THE PREVENTION OF RELATIONSHIP DISTRESS FOR COUPLES AT RISK

A CONTROLLED EVALUATION WITH NINE-MONTH AND TWO-YEAR FOLLOW-UPS*

Brigit Van Widenfelt, Clemens Hosman, Cas Schaap, and Cees van der Staak**

A preventive intervention was randomly offered to a group of 67 non- to mildly distressed couples who participated in a larger study on relationships. At the 9-month follow-up, couples in which one partner experienced parental divorce demonstrated a significant increase in problem intensity and a trend toward decreased problem solving ability and relational efficacy, whereas couples from intact families of origin showed the opposite. At the 2-year follow-up, no significant differences were found between the two groups. At both follow-ups, participation in the preventive intervention did not appear to have a protective influence on decline in relationship functioning for persons whose parents divorced and their partners.

Given the high rates of marital distress and divorce (Centraal Bureau voor Statistiek, 1988; National Center for Health Statistics, 1990) and the severe consequences of these for partners and children (Bloom, Asher, & White, 1978; Emery, 1982), many professionals have called for preventive interventions (Coie et al., 1993; Markman, Floyd, Stanley, & Storaasli, 1988). However, only a few programs have been evaluated to date and additional research is still needed before larger scale implementation can be justified.

An impressive evaluation of a preventive intervention for couples is a longitudinal study in Denver by Markman and his colleagues (Markman, 1981; Markman, Duncan, Storaasli, & Howes, 1987; Markman, Floyd, Stanley, & Lewis, 1986; Markman et al., 1988; Markman, Renick, Floyd, Stanley, & Clements, 1993; Renick, Blumberg, & Markman, 1992; Stanley, Markman, St. Peters, & Leber, 1995). At 1½- and 3-year follow-ups, intervention couples were found to show less decline in relationship satisfaction compared to controls, who declined significantly more. When control couples were analyzed separately from those who declined the intervention at the 4- and 5-year follow-ups, significant differences between the intervention and decline groups were found on relationship satisfaction, although differences were no longer found between control and intervention couples. Further, at 3 years, other measures of relationship quality reflected that intervention couples were doing better than controls. By the 4- and 5-year follow-ups, no further significant differences were reported on self-report measures. In addition to self-report measures, differences were found between groups on observational measures. At postassessment and many of the early fol-

low-ups (through 4 years), intervention couples were reported to have more positive and less negative observed communication than controls (and sometimes intervention decliners). Lastly, at the 1½-year and 3-year follow-ups, significantly greater rates of break up prior to marriage and divorce were reported in the control versus the intervention groups. At the 4- and 5-year follow-ups, the difference between separation and divorce between groups was not significant.

Although the reports on the Denver study appear promising, it has several important limitations. First, generalizability is limited because of the relatively small sample size that was composed of primarily White middle-class Americans. Further, randomization was compromised due to a large percentage of couples declining participation in the intervention, thereby leaving the most dedicated couples to participate in the intervention. In addition, the study lacked an attention-only control condition, thereby limiting the ability to determine whether it was the Prevention and Relationship Enhancement Program (PREP) in particular or some general attention factor that produced the reported effects. Lastly, the number of significant effects were reported to have gradually attenuated after the 5-year follow-up (Stanley et al., 1995), highlighting the problem of attrition and possibly the need for booster sessions. For all these reasons, replication is needed in general, as well as across cultures and groups. The present study was similar in design and intervention to that of the Denver study. As in the Denver study, in an attempt to reduce selection bias, couples were not informed of the intervention during the recruitment process.

The present study differs from the Denver study in two important ways. First, in terms of culture and age (years together), the population of the current study is Dutch (vs. American) and is somewhat older (longer together) than the Denver sample. Second, the present investigation focuses primarily on couples at risk for relationship distress and divorce. The issue of whether to focus on general groups of couples or specific high risk populations of couples when offering preventive interventions to couples has not yet been well researched and remains an important question in prevention science. The literature on marital distress and divorce offers various possibilities for selecting high-risk groups from which to evaluate prevention programs (for an overview, see Van Widenfelt, Markman, Guernsey, Behrens, & Hosman, in press). Thus, in contrast with the Denver study, which focused on the general population, the current study focused on a high-risk group: those who had experienced parental divorce.

The choice of parental divorce as a risk indicator among other variables for marital distress was based primarily on

*We gratefully acknowledge the many students at the University of Nijmegen who assisted in carrying out the project. We also thank the anonymous reviewers for their extremely helpful comments on earlier drafts of this manuscript.

**Brigit Van Widenfelt is a Postdoctoral Research Associate in the Department of Psychology, University of North Carolina, Davie Hall, CB #3270, Chapel Hill, NC 27599-3270 and former Clinical Researcher in the Department of Clinical Psychology, University of Nijmegen, The Netherlands. Clemens Hosman is a Professor, Cas Schaap is an Associate Professor, and Cees van der Staak is a Professor in the Department of Clinical Psychology, University of Nijmegen, The Netherlands.

Key Words: couples, marital distress, parental divorce, prevention, risk.

an important study conducted in the Netherlands by Kooy (1984), who examined 12 variables and found parental marital quality and the mental health of spouses to be the two variables most predictive of marital quality. Reports of demographic and clinical data have also drawn a link between parental marriage and the marriages of offspring, showing higher rates of relationship distress, break up, and divorce in offspring with divorced parents in the U.S. (e.g., Glenn & Kramer, 1987; Pope & Mueller, 1976; Wallerstein & Blakeslee, 1989), as well as in Europe (Chase Lansdale, Cherlin, & Kiernan, 1995; De Graaf, 1991). More recently, Amato and Keith (1991), in a meta-analysis of the effects of parental divorce on the well-being of adult offspring, concluded that a significantly negative, but relatively weak, effect was present between parental divorce and lower relationship quality and separation/divorce in offspring. However, even if the effect is small, these couples are still at increased risk compared to the general population.

The current study was aimed at evaluating the effect of a preventive intervention designed to lower the risk for eventual relationship distress and divorce for heterosexual couples who are not yet experiencing serious relationship difficulties but are expected to run a higher risk for such based on their family background. The preventive intervention is primarily based on PREP (Markman, Stanley, & Blumberg, 1989) and was adapted for the Dutch population at the University of Nijmegen (Schaap & Van Widenfelt, 1990).

HYPOTHESES

Couples in which one partner experienced parental divorce were compared with couples in which both partners were from intact families of origin. It was hypothesized that partners who had experienced parental divorce were at increased risk for relationship distress by not having learned the necessary skills for maintaining relationship quality and stability from their parents, thereby putting them and their partners at risk for relationship distress and eventual break up. By learning the necessary skills for maintaining a healthy relationship through participation in a preventive intervention, partners were expected to be more equipped to prevent relationship discord and dissolution.

H1. Control couples will show a greater decline in relationship satisfaction, lower relational efficacy, poorer conflict management skills, and higher rates of break up at fol-

low-up than couples who participate in the intervention.

H2. These rates of decline and break up will be strongest for couples in which one partner is identified as having a high risk family of origin (divorced parents) and who do not participate in the intervention.

METHOD

Recruitment

Couples were recruited through media advertisements, brochures, and posters for participation in a longitudinal study on family of origin, communication, and relationship development. Participants were not told about the possibility of being offered an intervention during recruitment. To take part in the study, partners were required to have had a commitment to their relationship of at least 1 year and have plans for a future together. To reward participants for their participation, a popular book on relationships, written by one of the co-authors, was given to them upon completion of the first assessment, which took approximately 3 hours. The book was a compilation of demographic information, research, and clinical experience with couples written for a lay audience. Couples in all conditions were given the book.

Procedure

The first assessment began with partners completing an informed consent form, at which time the interviewer explained the procedure of the study and the possible risks involved, as well as answered any questions the participants had at that time. Participants were also informed about the longitudinal plans of the study. Partners separately completed a set of questionnaires and were videotaped during two discussions (for more details, see Van Widenfelt, 1995). Nine months (FU I) and 2 years (FU II) later, couples were sent a set of questionnaires to be filled in separately and returned by mail.

Participants

Sixty seven of the 89 couples who completed the first assessment were selected for participation in the prevention study. The 22 couples who were excluded were severely distressed based on their scores on the Maudsley Marital Questionnaire (MMQ) relationship satisfaction subscale (see Measures) and/or because they asked for an intervention. The 67 non- to mildly distressed couples

who participated came from two medium sized cities in the Netherlands. Forty-three percent of the couples were married, 37% were cohabiting, and 19% lived apart. The mean number of years together was 6 ($SD = 6$, range = 1-30). Thirty-four percent of the couples had children. The mean age for males was 36 ($SD = 10$, range = 20-63); the mean age for females was 33 ($SD = 8$, range = 19-53). Fifty-one percent of the males and 52% of the women had a religious affiliation; the rest of the participants had no religious affiliation. Twenty-eight percent of the males and 21% of the females had a university education.

Assignment to Intervention, Control, and Decline Conditions

With the aim that the control and intervention conditions would be roughly the same size and with the expectation of decliners, more than half of the 67 couples (60%, $n = 40$) were randomly offered the intervention. Of the 40 couples who were offered the preventive intervention, 60% completed the intervention ($n = 24$), 35% declined participation in the intervention ($n = 14$), and 5% dropped out of the intervention by session two ($n = 2$). This rate of participation is somewhat higher than the Denver study, in which a similar recruitment strategy was used and 39% of the couples who were originally offered the intervention completed it (Markman et al., 1988).

Differences on Demographic Variables at Time 1

On demographic variables at Time 1 for both males and females, intervention, control, and decline couples did not differ significantly on age, marital status (married, living together, or living apart), or number of children. Non- and mildly distressed couples were evenly distributed across the three conditions.

The number of years together, however, was significantly different between conditions at Time 1 ($F[2, 66] = 9.06$, $p < .001$). The mean number of years together for intervention, control, and decline couples was 9.1, 6.3, and 3.9, respectively. Post hoc analyses revealed that the two extreme groups differed significantly (Tukey). Number of years together was not found to be significantly related to any self-report relationship variables.

Because in the Netherlands many couples do not marry nor plan to, yet are nevertheless highly committed to each other, nonmarried couples were included in the present study if they met the

criteria of having "plans for a future together." Because this situation differs from that in the United States, additional analyses were done that compared couples on marital status. The groups differed significantly in age and number of years together, but did not differ significantly on other demographic variables or self-report relationship variables.

Measures

Personal History Questionnaire (PHQ). The PHQ (Van Widenfelt, Schaap, & Verdellen, 1990) was used to gather relevant background information. A range of questions was included about the participant, including occupation, education, income, and religion. Participants also provided information about their family of origin (parental divorce, parental psychiatric history, and parental death). Finally, participants were asked to rate their parents' marital quality on a scale of 1-7 during their childhood (through age 12) and during their adolescence (age 12-18), and to rate on a 1-5 scale the quality of their relationship with their parents during childhood.

Maudsley Marital Questionnaire (MMQ). The MMQ (Arrindell, Boelens, & Lambert, 1983; Cobb, McDonald, Marks, & Stern, 1980) is made up of three subscales: relationship, sexual, and general life satisfaction. Arrindell et al. (1983) have validated the questionnaire for the Dutch population. In the current study, Cronbach's alphas for the relationship satisfaction subscale were .93 for both males and females; for the sexual satisfaction subscale, .86 and .79 for males and females, respectively; and for the general life satisfaction subscale .57 and .66 for males and females, respectively ($N = 89$ males and 89 females).

Conflict Tactics Scale (CTS). The CTS (Straus, 1979) measures three forms of handling relationship conflict. For the current analyses, the verbal and physical aggression subscales (reported by self) were used. The questionnaire has a long history of use and has been reported to be reliable and valid. It was translated into Dutch for use in the current study. Cronbach's alphas in the present study for the verbal aggression scale were .72 and .82 for males and females, respectively ($N = 89$) and .58 and .78 for physical aggression for males and females, respectively ($N = 89$).

Marital Agendas Protocol (MAP). The MAP (Notarius & Vanzetti, 1983) consists of four parts. Two parts were used in the present study to assess problem intensity and relational efficacy. For problem intensity, participants were asked to rate 12 problem areas on a scale of 0 (*not at all a problem*) to 100 (*a se-*

vere problem). For assessing relational efficacy, participants were asked to rate expectancies—how many out of 10 discussions for 12 problem areas he or she believes the partners resolve to their mutual satisfaction. In a series of studies, the measure has been found to be reliable and valid. The measure was translated into Dutch for use in the present study (Van Widenfelt & Schaap, 1990). In the current study, Cronbach's alphas for relational efficacy were .82 and .81 for males and females ($N = 89$), respectively, and for problem intensity, .75 and .80 for males and females, respectively ($N = 89$).

Interactional Problem Solving Inventory (IPSI). The IPSI (Lange, 1983; Lange, Markus, Hageman, & Hanewald, 1991), a 17-item Dutch scale, was used to measure problem solving ability. Each item is a statement about the couple's ability to solve problems, in which a choice of five responses is provided, ranging from *very applicable to us* to *not at all*. A sample item is: "During a fight we often end up in a discussion over who is right." The IPSI differs not only in format from the MAP, but also in its focus on reports of behavior in regard to problem solving and arguing in general, rather than intensity of and expectancies about specific problem areas. The reliability and validity of the IPSI are reported to be satisfactory. For the present sample, Cronbach's alphas for males and females were .92 and .93, respectively ($N = 89$).

Symptom Check List (SCL-90). The SCL-90 (Derogatis, 1977) is the most widely used instrument for measuring psychological adjustment or health symptoms. It has excellent psychometric properties. The SCL-90 was translated and validated for the Dutch population by Arrindell and Ettema (1986). In the present sample, the total score of the SCL proved to be very reliable; Cronbach's alphas for males and females were .97 and .98, respectively ($N = 89$).

Family Environment Scale (FES). The FES (Moos & Moos, 1981) is a scale made up of 99 items about how a family member experiences and views his or her family. There are 11 items for each of nine categories. Each item is answered with *yes* or *no*. The scale has been translated for the Dutch population by de Coole and Jansma (1983), who have also worked on the norms, reliability, and validity of the scale in the Netherlands, with mixed results. In the present study, instructions were given to each partner to rate his or her family of origin during childhood (through age 18) using the scale. For the current study, the conflict subscale was used, which consists of 11 items, such as: "We fight a lot in our fam-

ily," "Family members often criticize each other," and "Family members sometimes hit each other." For the conflict subscale, KR 20 = .59 and .63 for males and females, respectively ($n = 56$).

Differences on Self-Report Measures at Time 1

At Time 1, there were no significant differences between the three conditions (intervention, control, and decline) or between males and females on five of the seven self-report relationship variables: relationship (dis)satisfaction, problem solving ability, problem intensity, relational efficacy, and physical aggression. The exceptions were for sexual (dis)satisfaction and verbal aggression. Analyses revealed a significant difference between conditions on sexual (dis)satisfaction ($F[2, 66] = 3.20, p = .05$). A follow-up test, by means of a contrast comparing the intervention condition with the other two conditions, showed the decline condition had significantly lower scores on sexual (dis)satisfaction (thus reported to be more sexually satisfied) than the intervention condition. For verbal aggression, analyses revealed a gender difference ($F[1, 66] = 30.31, p < .001$), with females demonstrating significantly higher scores than males (see Table 1). For individual variables, there were no significant differences in general life (dis)satisfaction between conditions nor between males and females. There was a significant difference between conditions on psychological symptoms ($F[2, 66] = 5.37, p = .007$); the follow-up test using a contrast revealed the decline condition to be significantly less healthy than the intervention condition.

No significant differences were found between the three conditions on retrospective reports of seven family background variables: parental divorce, parental death, perceived parental psychopathology, perceived parental marital quality during childhood and adolescence, perceived quality of relationship with parents during childhood, and perceived level of conflict in family during childhood.

Structure of the Intervention

The preventive intervention was based on PREP (Markman et al., 1989) with some adaptations for the Dutch population, as well as an addition of a family of origin focused session. The intervention consisted of six 2½ hour sessions. The foci of the sessions were as follows: (a) speaking and listening skills, (b) expressing negative feelings and managing conflict, (c) problem-solving and hidden agendas, (d) family of origin, (e) expectations and relationship beliefs,

and (f) sexuality and making a ground rules contract. Each couple worked with its own personal trainer throughout the six sessions. At the beginning of each session, participants received instructions in a group setting and then practiced the skills alone with a personal trainer. Couples received continuous feedback from trainers and were required to practice at home as well.

Trainers were master's level clinical psychology students with some prior clinical experience. Trainers went through a training program of 60 hours and were supervised throughout the duration of the program implementation. They were instructed to closely follow a detailed manual (Schaap & Van Widenfelt, 1990).

Intervention Drop-Outs

Two couples dropped out of the intervention by session two. The reason given by one couple was that they had a conflict before the second session and, as a result, did not show up for the session, nor call. When they were contacted after session two, they had decided it was better to not continue during such a difficult period. The second couple stopped because the program conflicted with their religious beliefs. They said they were "spoken to" through a bible verse to no longer participate in a secular program. Although additional bible verses in support of the program (Markman, Blumberg, & Stanley, 1991) were presented to them, as well as arguments for the importance of the program in the Christian community, they were not persuaded to continue. They also passingly shared that they had an argument after the first session, which perhaps also influenced their decision to stop participating.

Follow-Up I (FU I)

Couples were assessed at approximately 9 months after Time 1 (approximately 6 months after the intervention). Questionnaires were sent to all 67 couples. At FU I, 12 (18%) couples refused to participate in the assessment. Data were collected on 55 (82%) of the 67 couples. Two couples (3%) had broken up; thus, questionnaires were received from 53 intact couples (79%).

Booster Session

One year after Time 1 (approximately 9 months following the completion of the intervention), intervention couples were invited to participate in a booster session. A trainer reviewed the original six sessions of the intervention with the couple and asked what the partners

needed help with, as well as if there were aspects of their contract that they wanted to renew. Twenty of the original 24 intervention couples (83%) participated in the booster session.

Follow-Up II (FU II)

Couples were again assessed 2 years after Time 1 (approximately 1 year and 9 months after completing the intervention). Couples were sent a letter to request their participation; 38 of the original 67 couples responded (57%). Three additional couples had broken up by then, resulting in the completion of questionnaires by 35 (52%) of the 67 original couples. Thus, at FU II, 5 couples had broken up (7%) and 27 couples (40%) refused further participation in the study. Couples who did not complete the FU I or FU II assessment were compared with those who completed the follow-up assessments. The two groups did not differ on demographic variables; however, on self-report relationship variables, *t* tests revealed that there was a pattern for noncompleters to be significantly more negative in their evaluations of their relationship functioning. Female noncompleters reported more relationship distress, more sexual dissatisfaction, and more verbal aggression than female completers; male noncompleters reported greater problem intensity than male completers.

RESULTS

Participation in the Intervention and Overall Functioning for All Couples at FU I

At FU I, 2 couples (8%) who participated in the intervention had broken up; none in the control condition had. Interestingly, the 2 couples that broke up did so within weeks after completing the program. One woman stated: "We realized just *how* bad our communication actually was." The second woman commented that the intervention was her last hope that things would change and she finally accepted that they would not.

Repeated measures ANOVAs (2 x 3 x 2 factorial design) were conducted on seven self-report relationship variables. Planned comparisons were conducted that contrasted the intervention condition with the control and decline conditions. Gender (male and female) and Time (1 and 2) were within-subject factors, and Condition (intervention, control, and decline) was a between-subject factor. Gender was included in the design to account for the fact that each

couple yielded two scores, one from the male and one from the female. Because both scores are (statistically and conceptually) interdependent, the couple is regarded as the unit of analysis. Although gender is not reported on, the reader may be interested to know that few significant gender differences were found.

Table 1 presents means and standard deviations on the dependent variables for males and females in the three conditions at Time 1 and Time 2 (FUI); Table 2 presents the results of the ANOVAs with planned comparisons. Overall, the results did not reveal the predicted interaction between Condition and Time on relationship variables that would have indicated a difference between the conditions in decline of relationship quality over time. Only for problem intensity was there an interaction between Condition and Time when the intervention and control condition were compared: Problem intensity increased in the intervention condition and decreased in the control condition, which runs contrary to what was expected. There were several main effects. Relationship (dis)satisfaction and sexual (dis)satisfaction increased over time; couples became more distressed over time. There was also a main effect for sexual (dis)satisfaction between the intervention and decline condition, with the couples who were assigned to the intervention condition reporting higher rates of sexual (dis)satisfaction than couples that refused the intervention.

For individual well-being, the pattern of data appeared consistent with relationship well-being: Planned comparisons revealed a significant difference between intervention and control couples on psychological symptoms (SCL-90), with intervention couples reporting an increase in psychological symptoms and control couples reporting a decrease. Intervention and decline couples also appeared to differ significantly on general life (dis)satisfaction, with intervention couples demonstrating an increase in (dis)satisfaction with life in general and decline couples showing a decrease in (dis)satisfaction.

Participation in the Intervention and Overall Functioning of Couples With Parental Divorce at FU I

Next, another factor was added to the design, Parental Divorce, resulting in a 2 x 2 x 3 x 2 factorial design. Couples for which one partner experienced parental divorce were compared with couples from intact families of origin. Again, repeated measures ANOVAs were

Table 1
Means and Standard Deviations of Variables by Condition, Gender, and Time (1 and 2)

Variable	Males				Females			
	Time 1 (n = 67)		Time 2 (n = 52)		Time 1 (n = 67)		Time 2 (n = 52)	
	M	SD	M	SD	M	SD	M	SD
Intervention condition								
Relationship (dis)satisfaction	13.1	10.8	17.7	15.3	13.1	10.3	16.3	14.6
Sexual (dis)satisfaction	10.4	9.5	13.9	9.8	11.6	6.9	14.1	10.2
Problem-solving ability	66.5	10.3	66.0	12.2	68.8	10.3	66.9	13.0
Problem intensity	132.5	81.9	180.8	149.2	156.6	80.3	187.4	150.0
Relational efficacy	103.0	11.8	101.6	17.5	102.2	9.4	101.7	12.3
Verbal aggression	11.8	4.2	13.1	5.9	15.4	6.7	15.1	7.5
Physical aggression	12.0	1.6	11.7	1.0	12.4	2.1	12.3	3.1
Psychological symptoms	118.6	24.0	124.2	36.5	115.9	16.8	121.9	19.1
General life (dis)satisfaction	9.2	5.1	10.4	7.0	9.2	5.3	13.0	6.5
Control condition								
Relationship (dis)satisfaction	11.7	8.7	15.1	12.1	15.0	11.7	15.3	13.8
Sexual (dis)satisfaction	10.2	7.8	11.3	9.0	10.0	7.0	11.4	8.6
Problem-solving ability	68.7	8.6	69.1	9.3	68.8	8.8	68.9	9.2
Problem intensity	176.7	111.1	132.4	103.3	191.4	153.4	170.0	145.4
Relational efficacy	98.4	15.6	100.2	23.2	101.4	13.5	96.4	25.1
Verbal aggression	11.4	5.7	12.4	5.8	16.5	8.4	16.0	8.9
Physical aggression	12.6	2.3	12.5	2.6	15.0	6.5	13.8	5.0
Psychological symptoms	114.3	19.9	114.4	18.5	127.6	29.3	119.4	24.9
General life (dis)satisfaction	7.9	3.0	9.2	5.4	9.6	3.8	9.7	4.4
Decline condition								
Relationship (dis)satisfaction	7.9	5.9	10.1	6.8	9.0	5.1	12.2	7.0
Sexual (dis)satisfaction	5.2	4.7	6.2	4.2	4.6	4.2	6.2	5.9
Problem-solving ability	67.8	11.2	66.7	8.4	73.7	6.3	72.8	6.6
Problem intensity	200.0	136.0	178.3	148.8	175.8	131.8	158.3	85.6
Relational efficacy	100.7	12.0	97.6	17.7	102.4	10.0	101.0	12.1
Verbal aggression	11.7	2.0	13.4	4.4	15.7	3.6	16.8	4.0
Physical aggression	13.0	2.6	11.4	0.8	11.6	1.2	12.5	2.9
Psychological symptoms	120.1	19.9	126.4	32.9	144.8	40.9	135.8	46.8
General life (dis)satisfaction	10.9	4.7	10.1	3.7	10.1	4.1	9.6	6.2

Table 2
Results of the Repeated Measures ANOVAs With Planned Comparisons: Main Effects for Condition and Time (1 and 2), and Interactions Between Condition Comparisons and Time

	Time <i>F</i> (1, 45)	Intervention vs. Control <i>F</i> (1, 45)	Intervention vs. Decline <i>F</i> (1, 45)	Time x Intervention vs. Control <i>F</i> (1, 45)	Time x Intervention vs. Decline <i>F</i> (1, 45)
Relationship (dis)satisfaction	7.70***	0.06	1.61	0.94	0.21
Sexual (dis)satisfaction	6.33**	0.61	5.63**	1.24	0.73
Problem-solving ability	0.67	0.45	0.84	0.67	0.79
Problem intensity	0.10	0.01	0.10	6.54**	2.67
Relational efficacy	1.04	0.49	0.08	0.00	0.03
Verbal aggression	2.54*	0.02	0.06	0.06	0.74
Physical aggression	2.15	2.77	0.00	0.94	0.21
Psychological symptoms	0.00	0.04	2.00	4.76**	1.54
General life (dis)satisfaction	3.17*	1.43	0.02	2.54	4.53**

* $p < .10$. ** $p < .05$. *** $p < .001$.

conducted with planned comparisons, contrasting the intervention with the control and decline conditions. Table 3 presents the means and standard deviations for the groups and conditions and Table 4 presents the F values for the relevant main and interaction effects in the factorial design. Inspection of Table 4 indicates that there were several significant differences and trends for the interaction of parental divorce and time, indicating that decline of relationship quality followed a different pattern over time for the two groups. Problem intensity increased over time for couples with a

parental divorce background, and decreased for those from an intact family background, which is in support of the hypothesis. In addition, there was a trend for problem solving ability and relational efficacy to decrease over time for couples with a parental divorce background, whereas couples from an intact family background increased. Furthermore, symptoms on the SCL-90 significantly decreased over time for couples with an intact family background and increased for those with a parental divorce background. The Condition factor, however, yielded no significant results. Thus,

the intervention did not appear to have had any protective influence in this time frame, in view of the lack of a significant interaction among Time, Condition, and Parental Divorce.

Participation in the Intervention and Overall Functioning for All Couples at FU II

By FU II, 5 of the original 67 couples (8%) had broken up (3 intervention couples [13%] and 2 control couples [7%]). Note that due to the decreased sample

Table 3
Means and Standard Deviations of Self-Report Relationship Variables for Intervention, Control, and Decline Couples With and Without Parental Divorce at Time 1 and Time 2 Reported by Male and Female Partners

Variable	With Parental Divorce				Without Parental Divorce			
	Time 1		Time 2		Time 1		Time 2	
	M	SD	M	SD	M	SD	M	SD
Intervention condition								
Relationship (dis)satisfaction	14.5	11.1	20.0	19.0	11.9	11.1	16.0	12.5
	12.3	8.3	15.5	13.5	13.7	12.0	16.9	16.1
Sexual (dis)satisfaction	10.8	9.6	16.6	10.2	10.1	9.9	11.8	9.3
	12.3	6.8	14.3	8.9	11.0	7.3	14.0	11.6
Problem-solving ability	67.6	6.6	65.6	11.8	65.6	12.8	66.3	13.0
	68.6	12.8	67.8	12.8	68.9	8.5	66.1	13.7
Problem intensity	115.6	68.6	208.3	179.0	147.6	93.1	156.0	120.9
	162.7	91.3	207.8	175.7	151.2	73.5	169.0	129.5
Relational efficacy	105.2	8.2	98.1	21.5	101.0	14.4	102.8	13.6
	102.9	12.9	101.4	15.0	101.6	5.3	102.0	10.0
Verbal aggression	11.9	2.0	13.0	5.1	11.8	5.5	13.2	6.7
	16.3	7.7	15.9	8.5	14.8	6.1	14.4	7.0
Physical aggression	12.4	1.8	11.7	0.8	11.7	1.4	11.6	1.1
	12.1	1.2	12.6	3.8	12.7	2.7	12.5	2.7
Psychological symptoms	117.5	22.5	134.3	50.7	119.5	26.3	116.2	18.8
	113.6	15.6	123.4	21.4	117.7	18.4	120.7	18.1
General life (dis)satisfaction	8.8	3.0	9.3	8.5	9.6	6.5	11.3	5.8
	10.6	7.2	14.4	9.1	8.1	3.0	11.8	3.4
Control condition								
Relationship (dis)satisfaction	10.6	7.3	15.8	13.4	12.6	9.6	14.7	11.6
	15.1	11.5	17.3	11.4	14.8	12.4	13.8	15.7
Sexual (dis)satisfaction	10.8	6.6	12.1	8.9	9.7	8.8	10.7	9.5
	10.6	5.9	13.4	9.1	9.5	7.9	9.9	8.3
Problem-solving ability	71.8	5.3	69.0	8.2	66.3	10.1	69.3	10.4
	69.9	10.4	67.1	10.1	68.0	7.8	70.2	8.8
Problem intensity	139.0	84.7	130.0	113.8	205.0	123.3	134.3	99.9
	147.1	128.1	145.1	130.7	224.6	167.4	188.8	158.5
Relational efficacy	101.0	16.2	90.2	24.1	96.7	15.7	100.8	12.7
Decline condition								
Verbal aggression	9.7	4.1	11.7	5.4	12.8	6.5	13.0	6.3
	14.7	8.4	14.2	8.8	17.9	8.5	17.3	9.2
Physical aggression	12.8	2.5	13.1	3.0	12.4	2.3	12.1	2.3
	13.5	3.6	12.3	2.8	16.1	8.0	14.9	6.0
Psychological symptoms	106.7	14.4	104.8	12.1	120.1	22.3	121.6	19.6
	117.4	19.8	112.6	11.8	135.3	33.6	124.5	30.9
General life (dis)satisfaction	7.8	1.5	10.1	5.5	7.9	3.8	8.6	5.4
	9.3	3.1	10.6	3.7	9.8	4.4	9.1	4.9
Decline condition								
Relationship (dis)satisfaction	7.6	7.8	8.6	7.4	8.3	3.2	12.0	6.6
	7.2	4.1	12.0	8.0	11.3	5.9	12.5	6.8
Sexual (dis)satisfaction	6.0	6.3	6.4	5.3	4.3	1.7	6.0	2.9
	5.4	5.0	6.6	7.8	3.5	3.1	5.8	3.2
Problem-solving ability	73.6	9.8	70.8	7.7	60.5	8.9	61.5	6.6
	75.4	8.1	73.8	7.0	71.5	2.6	71.5	6.8
Problem intensity	141.0	90.6	155.0	142.9	273.8	159.1	207.5	172.7
	137.4	76.1	160.0	94.8	223.8	181.9	156.3	86.9
Relational efficacy	104.5	10.0	99.9	22.2	96.0	14.1	94.8	12.6
	106.8	7.2	104.6	8.7	96.9	11.1	96.4	15.4
Verbal aggression	11.2	2.2	12.0	4.0	12.2	1.7	15.3	3.4
						4.0	18.8	9.0
Physical aggression						1.0	11.8	1.0

Table 4
Results of the Repeated Measures ANOVAs With Planned Comparisons: Main Effects for Parental Divorce (Time 1 and 2) and Interactions Between Parental Divorce and the Other Factors (Condition Comparisons and Time)

	Parental Divorce <i>F</i> (1, 42)	Parental Divorce x Intervention vs. Control <i>F</i> (1, 42)	Parental Divorce x Intervention vs. Decline <i>F</i> (1, 42)	Parental Divorce x Time <i>F</i> (1, 42)	Parental Divorce x Time x Intervention vs. Control <i>F</i> (1, 42)	Parental Divorce x Time x Intervention vs. Decline <i>F</i> (1, 42)
Relationship (dis)satisfaction	0.00	0.00	0.13	0.47	0.45	0.00
Sexual (dis)satisfaction	0.21	0.01	0.04	0.10	0.01	0.41
Problem-solving ability	1.33	0.00	0.84	3.35*	2.59	0.35
Problem intensity	0.86	0.88	0.86	5.49**	0.01	0.16
Relational efficacy	0.45	0.00	0.60	3.56*	0.64	0.10
Verbal aggression	0.75	0.93	0.51	0.03	0.39	0.33
Physical aggression	0.35	0.67	0.09	1.35	0.13	2.52
Psychological symptoms	1.87	1.99	1.37	6.39**	1.24	0.17
General life (dis)satisfaction	1.17	0.02	0.44	0.02	1.55	0.00

* $p < .10$. ** $p < .05$.

size at FU II ($n = 35$), and especially in the decline condition ($n = 6$), the intervention condition was compared with the control condition only and the decline condition was dropped out of the analyses.

Repeated measures ANOVAs were conducted on nine self-report variables, resulting in a $2 \times 2 \times 2$ factorial design. Again, Gender (male and female) and Time (1 and 3) were within-subject factors and Condition (intervention and control) was a between-subject factor.

Results revealed no statistically significant changes over time between those who participated in the intervention and those who did not on all variables at FU II. Thus, the hypothesis was not confirmed. A main effect for Time was found for general life (dis)satisfaction, problem solving ability, and physical aggression. Problem solving ability increased and physical aggression decreased, whereas dissatisfaction with life in general increased over time for all couples, regardless of condition. See Tables 5 and 6.

Table 5
Means and Standard Deviations of Variables by Condition, Gender, and Time

Variable	Time 1		Time 3	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Intervention condition				
Male partners				
Relationship (dis)satisfaction	12.2	11.4	13.8	13.0
Sexual (dis)satisfaction	8.8	9.5	9.2	8.6
Problem-solving ability	66.7	9.9	68.5	11.1
Problem intensity	121.6	79.8	151.4	141.1
Relational efficacy	103.7	12.9	104.9	15.0
Verbal aggression	12.2	4.5	12.5	5.1
Physical aggression	11.8	1.4	11.8	1.2
Psychological symptoms	119.1	27.1	12.6	32.9
General life (dis)satisfaction	8.7	5.1	10.6	6.3
Female partners				
Relationship (dis)satisfaction	11.7	8.6	15.3	11.4
Sexual (dis)satisfaction	9.7	5.6	13.1	8.8
Problem-solving ability	68.6	9.8	70.8	8.6
Problem intensity	157.8	82.6	125.1	109.9
Relational efficacy	102.0	10.3	102.5	15.8
Verbal aggression	14.2	5.8	12.6	4.9
Physical aggression	12.1	2.2	11.7	1.9
Psychological symptoms	114.3	17.5	114.2	22.3
General life (dis)satisfaction	9.0	5.7	11.5	5.7
Control condition				
Male partners				
Relationship (dis)satisfaction	10.3	7.3	12.7	10.3
Sexual (dis)satisfaction	8.5	7.0	9.7	5.1
Problem-solving ability	67.3	9.1	68.1	7.3
Problem intensity	163.4	115.0	153.5	137.6
Relational efficacy	99.9	14.2	97.4	16.9
Verbal aggression	10.4	3.2	11.6	5.0
Physical aggression	12.6	2.5	11.8	1.3
Psychological symptoms	115.1	21.8	112.6	21.0
General life (dis)satisfaction	7.5	3.5	10.2	5.1
Female partners				
Relationship (dis)satisfaction	11.1	9.6	12.0	9.6
Sexual (dis)satisfaction	6.7	4.8	8.2	5.4
Problem-solving ability	70.6	8.0	71.5	8.2
Problem intensity	160.2	121.4	102.8	89.9
Relational efficacy	101.9	11.1	103.9	15.2
Verbal aggression	14.8	6.5	14.7	6.7
Physical aggression	13.2	4.9	12.0	1.6
Psychological symptoms	126.5	25.2	118.5	18.0
General life (dis)satisfaction	9.0	4.4	9.6	4.8

Participation in the Intervention and Overall Functioning for Couples With Parental Divorce at FU II

Next, another factor, Parental Divorce, was added to the design, resulting in a $2 \times 2 \times 2 \times 2$ factorial design. Couples in which one partner had experienced parental divorce were compared with couples from intact families of origin. Results reveal no statistically significant differences between intervention and control couples, nor between parental divorce and intact family couples from Time 1 to Time 3 (FU II) across the same set of nine self-report variables. There were no statistically significant interaction effects. Thus, the hypothesis was not confirmed.

DISCUSSION

This study is important in that it is the first report of an evaluation of a preventive intervention for couples with a risk group focus. The study also offers cross-cultural data on the implementation and evaluation of a Dutch version of the PREP program. In the present study, the effects of the preventive intervention were evaluated at 9-month and 2-year follow-ups. Although it is too soon to draw definite conclusions (less than 2 years after participation in the program), sev-

Table 6
Results of the Repeated Measures ANOVAs: Main Effects for Condition and Time (Time 1, 3)
and Interaction Between Condition and Time

	Time F(1, 27)	Condition F(1, 27)	Time x Condition F(1, 27)
Relationship (dis)satisfaction	0.12	0.68	0.43
Sexual (dis)satisfaction	0.68	0.87	0.45
Problem-solving ability	5.21**	1.51	0.22
Problem intensity	1.66	1.10	0.00
Relational efficacy	0.38	0.02	0.18
Verbal aggression	1.30	0.16	0.73
Physical aggression	5.49**	0.39	1.61
Psychological symptoms	0.39	0.05	0.17
General life (dis)satisfaction	4.62**	0.73	0.00

** $p < .05$.

eral preliminary considerations are identified.

Overall, couples in the intervention condition did not differ significantly at FU I or FU II from the control and decline conditions on self-report variables. Thus, the couples who participated in the intervention did not rate their relationship more positively at FU I than control and decline couples. In fact, they appeared more negative. For example, they reported higher ratings of problem intensity than control couples over time. Perhaps participation in the intervention increased awareness of relationship problems. A required aspect of each session of the intervention was to find a problem to discuss during the session. This approach may have sensitized partners to relationship difficulties, leading to more negative evaluations. Not only did intervention couples rate their relationships more negatively at follow-up, reports of individual well-being showed a similar pattern, that is, intervention couples reported a greater number of negative psychological symptoms than controls and higher dissatisfaction with life in general than decline couples at FU I.

The increase in negative evaluations does not necessarily need to be viewed as a negative effect; it may even be positive if it reflects open expression of negative aspects of relationship functioning. Gottman and Krokoff (1989) found that denial at Time 1 was predictive of marital distress several years later, whereas more open expression of anger was related to less distress. It is interesting to note in the present data that, although problem intensity increased for intervention couples, relational efficacy did not decrease. Nonetheless, the pattern of increases in negative evaluations by intervention couples may have important implications for "happy" couples to consider before participating in a preventive intervention.

The results of the self-report data did not indicate any short-term benefits for couples who participated in the inter-

vention. In contrast to the present findings, the Denver team (Markman et al., 1986, 1987, 1988, 1993) has found some indications of positive short-term and longer-term benefits for intervention couples (vs. control but less so for decline) in their follow-ups on self-report data as well as on observational data. Even though these findings are relatively few and are reported to gradually attenuate over time (Stanley et al., 1995), they do reflect the importance of collecting longitudinal data. Hahlweg and his colleagues also evaluated a version of PREP in Germany and reported few differences on self-report variables, but they did find differences in observed communication behavior, with intervention couples demonstrating more positive communication behavior than controls (Hahlweg, Thurmair, Eckert, Engel, & Markman, 1992). This finding indicates that new skills were learned by intervention participants that perhaps did not influence relationship evaluations. Given the difference between self-report and observational data in the German study and even to a degree in the Denver study, the findings of the present study are consistent with those two studies that demonstrated few differences between groups with the use of self-report measures.

In addition to self-report and observational data, break ups have also been used as an outcome measure for preventive interventions. The two break-ups by FU I in the present study are intriguing because both couples participated in the intervention. It appears that the 2 couples may have used the intervention as a way of deciding whether or not to continue their relationship. The couples had been together for a short period of time and were not living together. Deciding to end their relationship may also be reflective of a lower commitment to working on the relationship. One could argue that this testing out of the relationship at an early stage is also preventive. However, that approach was not the intent of the present evaluation, where break up

was conceptualized as a negative outcome. Further follow-ups are needed to determine whether participation in the intervention is related to stability over time.

In contrast to the German and Denver studies, the present study focused on high- versus low-risk couples (Van Widenfelt, Schaap, & Hosman, 1991). Overall, few differences were found initially between couples with and without divorced parents. However, at the 9-month follow-up, parental divorce couples demonstrated a significant increase in problem intensity and a trend toward decreased problem solving ability and relational efficacy, whereas couples from intact families of origin showed the opposite pattern. Furthermore, couples from intact families showed significant improvement in psychological health over time, whereas the psychological health of couples with divorced parents became worse. At FU II, there were no longer significant differences present between parental divorce and intact family couples, which may be due to decreased power because of attrition. Participation in the preventive intervention did not appear to have a protective influence on decline in relationship functioning for persons who experienced parental divorce and their partners.

The present findings raise several important issues relevant to longitudinal prevention studies: selection and attrition effects, the importance of observational measures at follow-up, cultural influences, the appropriateness of the intervention for the targeted high-risk couples, and how risk is defined.

Selection Effects

A factor to take into consideration when interpreting the results of this study and similar studies is the possibility of a selection bias in recruitment. Couples who participated in the present study (as in the Denver study) were all volunteers who responded to media announcements. Given that we targeted nondistressed couples, it may be that, in the present sample, couples who experienced parental divorce had "worked through" the possible negative long-term effects associated with divorce. Perhaps the couples in need of help did not participate in the present study, and are in general less likely to participate in such a prevention program. Participation in itself may be an indication of both partners' willingness to examine their relationship and learn something new. The couples who did participate in the present study in which one partner had divorced parents did not appear to be at higher risk than couples from intact fami-

lies for poorer relationship functioning at Time 1 (although there were some indications that these partners rated their relationships more negatively over time). In addition, they did not appear to benefit more from the intervention than couples from intact families. Furthermore, there were no differences in family background between those who participated in the intervention and those who did not, which is somewhat surprising in that it may be expected that persons with higher family background risk would be more likely to respond to the offering of help.

Just as in the Denver study, the present study suffered from a selection bias in who agreed to participate in the intervention. Couples who were together for a shorter number of years in the present study were more likely to decline the intervention than those who were together longer. The Denver study had a higher decline rate than the present study and couples in that study were together a shorter number of years than in the present study. Perhaps couples together for just a few years are less likely to feel the need for a preventive intervention than couples who are together longer. This selection effect may limit the generalizability of the results.

Attrition Effects

In addition to a possible selection bias due to recruitment efforts or decline of the intervention, the effect of which couples participate in follow-ups is also critical for outcome evaluation. Because the attrition rate in the present study was considerable (18% at FU I and 40% by FU II), the results may be affected by this phenomenon. In a comprehensive review of longitudinal studies on marriage, Karney and Bradbury (1995) reported that an average of 31% of participants are not included in final longitudinal analyses due to attrition. Because of the likely impact of attrition on the findings, we conducted analyses on attritional biases. Analyses revealed that the couples who did not complete the follow-ups evaluated their relationships more negatively at Time 1 than follow-up completers. Control and decline couples especially did not complete the follow-ups, which is not surprising given that they did not receive the intervention or financial rewards for their participation at follow-up and may have felt less committed to the study. The potential impact of this phenomenon in the present study and similar studies deserves serious consideration, because it is possible that the hypothesized worsening of the control and decline conditions compared to the intervention is disguised by the high drop-

out rate. In other words, with more couples dropping out of the decline and control groups over time, and with drop outs tending to be more distressed in this and other studies, these groups could appear to be doing better than they really are, as an artifact of attrition.

Attritional bias may serve as an alternative explanation of why, in the present study, the intervention group reported increased problem intensity compared to a decrease in the control group, increased psychological symptoms compared to controls, and lower satisfaction with life in general compared to decliners. At FU II, potential differences between conditions may also have been disguised by differential drop out of controls and decliners, in which couples (regardless of condition) demonstrated an increase in problem solving ability, a decrease in physical aggression, and an increase in dissatisfaction of life in general. In conclusion, it is difficult to determine whether the lack of differences between conditions could be interpreted as reflective of the intervention group maintaining a wider range of couples, or whether the intervention did not have an identifiable effect at this point in time.

Cultural Influences

As mentioned earlier, the pattern of relationship development appears to differ in the Netherlands from the U.S., which may be relevant when comparing findings and samples. Government statistics show a pattern in which couples in Holland tend to first cohabit, then have children, and then get married (Central Bureau of Statistics, 1991). The mean age at which couples marry in Holland is somewhat older than in the U.S.—for males 29.1 and females 26.9 (Centraal Bureau voor de Statistiek, 1995)—which might have implications for assessing the best time to intervene. Such differences among cultures suggest exercising caution when generalizing about findings.

Another aspect of relationships that appears to differ in Dutch and American couples is that of gender roles. Van Yperen (1990) examined cross-national differences and found Dutch partners to be more feminine and American partners to be more masculine in terms of their relationship values. For example, Dutch couples showed less sex-role stereotypes than their American counterparts. This reported cultural difference may offer an explanation of the lack of gender differences found in the present study. It may also have implications for the impact of the content of PREP, which addresses gender differences. Each evaluation of PREP needs to take the characteristics of that culture into consideration when im-

plementing the study and when interpreting the findings.

The Fit Between the Intervention and the Risk Group

An interpretation of the lack of protection the intervention appeared to provide the parental divorce couples in the short term could be that the intervention was not adequately tailored for the high-risk population. The intervention consisted of basic ingredients of cognitive behavioral interventions that addressed relationship well-being. Only one session was added that focused on family of origin, in which a genogram was used to assist couples in identifying patterns of communication and expectations or beliefs about relationships that may have originated in their family of origin. This session, together with the other sessions, was perhaps insufficient in addressing the specific needs of adults who have experienced parental divorce and their partners.

IMPLICATIONS FOR FUTURE RESEARCH

For future program evaluation studies, a more complex picture of risk is recommended. The model proposed by Karney and Bradbury (1995) which includes enduring vulnerabilities (e.g., family of origin factors), current stress, and adaptive processes (e.g., skills), would be useful in planning target groups for future longitudinal research on prevention. A more thorough assessment of family of origin variables may offer more accurate risk information that takes into account both risk and protective factors. For example, in the present study, parental remarriage was not taken into account, which may serve as a protective factor in some cases. Including current information, such as skills available, would assist in understanding the impact of retrospective reports about earlier family experiences. Couples could be assessed to see if they actually are at increased risk for relationship distress and dissolution. A more thorough risk assessment could also be useful in tailoring the intervention more closely to the needs of the risk population, such as those who have experienced parental divorce.

There are two design issues that could improve future studies as well. For example, an inclusion of an attention only control group is recommended for future evaluation studies in order to be able to determine if the intervention has specific benefits (vs. a general benefit of participation in an intervention). Such a

design could aid in identifying which interventions and ingredients are the most effective for preventing relationship distress and divorce. One study by Blumberg (1991) compared PREP with another intervention, Engaged Encounter (EE), and found that couples in both programs demonstrated decreased ratings of problem intensity and increases in commitment, perhaps indicating a more general impact of participating in a prevention program. However, couples who participated in PREP showed more improvements in communication and relationship satisfaction than did EE couples.

The present study, as well as the Denver and German studies, speaks to the need to improve randomization. For example, of the couples who agreed to participate in the intervention, a subselection could be made that would actually receive it, and those could be compared to those who accepted but did not receive it. The latter would be a better control group than the current controls, who in fact may have been a mix of those who potentially would agree to participate and those who would decline.

Further, some of the apparent negative outcomes in the present study indicate that a broader and more complex evaluation of outcome is necessary. Too many longitudinal studies rely primarily on reports of satisfaction and stability as outcome measures (Karney & Bradbury, 1995). In the present study, it remains unclear if breaking up was a positive or negative outcome for the 2 couples who broke up immediately after the intervention. Further, problem intensity increased for intervention couples, although relational efficacy remained stable. Again, it remains unclear if that is a positive or negative outcome in the long term (see above discussion of Gottman and Krokoff, 1989). In addition, current studies indicate that future studies would benefit from including observational measures in addition to self-report at the follow-up assessments. Karney and Bradbury (1995) report that in over 100 longitudinal studies of marriage, a mere 16 used observational measures at follow-up, with the majority using only self-report. Exclusion of observational measures at follow-up limits the understanding of how an intervention impacts couples.

In sum, the potential negative effects of early intervention must be ruled out and the potential positive effects must be confirmed before dissemination can be justified. For example, if participation in PREP has a negative effect on couple and individual well-being, then the present findings raise an ethical issue of intervening in stable nondistressed re-

lationships. It remains critical for research to continue and for preventionists to be able to respond to this concern. Research still needs to be conducted on developing the most cost and time efficient and effective approach to prevention for specific subpopulations. Additional research on PREP is critical before larger scale implementation can be recommended.

REFERENCES

- Amato, P. R., & Keith, B. (1991). Parental divorce and adult well-being: A meta-analysis. *Journal of Marriage and the Family*, 53, 43-48.
- Arrindell, W. A., Boelens, W., & Lambert, H. (1983). On the psychometric properties of the Maudsley Marital Questionnaire (MMQ): Evaluation of self-ratings in distressed and 'normal' volunteer couples based on the Dutch version. *Personality and Individual Differences*, 4, 293-306.
- Arrindell, W. A., & Ettema, J. H. M. (1986). SCL-90: Handleiding bij een multidimensionele psychopathologie-indicator [SCL-90: Manual for a multidimensional indicator of psychopathology]. Lisse, The Netherlands: Swets & Zeitlinger.
- Bloom, B., Asher, S. J., & White, S. W. (1978). Marital disruption as a stressor: A review and analysis. *Psychological Bulletin*, 85, 867-894.
- Blumberg, S. L. (1991). *Premarital intervention programs: A comparison study*. Unpublished doctoral dissertation, University of Denver, Colorado.
- Centraal Bureau voor Statistiek. (1988). *Statistisch zakboek* [Statistics handbook]. Rijswijk, The Netherlands: Centraal Bureau voor Statistiek.
- Centraal Bureau voor Statistiek. (1995). *Statistisch Jaarboek* [Statistics Yearbook]. The Hague, the Netherlands: Centraal Bureau voor Statistiek.
- Central Bureau of Statistics. (1991). *Demographic working papers: Netherlands fertility survey 1988 cohabitation, marriage, birth control, employment and fertility*. Voorburg, The Netherlands: Central Bureau of Statistics.
- Chase Lansdale, P. L., Cherlin, A., & Kiernan, K. E. (1995). The long-term effects of parental divorce on the mental health of young adults: A developmental perspective. *Child Development*, 66, 1614-1634.
- Cobb, R. L., McDonald, R., Marks, I., & Stern, R. (1980). Marital versus exposure therapy: Psychological treatment of co-existing marital and phobic-obsessive problems. *Behaviour Analysis and Modification*, 4, 3-16.
- Coie, J. D., Watt, N. F., West, S. G., Hawkins, D., Asarnow, J. R., Markman, H. J., Ramey, S. L., Shure, M. B., & Long, B. (1993). The science of prevention: A conceptual framework and some directions for a national research program. *American Psychologist*, 48, 1013-1022.
- Coole, R. L., & Jansma, J. B. M. (1983). *Gezinsklimaatsschaal (GKS) Handleiding* [Family Environment Scale (FES) manual]. Lisse, The Netherlands: Swets & Zeitlinger.
- De Graaf, A. (1991). De invloed van echtscheiding van de ouders op demografisch gedrag van de vrouw [The impact of divorced parents on women's demographic behavior]. *Maandstatistiek van de Bevolking*, 39, 30-38.
- Derogatis, L. R. (1977). *SCL-90: Administration, scoring, and procedures manual-I for the R(evised) version*. Baltimore: Johns Hopkins University School of Medicine, Clinical Psychometrics Research Unit.
- Emery, R. E. (1982). Interparental conflict and the children of discord and divorce. *Psychological Bulletin*, 92, 310-330.
- Glenn, N. D., & Kramer, K. B. (1987). The marriages and divorces of the children of divorce. *Journal of Marriage and the Family*, 49, 811-825.
- Gottman, J., & Krokoff, L. (1989). Marital interaction and satisfaction: A longitudinal view. *Journal of Consulting and Clinical Psychology*, 57, 47-52.
- Hahlweg, K., Thurmair, F., Eckert, J., Engel, J., & Markman, H. J. (1992, November). *The German Premarital Prevention Study: One and a half year results*. Paper presented at the 22nd Annual Convention of the Association for the Advancement of Behavior Therapy, Boston, MA.
- Karney, B. R., & Bradbury, T. N. (1995). The longitudinal course of marital quality and stability: A review of theory, method, and research. *Psychological Bulletin*, 118, 3-34.
- Kooy, G. A. (1984). *Huwelijksweelagen in Nederland: Een vergelijking tussen 1967 en 1983* [Marital success in the Netherlands: A comparison between 1967 and 1983]. Wageningen, The Netherlands: Landbouw Hoogschool Wageningen.
- Lange, A. (1983). *Interactiële Probleem Oplossing Vragenlijst (IPOV)* [Interpersonal Problem Solving Inventory (IPSI)]. Deventer, The Netherlands: Van Loghum Slaterus.
- Lange, A., Markus, E., Hageman, W., & Hanewald, G. (1991). Status inconsistency, traditionality, and marital distress in the Netherlands. *Psychological Reports*, 68, 1243-1253.
- Markman, H. J. (1981). Prediction of marital distress: A five-year follow-up. *Journal of Consulting and Clinical Psychology*, 49, 760-762.
- Markman, H. J., Blumberg, S. L., & Stanley, S. M. (1991). *PREP leader's manual*. Unpublished manual, University of Denver, Center for Marital and Family Studies.
- Markman, H. J., Duncan, S. W., Storaasli, R., & Howes, P. (1987). The prediction and prevention of marital distress: A longitudinal investigation. In K. Hahlweg & M. Goldstein (Eds.), *Understanding major mental disorders: The contribution of family interaction research* (pp. 266-289). New York: Family Process.
- Markman, H. J., Floyd, F. J., Stanley, S. M., & Lewis, H. C. (1986). Prevention. In N. S. Jacobson & A. S. Gurman (Eds.), *Clinical Handbook of Marital Therapy* (pp. 173-195). New York: Guilford.
- Markman, H. J., Floyd, F., Stanley, S. M., & Storaasli, R. (1988). The prevention of marital distress: A longitudinal investigation. *Journal of Consulting and Clinical Psychology*, 56, 210-217.
- Markman, H. J., Renick, M. J., Floyd, F. J., Stanley, S. M., & Clements, M. (1993). Preventing marital distress through communication and conflict management training: A 4- and 5-year follow-up. *Journal of Consulting and Clinical Psychology*, 61, 70-77.
- Markman, H. J., Stanley, S. M., & Blumberg, S. L. (1989). *Prevention and relationship enhancement program (PREP)*. Unpublished manual, University of Denver, Center for Marital and Family Studies.
- Moos, R. H., & Moos, B. S. (1981). *Family Environment Scale (FES)*. Palo Alto, CA: Consulting Psychologists Press.
- National Center for Health Statistics. (1990). Birth, marriages, divorces and deaths for 1989. *Monthly Vital Statistics Report*, 38, 1-19.
- Notarius, C. I., & Vanzetti, N. A. (1983). The Marital Agendas Protocol. In E. E. Filsinger (Eds.), *Marriage and family assessment: A sourcebook for family therapy* (pp. 209-227). Beverly Hills, CA: Sage.
- Pope, H., & Mueller, C. W. (1976). The intergenerational transmission of marital instability: Comparisons by race and sex. *Journal of Social Issues*, 32, 49-66.
- Renick, M. J., Blumberg, S. L., & Markman, H. J. (1992). The prevention and relationship enhancement program (PREP): An empirically based preventive intervention program for couples. *Family Relations*, 41, 141-147.
- Schaap, C., & Van Widenfelt, B. (1990). *Prevention of relationship distress and dissolution: A practical manual for professionals*. Unpublished manual, University of Nijmegen, The Netherlands.
- Stanley, S. M., Markman, H. J., St. Peters, M., & Leber, D. B. (1995). Strengthening marriages and preventing divorce: New directions in prevention research. *Family Relations*, 44, 392-401.
- Straus, M. A. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics (CT) scales. *Journal of Marriage and the Family*, 41, 75-85.
- Van Widenfelt, B. (1995). *The prediction and prevention of relationship distress and divorce*. Nijmegen, The Netherlands: Quickprint.
- Van Widenfelt, B., Markman, H., Guernsey, B., Behrens, B., & Hosman, C. (in press). Primary prevention of relationship problems. In W. K. Halford & H. J. Markman (Eds.), *Clinical handbook of marriage and couples interventions*. Chichester, U.K.: Wiley.
- Van Widenfelt, B., & Schaap, C. (1990). *Dutch version of the Marital Agendas Protocol*. Nijmegen, The Netherlands: University of Nijmegen.
- Van Widenfelt, B., Schaap, C., & Hosman, C. (1991, November). *Preventing marital distress in a risk group in The Netherlands*. Paper presented at the annual meeting of the Association for Advancement of Behavior Therapy, New York.
- Van Widenfelt, B., Schaap, C., & Verdellen, C. (1990). *Personal History Questionnaire (PHQ)*. Unpublished questionnaire, University of Nijmegen, The Netherlands.
- Van Yperen, N. (1990). *Sociale vergelijkingen en sociale uitwisseling in huwelijksrelaties* [Social comparison and social exchange in marital relationships]. Unpublished doctoral dissertation, University of Nijmegen, The Netherlands.
- Wallerstein, J. S., & Blakeslee, S. (1989). *Second chances: Men, women, and children a decade after divorce*. New York: Ticknor & Fields.