al., 1988). Investigations of the short-term efficacy of PREP provide mixed results. Markman and Floyd found no significant pre- to post-intervention effects on marital satisfaction or

problem intensity in PREP versus control couples. Similarly, the short-term findings of

Markman et al. (1998) do not suggest a significant intervention effect on relationship

satisfaction or problem intensity in PREP versus control couples in the DFDP. However,

Markman et al. (1988) did find that PREP couples, compared to controls, showed improved

communication from pre- to post-intervention. Furthermore, Renick et al. reported that

communication effects through the first two months after intervention were significant even

when PREP couples were compared to couples who participated in Engaged Encounter, one of

the most commonly offered premarital intervention programs at religious institutions in the

United States. Thus, while PREP may not have short-term effects on relationship satisfaction

or problem intensity, the intervention does seem to be efficacious in teaching couples PREP

communication skills.

Due to the preventative goals of PREP, long-term findings may provide a more

appropriate evaluation of the efficacy of PREP. At the third-year follow-up of DFDP couples,

Markman et al. (1998) reported significantly lower rates of relationship dissolution (breakups

before marriage or separation/divorce), less decline in relationship satisfaction, lower levels of

problem intensity, and less increase in sexual problems among PREP couples compared to

controls. Across the third through fifth years after PREP, PREP couples in the DFDP also

showed fewer instances of physical violence than control couples (Markman et al., 1993). By

the fifth-year follow-up, significantly fewer PREP couples had broken up before marriage

compared to control couples in the DFDP, but there were no differences between PREP and

control couples in separation or divorce in already married couples (Markman et al., 1993).

Furthermore, only PREP males reported significantly less decline in relationship satisfaction

when compared to their controls at the five year follow-up (Markman et al., 1993). No

significant communication main effects were found when comparing PREP couples to controls at the five-year follow-up in the DFDP; however, Markman et al. (1993) did report a Sex by Group interaction suggesting that the effects are still significant for males but not for females. Taken together, these findings suggest that the effects of PREP may begin to decline between the third and fifth year after intervention, especially for women. Supporting this conclusion, Stanley et al. (1995) reported that at 12-year follow-up, the separation/divorce differences between PREP and control couples in the DFDP were no longer significant and, although PREP couples maintained some communication and conflict management advantages over control couples, the effect sizes and number of effects continued to decline after five-year follow-up.

Because PREP has shown promise at least through the first three to five years after intervention, a number of researchers have attempted to use PREP in different populations and settings. Two of these efforts show promising results. First, Hahlweg et al. (1998) reported that premarital couples who participated in Ehevorbereitung—Ein Partnerschaftliches Lernprogramm (EPL; Thurmaier, Engl, Eckert, & Hahlweg, 1992), a German version of PREP, showed more positive communication and less negative communication than controls at post-intervention, 1.5 year follow-up, and 3 year follow-up. Furthermore, EPL couples had a lower rate of dissolution and reported more relationship satisfaction than controls 3 years after completing EPL (Hahlweg et al., 1998). Hahlweg et al. noted that overall differences between traditional PREP and EPL are minor, with the main adaptations being made to the sexuality presentation to account for cultural differences in Germany. Furthermore, of note is that the control group in the Hahlweg et al. (1998) study includes couples receiving a conventional Catholic premarital enrichment program; the controls used in the DFDP studies (Markman et

al., 1988; Markman et al., 1993; Renick et al., 1992; Stanley et al., 1995) only include couples who were not offered PREP or declined PREP upon offer. Second, Burnett (1993) was able to shorten PREP into a weekend format (PREP-WK) for use in a church setting in North Carolina without loosing the content or structure of the program. Similar to the findings of Markman and Floyd (1980), Markman et al. (1988), and Hahlweg et al., pre- to post-intervention results indicate that PREP-WK increased positive and decreased negative communication behaviors among both males and females (Burnett, 1993; Schilling et al., 2003). Furthermore, Schilling (1999) reported that PREP-WK appears to be at least as effective as traditional PREP in preventing onset of marital distress through three years after intervention when compared to controls. Taken together, these two studies suggest that PREP might be used, with minor adaptations, to prevent relationship distress through three years post-intervention in different populations and settings.

Two other studies have not found the same support for using PREP in different populations. First, a study conducted by Halford, Sanders, and Behrens (2001) found only limited support for Self-Regulatory PREP (Self-PREP), an Australian adaptation of PREP which includes a focus on self-regulation of behavior in addition to traditional PREP content. The investigators reported differential effects across high- and low-risk couples, with risk defined as female exposure to parental divorce or male exposure to interparental aggression. Specifically, Halford et al. described that, compared to high risk controls, high-risk Self-PREP couples showed less negative nonverbal communication at one-year follow-up and higher relationship satisfaction at four-year follow-up. However, while low-risk Self-PREP couples showed less conflict and invalidation in communication at post-intervention as compared to low-risk controls, no differences in communication were present at one-year follow-up. In

13

addition, results suggest that low-risk Self-PREP couples showed lower relationship satisfaction than low risk control couples at four-year follow-up. Finally, Halford et al. found no differences between conditions (Self-PREP vs. control) or the interactions of conditions and risk in association with separation or steps taken towards relationship dissolution. Although Halford et al. cautioned interpretation of results because of low statistical power, at least among low risk couples, Self-PREP clearly does not have the same level of support as traditional PREP, German PREP (EPL), and PREP-WK. Whether this difference is due to cultural differences in Australia, the additional focus on self-regulation processes in Self-PREP, or some other factor is not yet known.

The second study that did not find broad support for using PREP in a different population was performed by Van Widenfelt, Hosman, Schaap, and van der Staak (1996). Van Widenfelt et al. adapted PREP for use and study in the Netherlands. The investigators reported that at six-month follow-up, PREP couples showed an increase in problem intensity, higher rates of sexual dissatisfaction, an increase in psychological symptoms, and greater dissatisfaction with life compared to control couples. While these effects were no longer visible one year and nine months after intervention, PREP couples still did not show any advantages over controls regarding relationship functioning or well-being. In addition, Van Widenfelt et al. found that their version of PREP did not provide a protective influence for couples at risk, defined as couples in which at least one partner experienced parental divorce. This result does not replicate the finding of Halford et al. (2001), which suggested a limited protective influence of Self-PREP on couples at high risk for marital distress. While the results of Van Widenfelt et al. are discouraging, there are a few considerations that must be taken into account when interpreting their results. First, as compared to the sample used by Markman et

al. (1993), the sample used by Van Widenfelt et al. was much older (difference of 10 years between mean ages of females and 12 years between mean ages of males) and relationships had lasted much longer (difference of 3.5 years between mean number of years together) by the time of intervention. Also, the Van Widenfelt et al. study did not examine observational scores of communication, which may provide the best method of investigating changes in communication. Finally, Van Widenfelt et al. did not provide results beyond one year and nine months after intervention, which may not have been enough time for significant effects to emerge. For example, in the Hahlweg et al. (1998) and Schilling (1999) studies, many significant effects did not emerge until at least the third-year follow-up. Regardless, taken together and in contrast to the Hahlweg et al., Burnett (1993), and Schilling studies, the studies conducted by Halford et al. and Van Widenfelt et al. provide only limited to no support for the ability to adapt PREP to different populations and settings. Further investigation into the effectiveness of PREP for different settings is clearly needed, especially across cultures and across couples with different levels of initial risk for marital distress.

Recently, Markman and colleagues have begun dissemination studies using clergy and lay leaders in the church (Laurenceau, Stanley, Olmos-Gallo, Baucom, & Markman, 2004; Stanley et al., 2001) and Army chaplains (Stanley, Allen, Markman, Saiz, Bloomstrom, Thomas et al., 2005), as well as a general promotion for widespread dissemination of PREP. Early results of the dissemination studies in religious organizations have been promising, suggesting that PREP may not only be portable to different religious settings and communities, but also that clergy and lay leaders in the church trained to deliver PREP may be more effective in producing maintainable increases in couples' positive communication and maintainable decreases in couples' negative communication through one-year follow-up

compared to university staff trained to deliver PREP (Laurenceau et al., 2004). Military

couples receiving the chaplain-led Building Strong and Ready Families (BRSF) program, a

version of PREP adapted for the United States Army, have also shown the targeted changes in

communication from pre- to post-intervention as assessed by a self-report measure of

communication (Stanley et al., 2005). Furthermore, Stanley et al. (2005) reported that, based

on a one or three item measure of global relationship satisfaction, BRSF couples have also

evidenced increases in global relationship satisfaction from pre- to post-intervention and at

one-month after intervention. This is particularly promising because other versions of PREP

have not shown similar effects on relationship satisfaction so early after intervention. In

addition to these two dissemination studies, PREP has been adapted by Markman or his

colleagues for use in Christian communities (Christian PREP; Stanley & Trathen, 1994),

among couples transitioning to parenthood where the woman is at risk for depression (Stanley

et al., 1995), and in efforts to teach couples tools to cope with predictable and unpredictable

crisis events (Freedman, Low, Markman, & Stanley, 2002). Furthermore, Markman and

colleagues have written papers to promote relationship education, specifically the use of PREP,

in government programs (e.g. Stanley, Markman, & Jenkins, 2003). Similar to the perspective

that Markman and colleagues took when moving towards the initial development of PREP,

Stanley (2001) recently wrote:

> In the absence of data we might wish to have now, there are many
> reasons to believe in the value of engaging in broadly applied, premarital
> education efforts with couples. We know enough to act and we should take
> action to know more. (p. 278)

Acquisition of PREP Communication Skills as the Mechanism of Efficacy in PREP

Considering the long line of research discussed above, it is surprising that no studies

had investigated whether the intended mechanism in PREP, improving communication and

16

problem solving skills, is responsible for PREP's efficacy. Schilling, Baucom, Burnett, Allen, and Ragland (2003) set out to address this issue in a recent study of PREP-WK. The investigators examined the same data set used by Burnett (1993) and Schilling (1999), which demonstrated the efficacy of PREP-WK in increasing positive and decreasing negative communication in couples from pre- to post-intervention and preventing marital distress compared to controls three years after intervention. The investigators found several significant patterns regarding changes in male communication during PREP-WK. Consistent with the social-exchange/communication model of marital distress upon which PREP is founded, Schilling et al. found support for the expectation that decreasing negative or increasing positive communication in males leads to a decrease in the risk for marital distress among males. Furthermore, in examining at-risk couples, increases in positive communication among males at initial risk for marital distress (defined as high self-ratings of premarital depression or low premarital relationship satisfaction) decreased the risk for marital distress among females, supporting Halford et al.'s (2001) finding that PREP may be particularly helpful for couples at high risk for marital distress. This pattern reached marginal significance ($p < .10$) for decreasing the risk for marital distress among males. However, Schilling et al. also found that increases in positive communication among males who reported higher premarital relationship satisfaction increased risk for marital distress among females. This, too, is consistent with Halford et al., who found that Self-PREP couples at low initial risk for marital distress showed lower relationship satisfaction than low-risk control couples at four-year follow-up. Together, Schilling et al.'s findings on changes in male communication during PREP-WK make sense within the context of PREP's social-exchange/communication model of marital distress and

17

Halford et al.'s previous research on the efficacy of PREP among high-risk and low-risk couples.

However, Schilling et al. (2003) found an unexpected pattern of results when examining changes in female communication during PREP-WK. The investigators found no support for the expectation that decreasing negative or increasing positive communication in females leads to a decrease in the risk for marital distress among males and females. In fact, findings suggest that the *opposite* seems to be true; increasing positive communication among females during PREP actually predicted an *increased* risk for marital distress among both males and females. This finding is inconsistent with the social-exchange/communication model of marital distress upon which PREP is founded. Interestingly, male and female reports of avoidance accounted for some of the same variance in risk for distress as female change in positive communication, suggesting that avoidance patterns in couples may explain some of these effects. Furthermore, adding male and female avoidance scores to models predicting risk for marital distress from partners' negative communication suggested that decreases in female negative communication may also increase the risk for marital distress in females and males, although this effect was not independently significant. Aside from these basic findings, Schilling et al. also reported that decreases in negative communication among females who reported higher levels of premarital satisfaction increased the risk for marital distress in males, similar to findings on communication change among males with higher levels of premarital satisfaction discussed above. This last finding, while also not consistent with PREP's social-exchange/communication model of marital distress, does fit within the pattern of findings reported by Halford et al. (2001) on low-risk PREP couples, discussed above.

Because the findings of Schilling et al. (2003) regarding increasing female positive and decreasing female negative communication over PREP-WK were unexpected and inconsistent with hypotheses about premarital communication, Baucom, Hahlweg, Engl, Thurmaier, and Schilling (in press) set out to investigate similar patterns in the German PREP (EPL) dataset. As discussed earlier, Hahlweg et al. (1998) demonstrated that, compared to controls, EPL couples show more positive and less negative communication at post-intervention, 1.5 year follow-up, and 3 year follow-up. Furthermore, EPL couples were found to have lower rates of dissolution and report more relationship satisfaction than controls 3 years after completing the intervention (Hahlweg et al., 1998). Regardless, Baucom et al.'s (in press) investigation of communication patterns in the same EPL data set again found unexpected results; the more females increased positive or decreased negative communication from pre- to post-EPL when they were less maritally satisfied at post-EPL, the greater their risk for future marital distress. In addition, females who eventually became distressed showed greater increases in agreement than females who did not become distressed (Baucom et al., in press), suggesting that avoidance may again help account for these unexpected findings. Findings regarding changes in male communication again showed an expected pattern; Baucom et al. found that increases in positive and decreases in negative communication predicted reduced risk for distress in females. This general replication of Schilling et al.'s findings has since led some premarital program administrators to reconsider the appropriateness of teaching communication skills based on PREP's social-exchange/communication model without some reminder that, while improvement in communication is desired, changes should not come at the expense of confronting problems in one's relationship.

Stanley, Kline, Olmos-Gallo, and Markman (2005), also responding to Schilling et al.'s (2003) unexpected findings, have recently investigated changes in communication and marital distress in both the Denver Family Development Project (DFDP) sample and a sample used to test PREP dissemination models that involve clergy and lay leaders in the church (Family Stability Project [FSP]; Stanley et al., 2001). First, the authors were not able to predict onset of marital distress in either the DFDP or FSP samples using male and female positive communication change scores, although the length of follow-up for couples in each sample in this study is unclear. However, when examining continuous scores of relationship satisfaction, Stanley et al. reported that increases in FSP female positive communication predicted higher scores of relationship satisfaction at first follow-up. The investigators also tested models of change in one partner's communication without controlling for changes in the second partner's communication to predict either onset of marital distress across follow-up or continuous scores of relationship satisfaction at first follow-up. In predicting onset of marital distress in the DFDP sample, Stanley et al. found marginal significance for increases in male negative communication predicting female onset of distress, without controlling for female communication change scores. Similarly, the investigators reported a non-significant pattern in the DFDP sample in which increases in male negative communication predicted male distress onset, without controlling for female communication change scores. In predicting continuous scores of relationship satisfaction at one-year in the FSP sample, the investigators reported that increases in male negative communication change predicted lower scores of relationship satisfaction among males, without controlling for female communication change scores. In sum, the investigators concluded that they were not able to replicate the Schilling et al. findings regarding changes in female positive communication. However, they did find marginal to

significant support for the hypotheses that increases in male negative communication are associated with onset of marital distress in males and females and predict lower relationship satisfaction for males at first follow-up. These latter findings are consistent with the Schilling et al. and Baucom et al (2002) findings regarding changes in male communication during PREP-WK.

While the importance of investigating the effects of communication change in the original DFDP sample and the new FSP sample cannot be underestimated, the Stanley et al. (2005) study has a number of characteristics that make direct comparison to the Schilling et al. (2003) and Baucom et al. (in press) studies difficult. First, the outcome variables between the Stanley et al. study and the Schilling et al. and Baucom et al. studies are conceptually and mathematically different. Stanley et al. used the dichotomous occurrence of onset of marital distress or separation/divorce and a continuous scale score of relationship satisfaction as the outcome variable while both Schilling et al. and Baucom et al. used time-sensitive risk for onset of distress or separation/divorce as the outcome variable. Second, the investigators operationalized onset of marital distress in different ways. In the Stanley et al. study, individuals who were classified as distressed at one follow-up but rebounded to satisfied classification at a subsequent follow-up were treated as non-distressed. In the Schilling et al. and Baucom et al. studies, such individuals were treated as distressed at the appropriate follow-up point and their data were excluded from analysis at subsequent follow-ups. Although Stanley et al. provided no report of the number of partners that rebounded to "satisfied" classification, treating such partners as non-distressed may have caused results for non-distressed couples to look similar to those for distressed couples. Third, while using continuous scores of marital satisfaction as an outcome variable provides an improvement in

descriptive ability, Stanley et al. did not make clear if they included couples who had separated

or divorced in these specific analyses. Both Schilling et al. and Baucom et al. included such

couples throughout their analyses, which provided a conceptually larger sample with more

adherence to the construct under examination. Finally, Stanley et al. only predicted marital

satisfaction scores at first follow-up and did not describe when first follow-up occurs in the

FSP sample. Both the Schilling et al. and Baucom et al. studies examined their samples over

five years, providing a more complete account of the relationships studied over time.

Regardless, evidence consistent with Schilling et al.'s and Baucom et al.'s findings on female

communication may also be found outside the PREP literature.

A review of basic marital communication research since the mid 1980s suggests that,

while Schilling et al.'s (2003) and Baucom et al.'s (in press) findings are unexpected, such

patterns are not unprecedented. For example, Gottman and Krokoff (1989) found that wives'

negative communication may be associated with concurrent marital distress but future marital

satisfaction. However, some forms of negative communication continued to be associated with

marital distress concurrently *and* over time (i.e., defensiveness, stubbornness, and withdrawal;

Gottman & Krokoff, 1989), suggesting that only certain negative communication behaviors

may be beneficial to marital satisfaction over time (i.e., disagreement and anger; Gottman &

Krokoff, 1989). In addition, a number of studies also suggest that the expression of more

positive communication by wives is either not associated with later marital satisfaction

(Heavey, Layne, & Christensen, 1993) or is associated with marital distress (Gottman &

Krokoff, 1989; Levenson & Gottman, 1985). Gottman and Krokoff in particular found that

wives' positive verbal communication was associated with concurrent marital satisfaction but

deterioration in marital satisfaction over time. These findings fit with the patterns reported by

Schilling et al. and Baucom et al. Furthermore, Schilling et al.'s and Baucom et al.'s logic that

avoidance may play a role in these unexpected relationships was supported by additional

analyses in the Gottman and Krokoff study, which revealed that wives' compliance was

negatively associated with marital satisfaction over time and their engagement with conflict

was associated with concurrent dissatisfaction but improvement in satisfaction over time.

Finally, another hypothesis that can be applied to these patterns was proposed by Sher and

Baucom (1993), who suggested from a cross-sectional study of differences in marital

communication among maritally distressed, depressed, and nondistressed-nondepressed

couples that negative communication might be used differently by non-distressed and

distressed couples. Specifically, non-distressed couples may use negative communication

constructively while negative communication in distressed couples may be used destructively.

In all, these findings suggest that the patterns found by Schilling et al. and Baucom et al. in

their analysis of PREP communication are not unprecedented and may reflect what are more

complex influences of marital communication on later marital satisfaction than were originally

thought.

Despite providing support for the unexpected findings of Schilling et al. (2003) and

Baucom et al. (in press), research since the mid 1980s regarding the effects of couples'

communication on marital satisfaction and stability over time has not gone without criticism.

For example, Stanley et al. (2005) expressed concern that analyses in these studies may have

used negatively biased estimators (see Stanley et al., 2005 for details). In addition, Woody and

Costanzo (1990) expressed concern about Gottman and Krokoff's (1989) methodology, which

only uses two time points of data collection and uses raw difference scores instead of

residualized changes in predicting changes in marital satisfaction. However, all of these

questions were addressed in a study performed by Karney and Bradbury (1997; see the investigators' explanation of their methodology and statistical procedures for details). Even after addressing these concerns, Karney and Bradbury found that more positive and less negative communication among wives, as opposed to the opposite pattern, predicted faster decline of both husbands' and wives' satisfaction over time. This was true regardless of whether husband communication was controlled for in the model, addressing another reservation voiced by Stanley et al. (2005). Thus, these patterns seem to be substantiated beyond previously and currently voiced methodological and statistical concerns. Therefore, further investigation into these patterns, including those reported by Schilling et al. and Baucom et al., may be important in continuing to develop an understanding of how couples' communication affects their marital satisfaction over time and may provide useful information for improving premarital interventions that include a communication skill training component, such as PREP. The current study provides an effort in these directions.

The Current Study

While findings from the Schilling et al. (2003) and Baucom et al. (in press) investigations are important in the continuing study of PREP and, more generally, the effect of early communication on later marital satisfaction, their utility may be improved by a more detailed examination of the individual communication behaviors that are responsible for the unexpected pattern of female results. Such efforts towards detailed description in the analysis of couples' communication patterns are historically encouraged in the field, particularly by Gottman, Markman, and Notarius (1977), who stated that one problem with much of research on communication and marital satisfaction is that:

> While these global summary codes have some general utility in discriminating
> distressed from nondistressed couples, the summary codes are not useful in

describing precisely what nondistressed couples do differently than distressed
couples. They are therefore not very useful in designing intervention
programs for distressed marriages. (p. 462)

Furthermore, Gottman et al. lamented "that the role of *description*, an important phase of

scientific investigation, has been minimized. Without careful, detailed description, theorizing

about marital interaction is likely to be premature and to generate controversies that produce

more heat than light" (p. 463). Considering that Schilling et al. and Baucom et al. used

composite scores of positive and negative communication from the Interactional Dimensions

Coding System (IDCS; Julien, Markman, & Lindahl, 1989; Julien, Markman, Lindahl,

Johnson, & Van Widenfelt, 1989, November; Kline, Julien, Baucom, Hartman, Gilbert,

Gonzalez et al., 2004), which can readily be broken down into individual communication

behaviors, the effort towards greater description in their unexpected findings is entirely

possible. Specifically, IDCS positive communication can be broken down into four individual

communication behaviors: Communication Skills, Support-Validation, Problem Solving, and

Positive Affect. IDCS negative communication can be broken down into five individual

communication behaviors: Conflict, Withdrawal, Denial, Dominance, and Negative Affect.

Definition of these nine variables is provided in Table 1.

As alluded to above, knowing which individual behaviors account for Schilling et al.'s

and Baucom et al.'s unexpected findings may have useful implications for how to revise PREP

communication skills and also might generalize to a better understanding of how couples' early

communication affects their later marital satisfaction. For example, should increases in

females' expression of positive affect increase couples' risk for marital distress, researchers

may want to remove the emphasis on changing females' expression of positive affect during

PREP. However, should increases in other female positive communication behaviors still

Table 1

Description of Individual IDCS Communication Variables (Kline et al., 2004)

Positive Behaviors

1. Communication Skills: An individual's ability to convey thoughts and feelings in a clear, constructive manner.

2. Support-Validation: Positive listening and speaking skills that an individual uses to demonstrate support and understanding in his or her partner. Close synonyms for this code are encouragement, acknowledgement, and acceptance.

3. Problem Solving: An individual's ability to define a problem and work toward a mutually satisfactory solution for the problem. Ratings are assigned based on the individual's ability to try and solve the problem, not whether the problem is actually solved.

4. Positive Affect: Positivity expressed through facial expressions, body positioning, and tone of voice. Positive affect is not the same as absence of negative affect.

Negative Behaviors

1. Conflict: Behaviors that encourage arguing. The level of tension, hostility, oppositionality, antagonism, and negative affect that an individual displays identifies conflict.

2. Withdrawal: Attempting to avoid an interaction through body language or stating a desire not to discuss a topic.

3. Denial: An active rejection of a problem's existence or of personal responsibility for the problem.

4. Dominance: An individual's ability to control or influence his or her partner. Dominance may be identified through forceful, monopolizing, or coercive behaviors. Ratings are assigned based on whether the individual achieves dominance over his or her partner.

5. Negative Affect: Negativity expressed through facial expressions, body positioning, and tone of voice. Negative affects is not the same as absence of positive affect.

decrease a couple's risk for marital distress, no additional adjustments would be necessary. Similarly, even though decreases in females' negative communication have been found to increase couples' risk for marital distress (Schilling et al., 2003; Baucom et al., in press), should increases in withdrawal among PREP females predict an increase in couples' risk for marital distress, researchers will likely not want to change PREP's focus on decreasing female withdrawal behaviors, although other changes to PREP communication skills may be necessary. Furthermore, beyond PREP, such a pattern of findings regarding individual communication behaviors may help clarify the pattern of results in the literature suggesting that high female positive communication and/or low female negative communication may be detrimental to couples' long-term satisfaction (see above review of literature for detailed findings).

In order to answer questions about which individual communication behaviors contribute to the unexpected pattern of findings reported by Schilling et al. (2003) and Baucom et al. (in press), the current study reanalyzes the sample investigated by Schilling et al., substituting ratings of individual IDCS communication behaviors for the composite IDCS scores used by Schilling et al. Considering that avoidance has consistently been implicated as a factor in these unexpected patterns, the current investigator formed hypotheses based on groupings of changes in female IDCS communication behaviors that he believes represent increasing female avoidance of relationship problems (increasing females' support-validation, positive affect, withdrawal, and denial) and decreasing female engagement with relationship problems (decreasing females' communication skills, problem solving skills, conflict, dominance, and negative affect). Specifically, the current investigator hypothesized that increases in females' positive affect, support-validation, withdrawal, and denial during PREP

would increase couples' risk for marital distress. Likewise, the current investigator hypothesized that decreases in females' negative affect, problem solving skills, dominance, conflict, and communication skills would also increase couples' risk for marital distress. In addition, the current study explored of the effects of changes in male individual IDCS communication behaviors on couples' risk for marital distress. Because the relationships between male positive and negative communication and marital distress have consistently followed predicted patterns in previous research, the current investigator expected that individual communication behaviors would follow the same expected pattern: increasing positive IDCS communication behaviors and decreasing negative IDCS communication behaviors would lead to a decrease in risk for marital distress. However, because these analyses are secondary to the study's main purpose, analyses were exploratory in nature; no formal hypotheses were generated beyond these basic expectations.

In addition to these main analyses, a second set of analyses was conducted to allow for more complete replication of the analyses performed by Schilling et al. Because Schilling et al. found that the effects of change in composite IDCS communication scores on couples' risk for marital distress may be moderated by pre-intervention levels of risk for marital distress among partners (as operationalized by pre-intervention levels of depression and relationship satisfaction), the current study explored whether the effects of change in individual IDCS communication behaviors on couples' risk for marital distress may be moderated by levels of pre-intervention risk for marital distress among partners. These analyses were also exploratory since little is known about how pre-intervention risk for marital distress may play a role in moderating the relationships between changes in *individual* IDCS communication behaviors and couples' risk for marital distress; no specific hypotheses were formulated.

CHAPTER 2

METHOD

Research Design

The current study involved analysis of the sample examined by Schilling et al. (2003).

All data were collected as part of a treatment outcome study performed at The University of

North Carolina at Chapel Hill under the direction of Donald H. Baucom, Ph.D. Relationships

between the two independent variables – ratings on individual IDCS communication behaviors

and initial risk level for marital distress – and the dependent variable – risk for marital distress

over the first five years of marriage – were examined using statistical procedures established

by Schilling et al.

Participants

As described by Schilling et al. (2003), 65 premarital couples marrying between June

1990 and January 1996 at a large Protestant church in a small southeastern university town

served as PREP-WK participants. All couples completed PREP-WK to fulfill the requirement

of either (1) attending PREP-WK or (2) meeting with the minister of the church for premarital

counseling. Couples marrying in the church were allowed to self-select how they fulfilled this

requirement. Approximately half ($N = 65$) of couples chose to attend PREP-WK and provided

data for the current study. According to Schilling et al., the most common reason for declining

participation in the program was that one or both of the partners lived far enough from the

church that they were unable to participate. The program was offered once per year to groups of 10-15 couples. Demographic characteristics of all participants may be seen in Table 2.

As Schilling et al. (2003) noted, of the 65 couples that participated in PREP-WK, 4 did not marry and 9 did not provide follow-up data. Additionally, videotape equipment failure further reduced the available sample size to 39 women and 38 men, which is the sample size for the current study.

Measures

As a part of PREP-WK, couples completed extensive questionnaire packets focused on individual and relationship functioning. Couples also completed videotaped interaction tasks for later examination of couple communication. For the purposes of the current study, investigation focused on the following four measures:

Biographical Data Sheet (BIO). Basic demographic data were collected on each couple member for the purposes of describing the sample. Questions included on the BIO were participant's age, education, race, number of years of acquaintance to current partner, length of marriage to current spouse (if applicable), number of times married, income, occupation, cohabitation status, number of children, religious affiliation, and frequency of church attendance. A copy of this form is reproduced in Appendix A.

Dyadic Adjustment Scale (DAS). The DAS (Spanier, 1976; Spanier & Thompson, 1982) was used to measure marital adjustment, a common index of marital satisfaction, in the current study. The self-report questionnaire is one of the most widely used measures of marital adjustment (Schilling et al., 2003). Furthermore, the measure is worded for use among both married and unmarried couples, which made the measure appropriate for use among couples that were only engaged at the time of initial assessment. The DAS consists of 32 items, four

Table 2

Demographic Characteristics of the Sample for the Current Study (Schilling et al., 2003)

Characteristic	N	M	SD
Women			
Age	63	26.7	5.0
Years of education	63	16.8	2.3
Annual income*	62	2.2	0.8
Proportion White	63	1.0	
Proportion previously married	63	.12	
Proportion cohabitating	63	.45	
Men			
Age	64	28.0	5.1
Years of education	64	17.3	2.3
Annual income*	64	2.5	1.0
Proportion White	64	.98	
Proportion previously married	64	.21	
Proportion cohabitating	64	.39	

*Annual income was rated on a 7-point scale (1 = less than $10,000, 2 = $10,000–$24,999, 3 = $25,000–$49,999, 4 = $50,000–$74,999, 5 = $75,000–$99,999, 6 = $100,000–$249,999, 7 = over $250,000)

subscales, and a global scale (Dyadic Adjustment). Although the validity of the Dyadic Satisfaction Subscale and Dyadic Consensus Subscale remains questionable (Crane, Busby, & Larson, 1991), Spanier reported internal consistency for Dyadic Adjustment at .96. In a confirmatory analysis of the DAS, Spanier and Thompson (1982) reported internal consistency for Dyadic Adjustment at .91.

Interactional Dimensions Coding System (IDCS). The IDCS (Julien, Markman, & Lindahl, 1989; Julien, Markman, Lindahl, Johnson, & Van Widenfelt, 1989, November; Kline, Julien, Baucom, Hartman, Gilbert, Gonzalez et al., 2004) is a global observational coding system that is designed to assess both behavioral and affective components of couple interactions. Each couple in the current study completed four 10-minute videotaped interactions (described below) that were subsequently coded for male and female communication behaviors and affect by senior undergraduate psychology majors. As discussed above, the IDCS contains nine individual codes, for which each partner receives a rating. The individual codes consist of four positive codes (Communication Skills, Support-Validation, Problem Solving, and Positive Affect) and five negative codes (Conflict, Withdrawal, Denial, Dominance, and Negative Affect). All codes are described in Table 1. Five dyadic codes (Negative Escalation, Positive Escalation, Commitment, Future Satisfaction, and Future Stability) for which the couple is rated as a whole were also available but were not used in the current study. Each IDCS code is rated on a 9-point scale, with 1 being representative of very low occurrence of the communication behavior/affect and 9 being representative of very high occurrence of the communication behavior/affect. Julien, Markman, and Lindahl reported an average weighted kappa of .38 for intercoder agreement, defined as a rating difference of no more than one point. Coders in the current study were

trained until their ratings were reliable at a kappa of .60 (Schilling et al., 2003). One fourth of

the taped interactions were rated jointly by two coders to determine intercoder reliabilities.

Examining composite scores in the current sample, Schilling et al. reported average weighted

kappas of .52 for positive female communication, .65 for negative female communication, .44

for positive male communication, and .62 for negative male communication. As with the

Julien, Markman, and Lindahl study, intercoder agreement was defined as a rating difference

of no more than one point.

     Symptom Checklist 90, Revised (SCL-90-R). The SCL-90-R (Derogatis, 1983) is a 90-

item self-report inventory of physical, emotional, and cognitive symptoms and is widely used

as a brief measure of psychological adjustment (e.g. Schilling et al., 2003). In addition to a

global index of distress, the following nine scales are available from the SCL-90-R: 1)

somatization, 2) obsessive-compulsiveness, 3) interpersonal sensitivity, 4) depression, 5)

anxiety, 6) hostility, 7) phobic anxiety, 8) paranoid ideation, and 9) psychoticism. Derogatis

reported internal consistency reliabilities ranging from .77 to .90 and test-retest reliabilities

ranging from .78 to .90. In the current study, the SLR-90-R depression scale was used as an

assessment of high risk for marital distress among PREP-WK participants.

Procedure

     Participant recruitment. The five cohorts of couples in the current study participated in

PREP-WK between 1991 and 1995. All couples had either been married or planned to be

married in the participating church within 6 months of the program weekend. The senior

pastor at the participating church briefly described PREP-WK to each couple planning

marriage in the church during a given year. Letters further describing the purpose, content,

leaders, and research component of PREP-WK and offering a formal invitation to participate

were mailed to each eligible couple approximately one month prior to the annual PREP-WK offering; a sample recruitment letter is reproduced in Appendix B. Couples in the 1991 and 1992 cohorts were told that there would be no fee for participating in the program. However, in 1993 the participating church added a nominal fee per couple to cover the cost of PREP-WK materials and refreshments. Couples who responded affirmatively to the mailed invitation were then contacted by telephone by a PREP-WK staff member to confirm the couple's participation and answer any questions the couple might have. The research staff member also made clear that the couple had the option of participating in PREP-WK without agreeing to participate in the research component.

The PREP-WK intervention. PREP-WK was offered once each spring on an annual basis and followed the same format: 8:30am to 5pm Saturday and 1pm to 4:30pm Sunday. Although the content of PREP-WK is the same as the content in the version of PREP used in the late 1980s, the delivery format is significantly shortened. Lectures of 15-30 minutes, considerably shorter than traditional PREP lectures, are alternated with skills practice sessions lasting 20-45 minutes. These practice sessions involve a couple meeting with an individual consultant in a private room to apply skills learned in the preceding lecture. Topics covered during PREP-WK include communication and problem solving skills, individual differences in communication, friendship and intimacy, relationship enhancement, expectations, sensual/sexual enhancement, and spiritual issues. Unlike traditional PREP, no homework is assigned in PREP-WK. Burnett (1993) found that PREP-WK compares favorably to traditional PREP in 1) increasing positive and decreasing negative communication behaviors among males and females and 2) improving couple consensus and cohesion. Furthermore,

Schilling's findings suggest that PREP-WK is as efficacious as traditional PREP in the prevention of marital distress at least through the first three years after participation.

Pre- and post-intervention assessments. All participating couples were made aware of the research component of the PREP-WK program during recruitment. Within the week prior to PREP-WK, all couples made an appointment for pre-intervention assessment, which included the BIO, DAS, and SCL-90-R for each partner. Additionally, the couple completed two 10-minute communication tasks. One communication task required the couple to solve a problem that was important in their relationship but did not cause high conflict. The second task required the partners to share their thoughts and feelings about an issue that was important in their relationship but did not cause high conflict without working to solve any problems. Immediately after the PREP-WK program, couples completed the post-intervention assessment, which again included a DAS for each partner and the two 10-minute communication tasks. All four communication tasks were counterbalanced within and among couples, videotaped in a private room without the presence of anyone besides the couple, and later coded using the IDCS, data from which are included in the current study.

Follow-up assessments. From 1992 through 1997, participants completed follow-up (FU) DAS measures as part of mailed questionnaire packets. These packets included directions that asked partners to complete the questionnaires independently of each other. From 1992 to 1996, packets were sent every year between 1.5 and 5.5 years after post-intervention assessment. However, to reduce respondent burden, a decision to only send packets at the 1.5, 2.5, and 5.5 year follow-ups was made in 1997. Thus, data were obtained from the 1991 and 1992 cohorts for all five follow-up periods (FU1.5-FU5.5). Data were obtained for the 1993 cohort for FU1.5-FU3.5. Data from the 1994 and 1995 cohorts were

collected for the first two follow-up periods only (FU1.5 and FU2.5). Schilling et al. (2003)

reported that follow-up return rates for men and women, computed separately, ranged from

51% to 82% with a median of 70%.

CHAPTER 3

RESULTS

In accordance with Schilling et al. (2003), an alpha level of .05 was retained throughout

all statistical tests. Although the current study involves a relatively large number of analyses,

the current investigator was hesitant to reduce the required alpha for significance due to the

small sample size; there were concerns that the study would not have enough power to detect

meaningful differences with a lowered alpha. Accordingly, interpretations of the current

results are made only when meaningful psychological interpretation is warranted and a

consistent pattern of findings is obtained. Regardless, all results should be read conservatively.

Schilling et al. (2003) were able to show that overall positive communication, as

measured by summation of the four IDCS positive communication variables, increased from

pre- to post-intervention and overall negative communication, as measured by summation of

the five IDCS negative communication variables, decreased from pre- to post-intervention for

both men and women in the current sample. Results from current analyses suggest that the

same pattern is followed on the individual IDCS communication behavior level, with each

positive communication behavior increasing from pre- to post-intervention and each negative

communication behavior decreasing from pre- to post-intervention across both men and

women. However, not all changes in communication behaviors from pre- to post-intervention

were statistically significant: female Positive Affect did not change significantly from pre- to

post-intervention, nor did male Withdrawal, male Negative Affect, male Communication

Skills, nor male Positive Affect. Means and paired *t* test statistics are listed in Table 3. Although these communication behaviors did not significantly change from pre- to post-intervention, change in these as well as each other individual IDCS communication behavior may predict changes in marital satisfaction and stability over time. Therefore, the next step was to examine whether changes in each individual IDCS communication behavior was predictive of longitudinal change in marital satisfaction and stability over time.

In order to maintain consistency with Schilling et al.'s (2003) analyses of the current sample regarding the acquisition of PREP communication skills and couples' risk of becoming maritally distress, discrete-time survival analyses (c.f., Willett & Singer, 1995, 1997) were employed in the current study. Distress onset was operationalized in agreement with Schilling et al. as the following: either (a) a follow-up DAS score of less than or equal to 104 (the midpoint between clinical and non-clinical couples; Crane, Allgood, Larson, & Griffin, 1990) and a change in DAS score of greater than or equal to 7.7 points from post-intervention assessment DAS score, or (b) separation or divorce. Schilling's (1999) original report of the amount of change needed on the DAS in the current sample to be considered reliable (reliable change; RC) was based on calculations from the following criteria set forth by Jacobson and Truax (1991): $RC = (post - pre)/S_{diff}$ where $S_{diff} = SQRT[(2(S_E)^2]$. Jacobson and Truax found an RC index of 1.96 above which the probability that the change occurred by chance is less than .05. Thus, in the proposed sample, $7.7 = (1.96 \times S_{diff}) = 1.96 \times SQRT[2(S_E)^2])$ where $S_E = S_{DAS} \times SQRT (1-r_{xx'})$, $S_{DAS} = 13.89$, and $r_{xx'} = .96$ for married couples (Spanier, 1976). Furthermore, Schilling (1999) found that distress onset as defined by criterion (a) was a significant predictor of separation and divorce in the current sample.

Table 3

Means, Standard Deviations, and t-Tests for Pre- and Post-intervention IDCS variables

| Variable | Pre-intervention | | Post-intervention | | | Change from pre-intervention to post-intervention | | | | |
	M	SD	M	SD		No. increase	No. decrease	No. change	t^a	p
					Women					
Conflict	3.4	1.7	2.5	1.2		10	30	5	-4.4	<.001
Withdrawal	2.6	1.4	2.1	1.0		12	26	7	-2.4	<.05
Denial	2.0	1.2	1.4	0.7		6	25	14	-4.0	<.001
Dominance	3.6	1.5	3.2	1.3		11	26	8	-3.0	<.01
Negative Affect	3.1	1.5	2.6	1.3		13	26	6	-2.5	<.01
Comm. Skills	5.5	1.5	6.2	1.2		29	14	2	3.1	<.01
Support-Validation	5.5	1.4	6.2	1.2		31	11	3	3.0	<.01
Problem Solving	3.9	1.8	5.1	1.7		34	9	2	4.5	<.001
Positive Affect	5.7	1.5	6.1	1.5		24	16	5	1.0	.151

Note. IDCS = Interactional Dimensions Coding System.
[a]df = 44.

Table 3

Means, Standard Deviations, and t-Tests for Pre- and Post-intervention IDCS variables (continued)

Variable	Pre-intervention		Post-intervention			Change from pre-intervention to post-intervention				
	M	SD	M	SD		No. increase	No. decrease	No. change	t^a	p
					Men					
Conflict	3.3	1.9	2.6	1.7		10	27	8	-3.1	<.01
Withdrawal	2.8	1.4	2.4	1.4		17	24	4	-1.1	.148
Denial	2.4	1.5	1.7	1.2		10	27	8	-3.1	<.01
Dominance	4.3	1.8	3.4	1.5		7	31	7	-5.0	<.001
Negative Affect	3.2	1.8	3.0	1.7		13	18	14	-0.4	.665
Comm. Skills	5.3	1.5	5.8	1.3		26	18	1	1.2	.219
Support-Validation	5.0	1.7	5.8	1.4		29	10	6	3.2	<.01
Problem Solving	3.8	1.7	5.0	1.9		32	12	1	3.0	<.01
Positive Affect	5.3	1.9	5.6	1.7		21	19	5	0.2	.857

Note. IDCS = Interactional Dimensions Coding System.
[a]df = 44.

All models were estimated using the procedure for discrete-time survival analysis outlined in detail in Willet and Singer (1995). Survival analysis allows investigators to answer such questions as "whether" and "when" an event occurs (e.g. Willett & Singer, 1995, 1997). Using the hazard function, a member of the survival analysis statistical family, one can predict risk for an event occurrence over time. Hazard equations were used in the current study to predict male and female risk for marital distress over the time period under investigation. Discrete-time survival analysis involves logistic regression on data from each valid assessment period, controlling for the time of each assessment (Schilling et al., 2003). In the current analyses, marital distress was dichotomized at each assessment period (0 = no distress, 1 = distress onset). Once a partner in the current sample became distressed, his or her data were no longer included in the analysis, regardless of whether he or she returned to a non-distressed status at a later time. However, if a partner never reported the onset of marital distress, his or her data were included in analyses at all five follow-up assessments. This is an example of data "censoring," which occurs when a participant does not experience the target event during the time-period under study (Willett & Singer, 1995); we do not know whether or when such a participant eventually experienced the onset of distress given that the study ended. Willett and Singer (1995) pointed out that discrete-time hazard-function estimation of risk provides an adaptive way of dealing with censored data. In hazard-function estimation, data must neither be discarded nor imputed when the ultimate outcome of an event's history is unknown since risk computations continue onward and only up until the event occurs or its history is censored. Finally, Willett and Singer (1995) also noted that including multiple observations for the same individual in survival and hazard models does not significantly increase the probability of erroneously obtaining statistically significant parameter estimates.

41

The pattern of distress onset in the current sample was first explored by Schilling (1999) and again reported in Schilling et al. (2003) in the 52 couples who provided follow-up data. The investigators reported that six couples (12 individuals) divorced or separated. In addition, 14 individuals became distressed according to Criterion (a) above. Thus, 26 individuals (16 female and 10 male) in 18 couples (35% of the 52 couples) became distressed according to the definition of distress onset outlined above. Additionally, Schilling et al. originally reported the pattern of distress onset for the 39 wives and 38 husbands included in their analyses as well as the current survival analyses. This information is reported again in Table 4.

Basic Models

In order to meet the principal objective of the current study, survival analyses were performed to determine the ability of pre- to post-intervention change in each individual IDCS communication behavior to predict risk for marital distress in PREP-WK participants over time. The outcome variable was thus a function of distress onset at each follow-up period, and only cases with valid IDCS data for both pre- and post-intervention assessments were used. Similar to Schilling et al. (2003), the following equation was estimated separately for husband (H) and wife (W) distress onset:

$$\text{logit}_e(h) = \alpha_1 + \alpha_2 Futime + \beta_1 Precom(W) + \beta_2 Precom(H) + \beta_3\, ChngCom(W)$$

$$+ \beta_4\, ChngCom(H) + \beta_5[Precom(W)\ \text{x}\ Precom(H)]$$

$$+ \beta_6[ChngCom(W)\ \text{x}\ ChngCom(H)] \tag{1}$$

Table 4

Pattern of Distress Onset for Valid Cases Included in Survival Analyses

Distress Onset?	Follow-up Period				
	1.5 years	2.5 years	3.5 years	4.5 years	5.5 years
	Women				
No	30	31	14	7	6
Yes	2	4	1	1	2
	Men				
No	27	30	13	6	4
Yes	2	3	0	1	3

The symbol *h* represents the hazard probability, or risk for distress onset. The predictor *Futime*

represents the follow-up period in years (1.5 for the first follow-up period, 2.5 for the second

follow-up period, etc.). *Futime* was found to be an adequate substitute for the four dummy

variables that typically would be included in this discrete-time hazard function (Schilling,

1999; Willett & Singer, 1995, 1997); the prescribed four dummy variables needed to be

replaced in the current equation because the relatively small sample size in the current sample

had resulted in empty cells and inflated coefficient and standard error estimates (Schilling et

al., 2003). *Precom* represents pre-intervention ratings on individual IDCS communication

behaviors and *ChngCom* represents pre- to post-intervention change scores on individual IDCS

communication behaviors. Pre- to post-intervention changes in individual IDCS

communication ratings were defined as residuals from the regression of post-intervention IDCS

communication ratings on pre-intervention IDCS communication ratings. This method of

calculating *ChngCom* was also used by Schilling et al., who found the method to be virtually

identical to using simple difference scores when calculating pre- to post-intervention changes

in composite IDCS communication scores using the current sample. Separate equations were

performed for each individual IDCS communication variable.

Three additional aspects of Equation 1 are worth noting. First, the inclusion of pre-

intervention communication scores in the equation allows for examination of communication

change scores while controlling for pre-intervention communication. This is a desirable asset

because some may otherwise argue that pre-intervention communication alone may explain the

effects of communication change. Second, consistent with Schilling et al. (2003), the current

investigator performed chi-square difference tests to determine whether pre- to post-

intervention change in individual IDCS communication ratings contributed significantly to the

prediction of risk for distress onset above the contribution of pre-intervention communication ratings alone. Results, which can be seen in Table 5, suggest that of all nine IDCS communication variables, only change in Communication Skills significantly contributed to the prediction of risk for distress in females. Additionally, only change in Conflict, Denial, Communication Skills, and Support-Validation significantly contributed to the prediction of risk for distress in males (also seen in Table 5).

Lastly, for equations in which pre- to post-intervention change main effects did not significantly contribute to the prediction of risk for onset of distress, this did not rule out the possibility that an interaction of husband and wife communication change added significant predictive value. Therefore, in order to consider the dyadic interaction between husband and wife communication (both pre-intervention and change), the current investigator calculated and inspected interaction terms. Consistent with Schilling et al. (2003), in order for an interaction term to be included in a particular model, the term must not introduce high multi-collinearity into the model (defined in the current study as $r > .80$ with at least one main effect term from which the interaction is constructed; this decision was informed by Schilling et al.'s report that all interaction terms not included in their models had a Pearson's correlation coefficient greater than .8 with the main effect terms from which the interactions were constructed) and must demonstrate the ability to add unique information to the model in a model chi-square difference test. Upon inspecting the interactions of husband and wife pre-intervention communication across individual IDCS communication variables, only the interactions involving Dominance and Negative Affect did not introduce high multi-collinearity into their respective models (see Table 6). Furthermore, only the interaction of husband and wife pre-intervention Negative Affect contributed significantly to the prediction of male risk for distress

Table 5

Step Statistics for the Addition of Pre- to Post-intervention Change in Communication Ratings to Models of Pre-intervention Communication Ratings Alone Predicting Female and Male Risk
for Distress Onset in Females and Males

Model	Step Statistics		
	Change in Model χ^2 (2)	*N*	*p*
Female Risk for Distress			
Conflict	3.67	98	.16
Withdrawal	.02	98	.99
Denial	2.63	98	.27
Dominance	1.80	98	.41
Negative Affect	.98	98	.61
Communication Skills	8.02	98	<.05
Support-Validation	3.81	98	.15
Problem Solving	4.71	98	.10
Positive Affect	2.83	98	.24
Male Risk for Distress			
Conflict	12.41	89	<.01
Withdrawal	4.04	89	.13
Denial	10.39	89	<.01
Dominance	.96	89	.62
Negative Affect	4.37	89	.11
Communication Skills	8.70	89	<.05
Support-Validation	6.85	89	<.05
Problem Solving	.95	89	.62
Positive Affect	1.03	89	.60

Note. Change in Model χ^2 = Difference in model Chi-squares between model including pre- to post-intervention communication change scores and model including only pre-intervention communication ratings.

Table 6

Correlations between Equation 1 Interaction Terms and Their Respective Main Effect Terms

Wife x Husband Interaction Term	Correlation with Wife Main Effect Term	Correlation with Husband Main Effect Term
PRE Conflict	.797	>.80
PRE Withdrawal	>.80	.683
PRE Denial	>.80	>.80
PRE Dominance	.748	.787
PRE Negative Affect	.785	.785
PRE Comm. Skills	.771	>.80
PRE Support-Validation	.701	>.80
PRE Problem Solving	>.80	>.80
PRE Positive Affect	.754	>.80
Change in Conflict	.405	.485
Change in Withdrawal	.191	.701
Change in Denial	.744	.560
Change in Dominance	.290	.009
Change in Negative Affect	.332	.540
Change in Comm. Skills	.300	.179
Change in Support-Validation	-.006	-.316
Change in Problem Solving	-.055	-.087
Change in Positive Affect	.195	-.027

onset; neither interaction contributed to the prediction of female risk for distress onset (see

Table 7). Upon inspecting the interactions of husband and wife communication change scores

across individual IDCS communication variables, none of the interactions introduced high

multi-collinearity into the model (see Table 6). However, only two interactions, those

involving change in Withdrawal and Negative Affect, contributed significantly to the

prediction of male risk for distress onset and only one interaction, that involving change in

Positive Affect, contributed significantly to the prediction of female risk for distress onset (see

Table 7). Models with one or more non-significant interaction terms were re-estimated with

only the significant interaction term and/or the main effects included (all current models can be

seen in Tables 8 and 9).

     Female communication. Table 8 includes estimated models predicting risk for male

distress onset and Table 9 includes estimated models predicting risk for female distress onset.

In these models, negative coefficients indicate a decreased risk for distress onset and positive

coefficients indicate an increased risk for distress onset. Although the direction of results for

increasing any female positive communication behavior suggests an increase in both male and

female risk for onset of distress, only two significant main effects emerged, both regarding

changes in female IDCS Communication Skills. Results suggest that increasing female IDCS

Communication Skills from pre- to post-intervention significantly *increases* the risk for onset

of distress in both males *and* females. There was also a marginal effect suggesting that

increasing female IDCS Support-Validation *increases* the risk for onset of distress in males.

Lastly, there was a significant interaction between husband and wife pre- to post-intervention

change in IDCS Positive Affect. Probing this interaction suggested that simultaneously

decreasing *or increasing* both female and male positive affect during PREP increases risk for

Table 7

Step Statistics for the Addition of Husband x Wife Communication Interaction Terms to Basic Models of Husband and Wife Communication Behaviors Predicting Female and Male Risk for Distress

Model	Change in Model χ^2 (1)	N	p
	Step Statistics		
	Female Risk for Distress		
Husband x Wife Pre-intervention Dominance	3.3	98	.069
Husband x Wife Pre-intervention Negative Affect	0.0	98	.849
Husband x Wife Change in Conflict	0.9	98	.342
Husband x Wife Change in Withdrawal	0.6	98	.437
Husband x Wife Change in Denial	0.1	98	.782
Husband x Wife Change in Dominance	0.6	98	.430
Husband x Wife Change in Negative Affect	0.0	98	.918
Husband x Wife Change in Communication Skills	1.2	98	.268
Husband x Wife Change in Support-Validation	1.6	98	.201
Husband x Wife Change in Problem Solving	0.1	98	.794
Husband x Wife Change in Positive Affect	5.1	98	<.05

Note. Change in Model χ^2 = Difference in model Chi-squares between model including communication interaction term and model including only communication main effects; only interaction terms not introducing high multi-collinearity ($r < .8$ with both main effect terms from which the interaction is constructed) included in table.

Table 7

Step Statistics for the Addition of Husband x Wife Communication Interaction Terms to Basic Models of Husband and Wife Communication Behaviors Predicting Female and Male Risk for Distress (continued)

Model	Change in Model χ^2 (1)	N	p
	Step Statistics		
	Male Risk for Distress		
Husband x Wife Pre-intervention Dominance	0.2	89	.671
Husband x Wife Pre-intervention Negative Affect	7.0	89	<.01
Husband x Wife Change in Conflict	0.8	89	.378
Husband x Wife Change in Withdrawal	3.8	89	.050
Husband x Wife Change in Denial	0.1	89	.795
Husband x Wife Change in Dominance	2.6	89	.109
Husband x Wife Change in Negative Affect	5.1	89	<.05
Husband x Wife Change in Communication Skills	0.0	89	.921
Husband x Wife Change in Support-Validation	1.3	89	.254
Husband x Wife Change in Problem Solving	1.4	89	.242
Husband x Wife Change in Positive Affect	0.6	89	.442

Note. Change in Model χ^2 = Difference in model Chi-squares between model including communication interaction term and model including only communication main effects; only interaction terms not introducing high multi-collinearity ($r < .8$ with both main effect terms from which the interaction is constructed) included in table.

Table 8

Summary of Basic Survival Analyses for Observed Communication Variables Predicting Risk for Male Distress Onset

Variable	Basic: Conflict		Basic: Withdrawal		Basic: Denial		Basic: Dominance		Basic: Negative Affect	
	B	$SE\ B$	B	$SE\ B$	B	$SE\ B$	B	$SE\ B$	B	$SE\ B$
Female Pre-intervention	0.2	0.3	-1.2*	0.5	1.0†	0.5	0.2	0.2	3.0	2.9
Female Decrease	1.9*	0.8	1.4†	0.8	2.9*	1.4	0.0	0.6	-0.3	0.7
Male Pre-intervention	0.6†	0.3	2.1**	0.6	0.3	0.5	0.2	0.3	4.7	3.0
Male Decrease	-2.0**	0.7	-2.1*	0.9	-2.6**	1.0	-0.3	0.3	-1.4*	0.6
Female Pre x Male Pre									-1.0	1.0
Female Decrease x Male Decrease			1.0†	0.6					1.0†	0.5
Follow-up Time	1.0**	0.4	1.1*	0.5	0.6†	0.3	0.4	0.3	0.9*	0.4
Constant	-8.2**	2.1	-8.3**	2.3	-8.0**	2.2	-5.3**	2.1	-18.8*	9.6
Model Statistics										
Model χ^2 ($N = 89$)	20.8		23.0		21.1		6.7		23.6	
df	5		6		5		5		7	
p	.001		.001		.001		.245		.001	
Nagelkerke R-square	.433		.474		.439		.151		.484	

†$p < .10$ (marginally significant). *$p < .05$. **$p < .01$.

Table 8

Summary of Basic Survival Analyses for Observed Communication Variables Predicting Risk for Male Distress Onset (continued)

Variable	Basic: Communication Skills		Basic: Support-Validation		Basic: Problem Solving		Basic: Positive Affect	
	B	*SE B*	*B*	*SE B*	*B*	*SE B*	*B*	*SE B*
Female Pre-intervention	0.0	0.5	-0.2	0.4	-0.4	0.4	0.2	0.3
Female Increase	1.0*	0.5	1.1†	0.6	0.3	0.4	0.1	0.4
Male Pre-intervention	-0.4	0.5	-0.4	0.3	-0.2	0.4	-0.6*	0.3
Male Increase	-1.0*	0.5	-1.2†	0.6	-0.4	0.4	-0.5	0.5
Female Pre x Male Pre								
Female Increase x Male Increase								
Follow-up Time	0.7*	0.3	0.7*	0.3	0.5†	0.3	0.7*	0.3
Constant	-2.3	2.0	-1.6	1.8	-1.8	1.7	-2.3	1.7
Model Statistics								
Model χ^2 ($N = 89$)	14.2		14.3		7.9		10.7	
df	5		5		5		5	
p	.015		.014		.162		.058	
Nagelkerke R-square	.306		.309		.177	.235		

†$p < .10$ (marginally significant). *$p < .05$. **$p < .01$.

Table 9

Summary of Basic Survival Analyses for Observed Communication Variables Predicting Risk for Female Distress Onset

Variable	Basic: Conflict		Basic: Withdrawal		Basic: Denial		Basic: Dominance		Basic: Negative Affect	
	B	*SE B*	*B*	*SE B*	*B*	*SE B*	*B*	*SE B*	*B*	*SE B*
Female Pre-intervention	-0.6†	0.3	-0.2	0.3	0.3	0.4	-0.1	0.2	-0.9*	0.4
Female Decrease	1.6†	0.8	0.0	0.4	0.0	0.6	-0.5	0.5	-0.1	0.5
Male Pre-intervention	1.0**	0.4	0.8*	0.4	-0.1	0.4	-0.2	0.3	0.7*	0.4
Male Decrease	-0.7	0.5	-0.0	0.3	-0.5	0.3	-0.2	0.3	-0.2	0.3
Female Pre x Male Pre										
Female Decrease x Male Decrease										
Follow-up Time	0.8*	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3
Constant	-5.9**	1.8	-4.8**	1.4	-3.8**	1.1	-2.2	1.4	-3.1*	1.4
Model Statistics										
Model χ² (*N* = 98)	15.0		7.3		5.0		3.4		10.8	
df	5		5		5		5		5	
p	.010		.202		.420		.634		.055	
Nagelkerke R-square	.295		.148		.102		.071		.216	

†*p* < .10 (marginally significant). *p < .05. **p < .01.

Table 9

Summary of Basic Survival Analyses for Observed Communication Variables Predicting Risk for Female Distress Onset (continued)

Variable	Basic: Communication Skills		Basic: Support-Validation		Basic: Problem Solving		Basic: Positive Affect	
	B	*SE B*	*B*	*SE B*	*B*	*SE B*	*B*	*SE B*
Female Pre-intervention	0.5	0.4	0.4	0.3	-0.2	0.3	0.6†	0.3
Female Increase	1.1*	0.4	0.6	0.5	0.7	0.4	0.7	0.5
Male Pre-intervention	-0.8†	0.4	-0.8*	0.3	0.2	0.3	-0.9**	0.3
Male Increase	-0.1	0.4	-0.8†	0.5	-0.2	0.3	-0.3	0.5
Female Pre x Male Pre								
Female Increase x Male Increase							0.7*	0.3
Follow-up Time	0.6†	0.3	0.4	0.3	0.3	0.3	0.8*	0.4
Constant	-2.4	2.0	-2.1	1.7	-3.7*	1.7	-3.7*	1.8
Model Statistics								
Model χ² (*N* = 98)	12.1		12.5		6.9		17.4	
df	5		5		5		6	
p	.034		.028		.225		.008	
Nagelkerke R-square	.240		.249		.142	.337		

†*p* < .10 (marginally significant). *p < .05. **p < .01.

distress in females; decreases in risk for distress were predicted for females in couples where one partner increased and the other partner decreased expression of positive affect. While all four of these findings may be of interest, due to the large number of analyses in the current study only the interpretation of findings significant at $p < .05$ may be prudent.

The results for decreasing female negative communication were not as straightforward as the direction of results varied. However, there were two significant main effects and their direction was consistent. First, decreasing female IDCS Conflict was found to significantly *increase* risk for onset of distress in males. This main effect was also marginal for risk for distress in females. Second, decreasing female IDCS Denial was found to significantly *increase* risk for onset of distress in males. There were also marginal interactions between husband and wife pre- to post-intervention change in both IDCS Withdrawal and IDCS Negative Affect. Probing these interactions suggested that changing female IDCS Withdrawal or IDCS Negative Affect increases risk for onset of distress in males only if the male partner simultaneously experiences opposite changes in IDCS Withdrawal or IDCS Negative Affect (i.e., male increases while female decreases, male decreases while female increases). Among couples in which both the female and male experienced corresponding decreases *or increases* in IDCS Withdrawal or IDCS Negative Affect, there were decreased risks for onset of distress in males. Again, while all five of these findings may be of interest, due to the large number of analyses in the current study only the interpretation of findings significant at $p < .05$ may be prudent.

Although not the main focus of the current study, there were also some effects of female pre-intervention IDCS communication behaviors on risk for onset of distress in both males and females. As can be seen from Table 8, higher levels of baseline female IDCS

Withdrawal significantly predicted decreased risk for distress among males while higher baseline levels of female IDCS Denial marginally predicted increased risk for distress among males. Results from Table 9 suggest that higher baseline levels of female IDCS Positive Affect marginally predicted increased risk for distress among females, higher baseline levels of female IDCS Conflict marginally predicted decreased risk for distress among females, and higher baseline levels of female IDCS Negative Affect significantly predicted decreased risk for distress among females. While these results provide interesting information, the lack of consistent significance and direction in the findings makes clear interpretation difficult, especially given the number of analyses performed in the current study.

Male communication. As expected, the direction of results for pre- to post-intervention change in male positive IDCS communication behaviors was consistent in indicating that increases in male positive communication behaviors are associated with decreases in risk for onset of distress in both males and females. There was only one significant main effect, however. Results indicate that increasing male IDCS Communication Skills from pre- to post-intervention decreases males' risk for onset of distress. Two marginal effects also emerged from the general pattern. These suggest that increasing male IDCS Support-Validation decreases the risk for onset of distress in both males *and* females. As before, while all three of these findings may be of interest, due to the large number of analyses in the current study only the interpretation of findings significant at $p < .05$ may be prudent.

The direction of results for pre- to post-intervention change in male negative IDCS communication behaviors was also consistent and indicated that decreases in male negative communication behaviors from pre- to post-intervention are associated with decreases in risk for onset of distress in both males and females. While none of the main effects for male

56

negative IDCS communication change reached even marginal significance for predicting the risk for onset of distress in females, four main effects reached significance at least at $p < .05$ for predicting the risk for onset of distress in males. Results suggest that decreasing male IDCS Conflict, IDCS Withdrawal, IDCS Denial, or IDCS Negative Affect from pre- to post-intervention significantly decreases males' risk for onset of distress.

Additionally, the two marginal interactions between husband and wife pre- to post-intervention change in IDCS Withdrawal and IDCS Negative Affect, discussed above, were re-probed while holding constant the amount of change in female communication. Doing so suggested that among couples in which the female increased in IDCS Negative Affect, decreases in male IDCS Negative Affect increased the risk for onset of distress in males. Additionally, among couples in which the female decreased in IDCS Withdrawal, increases in male IDCS Withdrawal had greater deleterious effects on male risk for onset of distress when compared to similar changes in male IDCS Withdrawal among couples in which the female increased in IDCS Withdrawal. Therefore, results again suggest that, among couples in which both the male and female experienced corresponding decreases *or increases* in IDCS Withdrawal or IDCS Negative Affect, the risk for onset of distress in males decreased. Regardless, neither of these interactions was significant at $p < .05$, and thus further interpretation may not be wise in the current investigation.

There were also some effects of male pre-intervention IDCS communication behaviors on risk for onset of distress in both males and females. As can be seen from Tables 8 and 9, lower baseline levels of male IDCS Conflict, IDCS Withdrawal, or IDCS Negative Affect and higher baseline levels of male IDCS Support-Validation or IDCS Positive Affect significantly predicted decreased risk for distress among one or both partners. Lower baseline levels of

male IDCS Conflict and higher baseline levels of male IDCS Communication Skills marginally predicted decreased risk for distress among males and females, respectively. Each of these findings is consistent with previous research on the effects of male communication on marital satisfaction and stability, although again the current study will only focus on findings significant at $p < .05$.

Models Including Pre-intervention Risk Factors

A secondary purpose of the current study was to explore whether the relationships between pre- to post-intervention changes in individual IDCS communication behaviors and marital outcomes depended on the initial level of known risk variables for marital distress (relatively high depression and low premarital satisfaction). Similar analyses were performed by Schilling et al. (2003) using composite scores of IDCS communication. Depression was measured using the SCL-90-R depression scale and premarital satisfaction was measures using the DAS global scale. In accordance with Schilling et al., couples were considered at risk for marital distress based on partners' relatively high levels of depression (pre-intervention SCL-90-R depression scale score in the top 25% of PREP-WK participants of the same gender) or relatively low levels of premarital satisfaction (pre-intervention DAS global score in the bottom 25% of PREP-WK participants of the same gender). Schilling et al. included additional analyses for those couples who may be considered at low risk for marital distress based on the DAS global scale. The current study includes comparable analyses, defining low-risk for marital distress in the same fashion as Schilling et al.: relatively high levels of premarital satisfaction (pre-intervention DAS global score in the top 25% of PREP-WK participants of the same gender). Descriptors and cutoff points for depression and pre-marital satisfaction are outlined in Table 10. A dummy risk variable was created for depression by coding respondents

Table 10

Descriptors for Premarital Scales Used to Create Risk Variables

| | n | | | | Percentile | | |
Premarital Score	Valid	Missing	*M*	*SD*	25th	50th	75th
Female depression	62	3	.61	.45	.29	.42	.85
Male depression	64	1	.48	.44	.15	.38	.67
Female DAS	63	2	119.34	10.55	114.00	121.00	125.94
Male DAS	63	2	116.66	11.76	109.00	119.00	124.00

Note. DAS = Dyadic Adjustment Scale.

scoring in the top 25% as 1 and those in the lower 75% as 0. A dummy risk variable was created for low pre-marital satisfaction by coding the bottom 25% as 1 and the top 75% as 0. Finally, a dummy resilience variable was created for high pre-marital satisfaction by coding respondents scoring in the top 25% as 1 and those in the lower 75% as 0. As Schilling et al. noted, the depression means and standard deviations for the current sample are comparable to those in a sample of mothers ($M = 0.6$, $SD = 0.7$) and fathers ($M = 0.3$, $SD = 0.4$) of community children (data from Cheryl, Segal, Naylor, & Evans, 1993, as cited in Kendall & Sheldrick, 2000). Phi coefficients between depression and low DAS in the current sample were 0.17 ($N = 62$, $p = 0.19$) for female participants and 0.22 ($N = 63$, $p = 0.08$) for male participants (Schilling et al., 2003).

To test whether the relationships between change in individual IDCS communication behaviors and marital outcomes depended on the initial level of known risk variables for marital distress, the current study added the main effect of each respondent's risk/resilience factor and its interaction with that respondent's communication change variable to the main effect models in Tables 7 and 8. Similar to the models used by Schilling et al. (2003), the following equations predicting husband and wife risk for distress onset were thus estimated in the current study:

$$\text{logit}_e(h) = \alpha_1 + \alpha_2 Futime + \beta_1 Precom(H) + \beta_2 Precom(W) + \beta_3\ ChngCom(H)$$
$$+ \beta_4\ ChngCom(W) + \beta_5 Risk(W) + \beta_6[Risk(W) \text{ x } ChngCom(W)] \tag{2}$$

$$\text{logit}_e(h) = \alpha_1 + \alpha_2 Futime + \beta_1 Precom(H) + \beta_2 Precom(W) + \beta_3\ ChngCom(H)$$
$$+ \beta_4\ ChngCom(W) + \beta_5 Risk(H) + \beta_6[Risk(H) \text{ x } ChngCom(H)] \tag{3}.$$

Risk is the dichotomous dummy variable in these equations indicating whether a respondent is at risk (or resilient, in the case of high premarital satisfaction) or not. As can be seen in these two equations, *Risk* was multiplied by that respondent's communication change score (for individual IDCS communication behaviors) to create the interaction variable. Separate equations were performed for each individual IDCS communication variable.

As was performed by Schilling et al. (2003), two separate chi-square difference tests were performed on the risk models in Equations 2 and 3 to determine whether the contributions of the risk variables were significant. In the first test, risk models were compared to reduced communication main effect models to determine whether, as a group, the dummy risk variable together with the interaction variable significantly improved the prediction of the reduced model. In the second test, risk models were compared to models including the communication main effects and the dummy risk variable to determine whether the interaction variable alone added significant predictive power. Due to the large numbers of equations and tests for these secondary analyses (number of equations = 108, number of chi-square tests = 216), chi-square test results for only models passing both tests at $p < .05$ are reported in Table 11. In addition, parameters for all models passing both tests are included in Tables 12-15. Again, in these models, negative coefficients indicate a decreased risk for distress onset and positive coefficients indicate an increased risk for distress onset.

Female risk. Female risk and resilience factors of relatively high premarital depression, relatively low premarital satisfaction, and relatively high premarital satisfaction generally did not influence the effects of female pre- to post-intervention changes in positive IDCS communication behaviors on risk for onset of distress. There was one exception to this, however. The effect of female change in IDCS Positive Affect on risk for onset of distress in

Table 11

Significant Step Statistics for the Addition of, together, the Risk Dummy Variable and the Risk x Communication Interaction Variable to Reduced Communication Main Effect Models and, separately, the Risk x Communication Interaction Variable to Main Effect Models Including the Risk Dummy Variable

Model	Step Statistics: Risk Dummy + Interaction			Step Statistics: Interaction Alone		
	Chg. in Model χ^2 (2)	N	p	Chg. in Model χ^2 (1)	N	p
Distress onset in Women						
Depression						
Female Depression Risk and Female Positive Affect	8.70	95	.01	8.27	95	.00
Male Depression Risk and Male Withdrawal	9.86	98	.01	9.41	98	.00
Low DAS						
Female Low DAS Risk and Female Denial	6.90	98	.03	4.70	98	.03
Male Low DAS Risk and Male Communication Skills	6.54	96	.04	6.16	96	.01
Male Low DAS Risk and Male Problem Solving	6.50	96	.04	6.41	96	.01
Male Low DAS Risk and Male Positive Affect	5.83	96	.05*	5.77	96	.02

Note. Chg. in Model χ^2 = Difference in model Chi-squares between risk model including noted variables and model without noted variables. DAS = Dyadic Adjustment Scale, measured at pre-intervention.

*this *p*-value was rounded from *p* = .054 but the model was included because of nearness to the established alpha and because there is a significant interaction effect within this model; interpretations from this model should be made with caution.

Table 11

Significant Step Statistics for the Addition of, together, the Risk Dummy Variable and the Risk x Communication Interaction Variable to Reduced Communication Main Effect Models and, separately, the Risk x Communication Interaction Variable to Main Effect Models Including the Risk Dummy Variable (continued)

Model	Step Statistics: Risk Dummy + Interaction			Step Statistics: Interaction Alone		
	Chg. in Model χ^2 (2)	N	p	Chg. in Model χ^2 (1)	N	p
Distress onset in Women						
High DAS						
Female High DAS Resilience and Female Positive Affect	9.35	98	.01	8.30	98	.00
Male High DAS Resilience and Male Communication Skills	13.01	96	.00	12.21	96	.00
Male High DAS Resilience and Male Support-Validation	10.77	96	.00	10.71	96	.00
Male High DAS Resilience and Male Problem Solving	7.66	96	.02	7.10	96	.01
Male High DAS Resilience and Male Positive Affect	6.67	96	.04	5.82	96	.02

Note. Chg. in Model χ^2 = Difference in model Chi-squares between risk model including noted variables and model without noted variables. DAS = Dyadic Adjustment Scale, measured at pre-intervention.
*this *p*-value was rounded from *p* = .054 but the model was included because of nearness to the established alpha and because there is a significant interaction effect within this model; interpretations from this model should be made with caution.

63

Table 11

Significant Step Statistics for the Addition of, together, the Risk Dummy Variable and the Risk x Communication Interaction Variable to Reduced Communication Main Effect Models and separately, the Risk x Communication Interaction Variable to Main Effect Models Including the Risk Dummy Variable (continued)

Model	Step Statistics: Risk Dummy + Interaction			Step Statistics: Interaction Alone		
	Chg. in Model χ^2 (2)	N	p	Chg. in Model χ^2 (1)	N	p
Distress onset in Men						
Depression						
Male Depression Risk and Male Support-Validation	9.28	89	.01	5.80	89	.02
Male Depression Risk and Male Positive Affect	12.03	89	.00	6.63	89	.01
Low DAS						
Female Low DAS Risk and Female Withdrawal	6.62	89	.04	4.92	89	.03
Male Low DAS Risk and Male Dominance	6.52	87	.04	5.00	87	.02
High DAS						
Female High DAS Resilience and Female Denial	6.90	89	.03	6.86	89	.01
Female High DAS Resilience and Female Dominance	8.09	89	.02	7.96	89	.00

Note. Chg. in Model χ^2 = Difference in model Chi-squares between risk model including noted variables and model without noted variables. DAS = Dyadic Adjustment Scale, measured at pre-intervention.
*this *p*-value was rounded from *p* = .054 but the model was included because of nearness to the established alpha and because there is a significant interaction effect within this model; interpretations from this model should be made with caution.

64

Table 12

Summary of Significant Male-at-Risk Survival Analyses for Observed Communication Variables Predicting Risk of Male Distress Onset

	Risk: Depression		Risk: Low DAS		Risk: High DAS	
Variable	*B*	*SE B*	*B*	*SE B*	*B*	*SE B*
Dominance						
Female Pre-intervention			0.4	0.3		
Female Decrease			0.3	0.6		
Male Pre-intervention			0.3	0.4		
Male Decrease			-1.5†	0.9		
Male Depression						
Male Depression x Male Decrease						
Male Low DAS			2.8*	1.4		
Male Low DAS x Male Decrease			1.8†	1.0		
Male High DAS						
Male High DAS x Male Decrease						
Follow-up Time			0.4	0.3		
Constant			-7.8**	3.0		

	Model Statistics
Model χ^2 (7)	13.3
N	87
p	.065
Nagelkerke R-square	.292

Note. DAS = Dyadic Adjustment Scale.
†*p* < .10 (marginally significant). *p < .05. **p < .01.

Table 12

Summary of Significant Male-at-Risk Survival Analyses for Observed Communication Variables Predicting Risk of Male Distress Onset (continued)

Variable	Risk: Depression		Risk: Low DAS		Risk: High DAS	
	B	*SE B*	*B*	*SE B*	*B*	*SE B*
Support-Validation						
Female Pre-intervention	-0.5	0.4				
Female Increase	1.4*	0.7				
Male Pre-intervention	-0.8†	0.4				
Male Increase	-3.1*	1.2				
Male Depression	3.8*	1.5				
Male Depression x Male Increase	3.3*	1.6				
Male Low DAS						
Male Low DAS x Male Increase						
Male High DAS						
Male High DAS x Male Increase						
Follow-up Time 1.3**	0.5					
Constant	-2.5	2.1				

	Model Statistics	
Model χ^2 (7)	23.6	
N	89	
p	.001	
Nagelkerke R-square	.485	

Note. DAS = Dyadic Adjustment Scale.
†$p < .10$ (marginally significant). *$p < .05$. **$p < .01$.

Table 12

Summary of Significant Male-at-Risk Survival Analyses for Observed Communication Variables Predicting Risk of Male Distress Onset (continued)

Variable	Risk: Depression		Risk: Low DAS		Risk: High DAS	
	B	*SE B*	*B*	*SE B*	*B*	*SE B*
Positive Affect						
Female Pre-intervention	-0.1	0.4				
Female Increase	0.7	0.6				
Male Pre-intervention	-0.5	0.3				
Male Increase	-0.9	0.8				
Male Depression	4.2**	1.5				
Male Depression x Male Increase	-5.4*	2.7				
Male Low DAS						
Male Low DAS x Male Increase						
Male High DAS						
Male High DAS x Male Increase						
Follow-up Time 1.2*	0.5					
Constant	-3.6†	2.1				

	Model Statistics
Model χ^2 (7)	22.7
N	89
p	.002
Nagelkerke R-square	.469

Note. DAS = Dyadic Adjustment Scale.
†*p* < .10 (marginally significant). **p* < .05. ***p* < .01.

Table 13

Summary of Significant Female-at-Risk Survival Analyses for Observed Communication Variables Predicting Risk of Male Distress Onset

Variable	Risk: Depression		Risk: Low DAS		Risk: High DAS	
	B	$SE\ B$	B	$SE\ B$	B	$SE\ B$
Withdrawal						
Female Pre-intervention			-1.5*	0.6		
Female Decrease			3.8*	1.7		
Male Pre-intervention			2.7**	0.9		
Male Decrease			-2.0*	0.9		
Female Depression						
Female Depression x Female Decrease						
Female Low DAS			2.0	1.3		
Female Low DAS x Female Decrease			-3.0†	1.6		
Female High DAS						
Female High DAS x Female Decrease						
Follow-up Time			1.8**	0.7		
Constant			-12.5**	3.8		

	Model Statistics
Model χ^2 (7)	25.8
N	89
p	.001
Nagelkerke R-square	.524

Note. DAS = Dyadic Adjustment Scale.
†*p* < .10 (marginally significant). **p* < .05. **p < .01.

68

Table 13

Summary of Significant Female-at-Risk Survival Analyses for Observed Communication
Variables Predicting Risk of Male Distress Onset (continued)

Variable	Risk: Depression		Risk: Low DAS		Risk: High DAS	
	B	*SE B*	*B*	*SE B*	*B*	*SE B*
Denial						
Female Pre-intervention					-0.5	0.7
Female Decrease					3.6†	2.0
Male Pre-intervention					1.9†	1.0
Male Decrease					-3.1*	1.3
Female Depression						
Female Depression x Female Decrease						
Female Low DAS						
Female Low DAS x Female Decrease						
Female High DAS					-41.6	5289.7
Female High DAS x Female Decrease					77.6	10519.2
Follow-up Time					0.7*	0.3
Constant					-8.8**	2.8

	Model Statistics
Model χ^2 (7)	28.0
N	89
p	.000
Nagelkerke R-square	.562

Note. DAS = Dyadic Adjustment Scale.
†*p* < .10 (marginally significant). **p* < .05. ***p* < .01.

Table 13

Summary of Significant Female-at-Risk Survival Analyses for Observed Communication Variables Predicting Risk of Male Distress Onset (continued)

	Risk: Depression		Risk: Low DAS		Risk: High DAS	
Variable	*B*	*SE B*	*B*	*SE B*	*B*	*SE B*
Dominance						
Female Pre-intervention					0.2	0.3
Female Decrease					-0.7	0.6
Male Pre-intervention					-0.1	0.4
Male Decrease					-0.1	0.4
Female Depression						
Female Depression x Female Decrease						
Female Low DAS						
Female Low DAS x Female Decrease						
Female High DAS					-2.8	3.1
Female High DAS x Female Decrease					8.3	10.0
Follow-up Time					0.6*	0.3
Constant					-5.0*	2.3

	Model Statistics
Model χ^2 (7)	14.8
N	89
p	.039
Nagelkerke R-square	.318

Note. DAS = Dyadic Adjustment Scale.
†*p* < .10 (marginally significant). *p* < .05. **p* < .01.

Table 14

Summary of Significant Male-at-Risk Survival Analyses for Observed Communication Variables Predicting Risk of Female Distress Onset

Variable	Risk: Depression		Risk: Low DAS		Risk: High DAS	
	B	*SE B*	*B*	*SE B*	*B*	*SE B*
Withdrawal						
Female Pre-intervention	0.0	0.3				
Female Decrease	-0.2	0.5				
Male Pre-intervention	0.6	0.4				
Male Decrease	-0.2	0.3				
Male Depression	-0.1	1.2				
Male Depression x Male Decrease	4.5*	1.9				
Male Low DAS						
Male Low DAS x Male Decrease						
Male High DAS						
Male High DAS x Male Decrease						
Follow-up Time 0.6†	0.3					
Constant	-6.1**	1.7				

	Model Statistics
Model χ^2 (7)	17.1
N	98
p	.017
Nagelkerke R-square	.332

Note. DAS = Dyadic Adjustment Scale.
†*p* < .10 (marginally significant). **p* < .05. ***p* < .01.

71

Table 14

Summary of Significant Male-at-Risk Survival Analyses for Observed Communication Variables Predicting Risk of Female Distress Onset (continued)

Variable	Risk: Depression		Risk: Low DAS		Risk: High DAS	
	B	*SE B*	*B*	*SE B*	*B*	*SE B*
Communication Skills						
Female Pre-intervention			0.5	0.4	0.1	0.5
Female Increase			1.5**	0.6	1.3*	0.6
Male Pre-intervention			-0.8†	0.5	-0.6	0.6
Male Increase			0.5	0.6	-1.8*	0.8
Male Depression						
Male Depression x Male Increase						
Male Low DAS			0.5	1.0		
Male Low DAS x Male Increase			-2.5*	1.1		
Male High DAS					-4.3	4.0
Male High DAS x Male Increase					6.6*	3.4
Follow-up Time			0.8*	0.4	0.9*	0.4
Constant			-3.3	2.2	-3.2	2.5
			Model Statistics			
Model χ^2 (7)			18.3		24.7	
N			96		96	
p			.011		.001	
Nagelkerke R-square			.355		.466	

Note. DAS = Dyadic Adjustment Scale.
†*p* < .10 (marginally significant). **p* < .05. ***p* < .01.

Table 14

Summary of Significant Male-at-Risk Survival Analyses for Observed Communication Variables Predicting Risk of Female Distress Onset (continued)

Variable	Risk: Depression		Risk: Low DAS		Risk: High DAS	
	B	*SE B*	*B*	*SE B*	*B*	*SE B*
Support-Validation						
Female Pre-intervention					0.7†	0.4
Female Increase					1.3†	0.7
Male Pre-intervention					-1.5**	0.5
Male Increase					-2.8**	1.0
Male Depression						
Male Depression x Male Increase						
Male Low DAS						
Male Low DAS x Male Increase						
Male High DAS					0.8	1.1
Male High DAS x Male Increase					3.9**	1.4
Follow-up Time					0.7*	0.3
Constant					-2.5	2.1

Model Statistics	
Model χ^2 (7)	23.0
N	96
p	.002
Nagelkerke R-square	.438

Note. DAS = Dyadic Adjustment Scale.
†*p* < .10 (marginally significant). *p < .05. **p < .01.

Table 14

Summary of Significant Male-at-Risk Survival Analyses for Observed Communication Variables Predicting Risk of Female Distress Onset (continued)

Variable	Risk: Depression		Risk: Low DAS		Risk: High DAS	
	B	*SE B*	*B*	*SE B*	*B*	*SE B*
Problem Solving						
Female Pre-intervention			-0.1	0.4	0.0	0.4
Female Increase			0.4	0.5	0.7	0.5
Male Pre-intervention			0.1	0.4	0.1	0.5
Male Increase			0.7	0.5	-0.6	0.4
Male Depression						
Male Depression x Male Increase						
Male Low DAS			1.0	1.0		
Male Low DAS x Male Increase			-1.2*	0.5		
Male High DAS					-1.3	1.7
Male High DAS x Male Increase					1.6*	0.8
Follow-up Time			0.4	0.3	0.4	0.3
Constant			-4.3*	1.9	-4.2*	1.8

	Model Statistics		
Model χ^2 (7)	13.4		14.6
N	96		96
p	.063		.042
Nagelkerke R-square	.268		.289

Note. DAS = Dyadic Adjustment Scale.
†*p* < .10 (marginally significant). *p < .05. **p < .01.

Table 14

Summary of Significant Male-at-Risk Survival Analyses for Observed Communication Variables Predicting Risk of Female Distress Onset (continued)

	Risk: Depression		Risk: Low DAS		Risk: High DAS	
Variable	*B*	*SE B*	*B*	*SE B*	*B*	*SE B*
Positive Affect						
Female Pre-intervention			0.7*	0.3	0.8*	0.3
Female Increase			0.9†	0.5	0.6	0.5
Male Pre-intervention			-1.0**	0.3	-1.2**	0.4
Male Increase			0.5	0.6	-1.1	0.7
Male Depression						
Male Depression x Male Increase						
Male Low DAS			0.7	1.0		
Male Low DAS x Male Increase			-2.4*	1.0		
Male High DAS					0.2	1.2
Male High DAS x Male Increase					2.2*	1.0
Follow-up Time			0.7*	0.4	0.8*	0.4
Constant			-3.6†	1.9	-3.2†	1.8
			Model Statistics			
Model χ^2 (7)			17.7		18.6	
N			96		96	
p			.013		.01	
Nagelkerke R-square			.346		.361	

Note. DAS = Dyadic Adjustment Scale.
†*p* < .10 (marginally significant). **p* < .05. ***p* < .01.

Table 15

Summary of Significant Female-at-Risk Survival Analyses for Observed Communication Variables Predicting Risk of Female Distress Onset

Variable	Risk: Depression		Risk: Low DAS		Risk: High DAS	
	B	*SE B*	*B*	*SE B*	*B*	*SE B*
Denial						
Female Pre-intervention			0.5	0.5		
Female Decrease			-0.7	0.7		
Male Pre-intervention			-0.4	0.4		
Male Decrease			-0.6†	0.4		
Female Depression						
Female Depression x Female Decrease						
Female Low DAS			0.9	0.8		
Female Low DAS x Female Decrease			3.1*	1.6		
Female High DAS						
Female High DAS x Female Decrease						
Follow-up Time			0.5†	0.3		
Constant			-4.7**	1.3		

	Model Statistics
Model χ^2 (7)	11.9
N	98
p	.105
Nagelkerke R-square	.236

Note. DAS = Dyadic Adjustment Scale.
†*p* < .10 (marginally significant). **p* < .05. ***p* < .01.

Table 15

Summary of Significant Female-at-Risk Survival Analyses for Observed Communication Variables Predicting Risk of Female Distress Onset (continued)

Variable	Risk: Depression		Risk: Low DAS		Risk: High DAS	
	B	*SE B*	*B*	*SE B*	*B*	*SE B*
Positive Affect						
Female Pre-intervention	0.9*	0.4			0.5	0.4
Female Increase	0.5	0.4			0.8	0.5
Male Pre-intervention	-1.1**	0.4			-0.9*	0.3
Male Increase	-0.7	0.6			-0.6	0.6
Female Depression	-2.1	1.7				
Female Depression x Female Increase	4.0*	1.9				
Female Low DAS						
Female Low DAS x Female Increase						
Female High DAS					-5451.7	58529.2
Female High DAS x Female Increase					2810.1	30157.6
Follow-up Time	0.9*	0.4			0.7*	0.3
Constant	-4.0*	1.9			-2.5	2.0
Model Statistics						
Model χ^2 (7)	20.7				21.7	
N	95				98	
p	.004				.003	
Nagelkerke R-square	.399				.411	

Note. DAS = Dyadic Adjustment Scale.
†*p* < .10 (marginally significant). **p* < .05. **p < .01.

77

females was significantly moderated by high female premarital depression. Specifically, among females who were relatively high in premarital depression, there was a much stronger effect for increasing Positive Affect and increases in risk for onset of distress in females. However, due to the lack of consistent significance across the relationships between female risk/resilience, female positive communication change, and risk for onset of distress, as well as the large number of analyses performed, the interpretation of this one interaction effect may be imprudent at this time.

Similarly, female risk and resilience factors largely did not influence the effects of female pre- to post-intervention changes in negative IDCS communication behaviors on risk for onset of distress. However, there were two exceptions. First, the effect of female change in IDCS Denial on risk for onset of distress in females was significantly moderated by low premarital satisfaction in females; specifically, among females who were relatively low in premarital satisfaction, decreasing Denial increased risk for onset of distress in females while, among females not at-risk due to this criteria, increasing Denial increased risk for onset of distress in females. Second, the effect of female change in IDCS Withdrawal on risk for onset of distress in males was marginally moderated by low premarital satisfaction in females; specifically, among females who were at-risk due to relatively low premarital satisfaction, there was a much weaker effect for decreasing Withdrawal and increases in risk for onset of distress in males. However, again due to the lack of consistent significance when investigating these relationships and the large number of analyses performed, interpretation these two interaction effects may be imprudent at this time.

Male risk. Contrary to results regarding female risk, male risk and resilience factors of relatively high premarital depression, relatively low premarital satisfaction, and relatively high

premarital satisfaction often moderated the effects of male pre- to post-intervention changes in positive IDCS communication behaviors on risk for onset of distress. First, the relationship between pre- to post-intervention change in male IDCS Communication Skills and risk for onset of distress in females was significantly moderated by both low and high premarital satisfaction; specifically, among males who were relatively low on premarital satisfaction, increasing Communication Skills decreased risk for onset of distress in females while, among males not at-risk due to this criteria, increasing Communication Skills increased risk for onset of distress in females. Likewise, among males who were relatively high on premarital satisfaction, increasing Communication Skills increased risk for onset of distress in females while, among males not resilient as defined by this criteria, increasing Communication Skills decreased risk for onset of distress in females. Second, the relationship between pre- to post-intervention change in male IDCS Support-Validation and risk for onset of distress was significantly moderated differently by both high premarital depression and high premarital satisfaction; specifically, among males who were relatively high in premarital depression, increasing Support-Validation largely did not affect risk for onset of distress in males while, among males not at-risk due to this criteria, increasing Support-Validation decreased risk for onset of distress in males. Among males who were relatively high in premarital satisfaction, increasing Support-Validation increased risk for onset of distress in females while, among males not resilient as defined by this criteria, increasing Support-Validation decreased risk for onset of distress in females. Third, the relationship between pre- to post-intervention change in male IDCS Problem Solving and risk for onset of distress in females was significantly moderated by both low and high premarital satisfaction; specifically, among males who were relatively low on premarital satisfaction, increasing Problem Solving decreased risk for onset

of distress in females while, among males not at-risk due to this criteria, increasing Problem Solving increased risk for onset of distress in females. Likewise, among males who were relatively high on premarital satisfaction, increasing Problem Solving increased risk for onset of distress in females while, among males not resilient as defined by this criteria, increasing Problem Solving decreased risk for onset of distress in females. Finally, the relationship between pre- to post-intervention change in male IDCS Positive Affect and risk for onset of distress was significantly moderated by all three risk/resilience variables. Among males who were relatively high on premarital depression, there was a much stronger effect for increasing Positive Affect and decreases in risk for onset of distress in males. Among males who were relatively low on premarital satisfaction, increasing Positive Affect decreased risk for onset of distress in females while, among males not at-risk due to this criteria, increasing Positive Affect increased risk for onset of distress in females. Likewise, among males who were relatively high on premarital satisfaction, increasing Positive Affect increased risk for onset of distress in females while, among males not resilient as defined by this criteria, increasing Positive Affect decreased risk for onset of distress in females. While the moderation effects of high male premarital depression were few and not consistent, there does seem to be a clear pattern of findings regarding the influence of male premarital satisfaction on the relationships between changes in male positive IDCS communication behaviors and female risk for marital distress. Therefore, interpretation of these specific findings may be warranted.

Male risk and resilience factors largely did not influence the effects of male pre- to post-intervention changes in negative IDCS communication behaviors on risk for onset of distress. However, there were two exceptions. First, the effect of male change in IDCS Withdrawal on risk for onset of distress in females was significantly moderated by high

premarital depression; specifically, among males who were relatively high in premarital depression, decreasing Withdrawal increased risk for onset of distress in females while, among males not at-risk due to this criteria, decreasing Withdrawal decreased risk for onset of distress in females. Second, the effect of male change in IDCS Dominance on risk for onset of distress in males was marginally moderated by low premarital satisfaction; specifically, among males who were relatively low in premarital satisfaction, decreasing Dominance increased risk for onset of distress in males while, among males not at-risk due to this criteria, decreasing Dominance decreased risk for onset of distress in males. However, again due to the lack of consistent significance when investigating these relationships and the large number of analyses performed, interpretation these two interaction effects may be hasty at this time. Therefore, in sum, the only consistent pattern of results were found for the effects of male low and high premarital satisfaction on the relationships between change in male positive communication behaviors and female risk for distress. Increasing male positive communication seems to be beneficial for partners of males who are relatively low on premarital satisfaction but deleterious for partners of males relatively high in premarital satisfaction.

CHAPTER 4

DISCUSSION

The current findings must be understood within the context of previous research

showing that PREP-WK is generally effective in decreasing risk for distress in couples during

the first three years after participation in the program (Schilling, 1999). In addition, both the

original version of PREP and the German version of PREP have shown to be effective in

decreasing onset of distress in couples three to five years after participation when compared to

controls (Markman et al., 1988; Hahlweg et al., 1998). Therefore, the general efficacy of

PREP is supported among certain populations, including the current population, and is not on

trial. However, as Schilling et al. (2003) pointed out, the efficacy of PREP must likewise be

understood within the context of recent evidence suggesting that changes in communication

during PREP may not always have the expected effects on couples' longitudinal risk for

distress. Therefore, the current results are important in the ongoing effort to make PREP as

highly effective as possible in decreasing couples' longitudinal risk for marital distress.

In the current study, the overall direction of change in communication behaviors in

both females and males reflected the composite-level changes reported by Schilling et al.

(2003); all positive behaviors increased and all negative behaviors decreased to some degree

from pre- to post-intervention. However, current results suggest that PREP-WK may not be

effective in *significantly* decreasing male withdrawal or negative affect, nor in *significantly*

increasing male ability to convey thoughts and feelings in a clear and constructive manner or

male or female expression of positive affect. Regardless, changes in each of these communication behaviors during PREP-WK, although not significant, were able to predict risk for distress in males and/or females. The only communication behaviors in which pre- to post-intervention changes in either gender did not show an ability to at least marginally predict risk for onset of distress in either males or females were IDCS Problem Solving, conceptualized as defining and working towards a mutually satisfactory solution to a problem, and IDCS Dominance, defined as establishing control or influence over one's partner. The Problem Solving results were especially interesting because all versions of PREP include a strong focus on teaching couples skills to define and work towards mutually satisfactory solutions to their problems. It may simply be that teaching couples problem solving skills is not an essential part of communication change that must be targeted in order to influence couples' longitudinal risk for distress. Male and female Dominance may also be a neutral part of communication behavior in relationship to longitudinal marital satisfaction. However, the current investigator strongly encourages replication of these two findings before any conclusions are drawn about the need to teach couples problem solving skills or decrease dominance in couples' communication; these current findings are not congruent with current theory about the impact of couples' communication on their relationship satisfaction.

The current study also replicated the overall direction of influence between changes in female positive communication behavior during PREP-WK and males' and females' longitudinal risk for distress, as reported in Schilling et al. (2003). However, only increases in females' IDCS Communication Skills (defined as the ability to convey thoughts and feelings in a clear and constructive manner) *significantly* predicted increases in males' and females' longitudinal risk for distress. In addition, the current study found that when both females and

males simultaneously increased IDCS Positive Affect (defined as the expression of positivity) during PREP-WK, females' risk for distress increased. This latter finding more or less fits within the current study's hypotheses, which state that behaviors that may increase avoidance of relationship problems, such as expression of positive affect, may increase risk for marital distress. However, the finding regarding female IDCS Communication Skills does not fit the current study's hypotheses. What is especially surprising about the suggestion that increasing females' IDCS Communication Skills increases male and female risk for distress is not only does increasing Communication Skills behavior imply increased engagement with the partner, but specifically *constructive* engagement. Previously, Schilling et al. stated the concern that PREP's focus on approaching conflict positively may lead some wives to "refrain from participating with their husbands in the *constructive engagement* of addressing relationship problems" (pp. 49-50). According to the results of the current study, this seems not to be the case; PREP seems to be successful in increasing wives' constructive engagement with their husbands and, in turn, this seems to increase both male and female longitudinal risk for distress.

While Schilling et al. (2003) were not able to find effects for decreases in composite-level female negative communication on risk for distress, breaking down the composite variable in the current study did lead to significant findings. Specifically, current results suggest that decreases in female IDCS Conflict (defined as behaviors that encourage arguing) or female IDCS Denial (defined as active rejection of a problem's existence or of personal responsibility for the problem) significantly increase risk for distress in males. These findings lend support to the German PREP findings by Baucom et al. (in press), which suggest that pre- to post-intervention decreases in female negative communication may put couples at greater

risk for later marital distress. However, the current results again do *not* support the current

study's hypothesis that unexpected patterns in female communication change and risk for

distress may be best accounted for by increases in female avoidance; while decreasing female

IDCS Conflict may suggest an increase in avoidance, decreasing female IDCS Denial

specifically does not.

Given that avoidance of constructive engagement does not explain the current findings

for females, alternative hypotheses should be discussed. One suggestion may come from the

work of Gottman, who has proposed a balance theory of marriage (e.g. 1993b). Balance

theory suggests that a ratio of positivity to negativity may be used to best predict the future

course of a marriage. In particular, Gottman (1993a) reported that stable couples tend to

achieve an approximate 5:1 ratio of positivity to negativity whereas unstable couples tend to

experience a ratio approximately equal to 1:1 or below. A similar idea was successfully

employed in the methodology of Karney and Bradbury (1997) when examining similar

unexpected female communication patterns to those investigated in the current study (results

of Karney & Bradbury are discussed above). In their study, however, the investigators used

difference scores as opposed to ratio scores, subtracting positive behaviors from negative

behaviors to predict and compare trajectories of marital satisfaction. Regardless, these ideas

suggest that, just as there may be an essential need for couples to maintain a certain level of

positive behavior, there may also be an essential need to retain a certain level of negative

behavior in relation to positive behavior. As Gottman (1993a) wrote:

> Without the predator, the ecology becomes out-of-balance and ultimately
> unstable. In my application, this suggests the speculation that negativity is as
> necessary as positivity for the survival of the marriage. It may very well be
> the case that negativity and negative affect have a positive, prosocial role in
> intimate relationships. They may have a role in balancing opposing qualities
> that are both desirable in a marriage, such as intimacy and autonomy; they

may also serve a role in keeping attraction alive over long periods of time. A relationship that is totally positive may thus be as undesirable and unstable as one that is all negative. (p. 14)

Given the success of using of ratio and subtractive methodology in the literature, using similar procedures during further efforts to understand Schilling et al.'s (2003) unexpected findings in the current sample will be an important part of continuing to explore the mechanism underlying the relationships between changes in communication behaviors during PREP and couple's risk for distress.

Gottman (1993a) reports another finding that may have noteworthy application for understanding why the current study's hypotheses were not supported. Upon further investigating his balance theory, Gottman (1993a) found that the 5:1 positivity to negativity ratio might be maintained in any of three different types of successful couples: (1) the volatile couple, in which there is a high level of both positive and negative behaviors, (2) the validating couple, in which there is a moderate amount of both positive and negative behaviors, and (3) the avoidant couple, in which there is a small amount of both positive and negative behaviors. Despite the level of behavior in each of these couples, Gottman found that all three types maintain a communication ratio at or near five positive behaviors to one negative behavior. Moreover, Gottman found that all three of these types of couples had less considerations of divorce and less occasions of actual divorce when compared to couples that experienced a ratio closer to 1:1. Therefore, there is some previous marital communication research that suggests avoidance (i.e., Gottman's "avoidant" couples) may not always be a destructive entity in marriage. Given that the current study found evidence that some of the better marital outcomes may be predicted for couples in which the female increases her active rejection of problems' existence or her personal responsibility for a problem (IDCS Denial),

86

perhaps this may occasionally be the case; marital stability may not always exclude some level of avoidance of relationship issues.

Although results concerning changes in female communication behavior during PREP-WK continue to provide unexpected twists, the current findings for changes in male communication behavior during PREP-WK remain in line with previous research and theory. In general, the current study found that increases in male positive or decreases in male negative communication behaviors were associated with decreases in couples' risk for distress. However, significant effects within these general patterns were only found for increasing male IDCS Communication Skills, decreasing male IDCS Conflict, decreasing male IDCS Withdrawal, decreasing male IDCS Denial, and decreasing male IDCS Negative Affect and only in the sense of decreasing *male* risk for distress. While these results do not come as a surprise, they may suggest to researchers and clinicians which aspects of male communication are the most essential to target during PREP. Interestingly, changes in male communication behaviors were not significantly predictive of female risk for distress. However, replication of this pattern is encouraged before any conclusions are drawn. In the current study, increases in male IDCS Support-Validation were marginally significant in predicting decreased risk for distress in females and this finding may become significant in a larger sample.

In addition to results concerning the general influences of male and female changes in communication behavior during PREP-WK on risk for marital distress, the current investigation replicated Schilling et al.'s (2003) general trend suggesting that PREP-WK communication skill acquisition may be especially important for males conceptualized as at-risk by their relatively low premarital satisfaction. Increasing IDCS Communication Skills, IDCS Problem Solving, or IDCS Positive Affect among males with relatively low premarital

satisfaction significantly decreased longitudinal risk for distress in females. On the contrary, increasing *any* individual positive communication behavior among males with relatively high premarital satisfaction significantly *increased* longitudinal risk for distress in females. These patterns not only replicate those of Schilling et al., but also partially parallel the findings of Halford et al. (2001), which suggest that PREP may be best suited for at-risk couples but potentially detrimental to low-risk couples. Although a small number of other analyses were significant, the current investigation did not find additional patterns to warrant any further interpretations regarding the moderation effects of male or female initial risk for marital distress on the relationships between changes in individual communication behaviors and longitudinal risk for distress in males or females.

While the current study has been able to provide additional information to aid the discussion of unexpected findings reported initially by Schilling et al. (2003) and subsequently by Baucom et al. (in press) regarding female acquisition of PREP communication skills, the current investigation has the same limitations as did Schilling et al.'s investigation of the current dataset. Although these limitations are listed in Schilling et al.'s papers, they are worth revisiting in the current discussion. First, PREP participants likely differ from couples in the general population, and the current results may not generalize to a sample of randomly selected couples from any given community. In particular, couples in the current sample were relatively well educated and white. In general, the need to tailor premarital interventions to diverse groups of individuals in diverse settings is a rising need given the increasing demand for relationship programs and the increasing ability to disseminate programs like PREP on a broad scale. Second, follow-up data collection for the later cohorts had not yet been completed at the time of Schilling et al.'s original investigation. The current dataset has since

been expanded and completed, providing an opportunity to expand the current investigation to a broader sample and provide greater statistical power. Third, neither the Schilling et al. study nor the current study is aided by comparison to a control group. However, Schilling (1999) pointed out that the patterns of communication change in the current PREP-WK sample are comparable to changes in the original PREP study and premarital satisfaction in the PREP-WK sample was maintained at a significantly greater level compared to control groups in other PREP studies. Fourth, the comprehensiveness of assessment instruments used in the current study was somewhat limited. Specifically, Schilling et al. noted that the SCL-90-R is a brief and relatively transparent measurement of psychopathology that may cloud results related to participant psychopathology risk. In addition, the IDCS is a global coding system with relatively low interrater reliability and, in the current study, reliability for positive IDCS communication was lower than reliability for negative IDCS communication. However, Schilling et al. did point out that the replication research by Baucom et al. (in press), which uses a microanalytic coding system, supports the general conclusions from the current dataset. Furthermore, the current investigation may have been strengthened by follow-up assessment with an observational coding system; this would allow detailed examination of observed communication change in relation to longitudinal distress onset. Finally, Schilling et al. advised that results from analysis of the current sample may be limited to PREP-WK. Since the time at which the current treatment outcome study began, PREP has been modified (a description of the most current version of PREP may be found in Stanley, Blumberg, & Markman, 1999), and changes in program content or format may alter findings in future research.

In addition to these shared limitations with the Schilling et al. (2003) study, the current investigation is limited in two ways. First, by breaking down positive and negative composite communication into their component parts, the current study lost predictive power compared to Schilling et al.'s initial investigations. With a larger sample size and additional observational data, other relationships between pre- to post-intervention change in communication behaviors and risk for distress may be supported. However, given the small current sample size, the relationships currently supported may be especially remarkable given the small amount of information with which to test them against null hypotheses. On the other hand, results from the current investigation must be viewed cautiously due to the vast number of statistical analyses performed. For instance, with 18 models testing the effects of change in individual IDCS communication behavior on male or female longitudinal risk for distress, at least one should return significant results due to chance given an alpha of .05. Similarly, given that 108 models testing interactions between initial risk and individual change in communication behavior were performed, at least five to six interactions should be supported by chance. Issues of statistical power and Type I error given the sample size and number of analyses performed were heavily weighed at the onset of the current investigation. The decision not to further sacrifice power ultimately was made in order to provide a reasonable possibility that meaningful results would statistically emerge. Regardless, these issues further argue the need to replicate the current results with a larger sample and perhaps corrected alpha.

Hopefully the current findings can play a role in de-mystifying the unexpected patterns in female communication changes during PREP and bring researchers and clinicians closer to advancing PREP's efficacy in decreasing couples' longitudinal risk for distress. One thing

seems to be clear from these results; the hypothesis that PREP may be increasing female

avoidance of constructive engagement with their husbands does not seem to explain why

increasing female positive communication and/or decreasing specific aspects of female

negative communication consistently increase couples' longitudinal risk for distress. In fact,

the current study finds that, at least in the case of PREP-WK, the unexpected patterns between

female change in communication and risk for distress occur in part *because* PREP-WK is

successful in *increasing* female constructive engagement. In addition, results suggest that

better marital outcomes need not exclude the experience of avoidance and/or denial of couple

problems. Regardless, the exploration of these patterns among PREP couples has only just

begun. There is a need to replicate the current study's findings with a larger, more complete

dataset and, moreover, to explore these patterns in other PREP datasets. Furthermore,

additional theoretical approaches to understanding female communication may need to be

considered to make sense of these unexpected patterns.

Appendix A:

Biographical Data Sheet (BIO)

Before you begin the questionnaires, please tell us a little about yourself. This information, and all information you give us, will be kept strictly confidential.

(Please circle the appropriate answer or fill in the blank.)

What is your Age? _____

How many years of Education have you had? _____

What is your Racial Group?   1. Asian   2. Black   3. Hispanic
          4. Native American   5. White   6. Other _____

How many years have you known each other? _____

If you are now married, how many years have you been married? _____

How many times have you been married? _____

Do/did you and your partner live together before you are/were married?
          1. Yes   2.No

How many children do you have? _____

What is your occupation? _____

Are you employed outside your home?   1. Full Time   2. Part Time
          3. No

What is your yearly income?   1. less than $10,000   2. $10,000 - $24,999
                    3. $25,000 - $49,999   4. 550,000 - $74,999 5. $75,000 - 599.000
                    6.5100,000 - $249,000   7. over 5250,000

What is your Religious Denomination?   1. Baptist   2. Catholic
          3. Episcopalian   4. Fundamentalist   5. Jewish   6. Lutheran
          7. Methodist   8. Presbyterian   9. Other Protestant
          10. None   11. Other _____

How often do you participate in Religious Services?   1. Frequently
          2. Occasionally   3. Seldom   4. Never

Appendix B:
Sample Couple Recruitment Letter

Dear:

This letter has two purposes. First, we would like to offer you our best wishes on your upcoming (recent) wedding. Second, we would like to invite you to participate in a new and exciting weekend program for premarital (newly married) couples in our church. This new program is called PREP, or the "Premarital Relationship Enrichment Program." PREP is designed to help you and your partner learn to communicate more effectively and to address problems more efficiently in your relationship. PREP has been adopted by many churches both in the United States and Europe as a way of enhancing marital relationships.

What is PREP? PREP is a 12-hour weekend workshop that teaches couples effective communication skills, new ways of handling conflict, and ideas for promoting intimacy. The goal of PREP is to help couples build the relationship strengths they have already have and to increase their current and long-term marital satisfaction. Couples come out of PREP with new skills and ideas as well as with an agreed-upon procedure for resolving conflicts in their relationships.

Who is teaching PREP? The PREP program was developed by Dr. Howard Markman, a well-known psychologist at the University of Denver. We are fortunate to have one of Dr. Markman's colleagues in our congregation. Dr. Don Baucom is Professor of Psychology at UNC and an internationally known authority on couple communication and marital therapy. Dr. Baucom is also working with Dr. Chuck Burnett, who lives in Chapel Hill and is the author of The Premarital Inventory (PMI), the most widely-used premarital counseling questionnaire in the country. The PMI is used to help couples explore their attitudes and expectations for marriage. Dr. Burnett recently completed training with Dr. Markman in how to conduct the PREP program. Our first PREP weekend will be led by Drs. Burnett and Baucom and by Revs. Gattis and May. Also, several graduate students in psychology and members of the congregation will assist in the program.

What do we do? The PREP weekend is divided into six blocks, and each one covers different aspects of communication in marriage. During each block, there is a brief presentation and a chance to learn and practice a new communication skill. The presentations take place in a group setting, but your communication practice takes place only between you and your partner. One graduate student or church member will be a consultant for each couple during the practice. These consultants act as coaches to help couples easily learn the new communication skills. The PREP session also will include an evaluation to see how well the program is working to improve communication and problem-solving skills. Therefore, you will be asked to talk with each other and complete several forms both prior to and after the program.

How do we do it? First, sign up! Then, plan to attend the PREP weekend here at University United Methodist Church on Saturday, March 23, from 8:30 am until 5:00 pm, and we'll have one brief meeting (about an hour in length) prior to March 23 (date still to be

93

arranged). Lunch will be served on Saturday, and refreshments will be provided both Saturday and Sunday.

There is no cost for this program. In other settings, each couple often pays several hundred dollars to attend PREP. University United Methodist Church is happy to be able to offer it to all couples who marry in their church. Simply complete and return the form below by March 5, letting us know you will attend.

We will let you know the date of our brief initial meeting, and look forward to seeing you then and on March 23 and 24.

Sincerely,

Bill Gattis   Raegan May   Chuck Burnett   Don Baucom

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