

## Clinical Section

# THE EFFECTS OF ADDING BOOSTER SESSIONS TO A PREVENTION TRAINING PROGRAM FOR COMMITTED COUPLES

Christoph Braukhaus, Kurt Hahlweg, Christine Kroeger

*Technische Universität Braunschweig, Germany*

Thomas Groth and Gabriele Fehm-Wolfsdorf

*Universität Kiel, Germany*

**Abstract.** There is still a lack of indicated prevention programs for couples who, although subjectively concerned about their relationship, do not seek marital therapy. In a previous randomized controlled study, the efficacy of a cognitive-behavioural psychoeducational program delivered on a weekend by two trainers for groups of four couples was established. The program consists of communication and problem-solving training, couples' discussions to clarify their relationship expectations, and exercises to enhance their sensual/sexual relationship. In the current study, the effectiveness of adding two booster sessions with each couple individually one and three months after the weekend training program was investigated. Sixty-two couples were recruited by newspaper announcements. At post assessment, couples emitted significantly more positive and less negative verbal and nonverbal communication behaviours during a conflict discussion task than at pre-assessment, thus replicating the previous findings. At the 1-year follow-up, couples with booster sessions reported significant higher marital satisfaction ratings and fewer problem areas than couples receiving the weekend program only. Booster sessions seem to be effective in enhancing the long-term effectiveness of preventive interventions.

*Keywords:* Marital distress, prevention, booster sessions, communication skills training.

### Introduction

The divorce rate in Germany is rising by about 5% per year. Even though two-thirds of all married couples will stay married, divorce and dissatisfaction have a strong impact on health

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Reprint requests to Kurt Hahlweg, TU Braunschweig, Institut für Psychologie, Spielmannstr. 12a, 38106 Braunschweig, Germany. E-mail: k.hahlweg@tu-bs.de

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and psychopathology, in particular, depression in adults and conduct disorders in children (Burman & Margolin, 1992; Halford & Bouma, 1997; Sanders, Nicholson, & Floyd, 1997).

One of the established findings in the marital field is that distressed couples emit more negative and fewer positive statements and show greater reciprocation of negative behaviour during problem-solving interactions (Gottman & Levenson, 1999). In their meta-analysis of longitudinal predictors of marital distress and stability, Karney and Bradbury (1995) reported that communication behaviour is the strongest known predictor of long-term marital satisfaction and stability.

As marital therapy is often undertaken too late to repair the damage of years of destructive marital conflicts (e.g. Jacobson, Schmalings, & Holtzworth-Munroe, 1987), different preventive strategies have been developed. Based on a cognitive-behavioural approach, the goal of these programs is to decrease the frequency of negative and increase the frequency of positive exchanges during conflict discussions and to solve relationship issues more effectively. Preventive interventions can be classified into “universal preventive interventions” with the target on entire population or “selective preventive interventions” with priority to help subgroups of the population who have elevated risk for developing a problem (e.g. children from divorced parents or from families with spouse abuse). “Indicated preventive interventions” target groups who are at high risk because they are already identified as having some detectable signs or symptoms of developing a problem, without all signs or symptoms of the disorder necessarily being present.

On the basis of the American Premarital Relationship Enhancement Program (PREP; Markman, Floyd, Stanley, & Lewis, 1986), the German EPL (Ehevorbereitung: Ein partnerschaftliches Lernprogramm [Premarital preparation – A Couples’ Learning Program]) was developed and showed its 3-year long-term efficacy as a universal premarital prevention program (see Hahlweg, Markman, Thurmaier, Engl, & Eckert, 1998). In a previous study, the efficacy of the EPL as an indicated prevention program for committed couples was investigated (EPL II; (Ein Partnerschaftliches Lernprogramm für verheiratete Paare [Epl-II; A Learning Program for Committed Couples], Kaiser, Hahlweg, Fehm-Wolfsdorf, & Groth, 1998). Sixty-seven couples were randomly assigned to the intervention program or a waiting-list control group. At post assessment, intervention couples emitted significantly more positive verbal and nonverbal communication behaviours during a conflict discussion task than did control couples, who reported significantly more relationship problem areas and displayed more negative communication behaviours. At the 1-year follow-up, intervention couples reported fewer problem areas in comparison with pre-assessment. Although being helpful to the couples, in general EPL II was less efficacious for those couples who had already shown some signs of distress than the EPL program was for premarital couples.

The use of booster sessions has long been advocated as a maintenance strategy in behaviour therapy. Whisman (1990) reviewed the literature from the past 18 years and was able to identify 30 clinical trials of booster maintenance sessions spanning eight problem behaviours, e.g. depression, headache, hypertension, smoking or weight loss. He concluded that booster sessions have been moderately successful in maintaining treatment induced behaviour change. In marital therapy or in preventive interventions booster sessions have been recommended but not evaluated.

Therefore, one way to enhance the effectiveness of the training may be to add booster sessions to the program (EPL II-B), conducted individually with each couple. By this addition, couples might practise the skills learned at the weekend over a longer time period

at home, thus increasing generalizability. In addition, the booster sessions provide more opportunities to discuss actual or longer standing conflicts with the help of their trainer, perhaps enhancing the long-term effectiveness of the intervention.

In this study, the effectiveness of the booster session enhanced EPL (EPL II-B) was investigated with two aims: (a) to replicate the results of the EPL II-study (Kaiser et al., 1998) with an independent sample of couples and trainers and (b) to investigate the short and long term effectiveness of the EPL II-B intervention. In the current investigation, all couples were assigned to the EPL II-B intervention with individualized booster sessions.

Given the similarity of the recruitment methods and EPL-based intervention used with the current sample and the EPL II couples, the current sample was compared with the EPL II treatment and waiting list control group. This comparison was seen as appropriate because the recruitment strategies and EPL intervention were identical between the two studies. We decided not to use a waiting-list control group for the following reasons: a) Because the efficacy of the EPL II had been demonstrated in a randomized, controlled investigation, it became ethically questionable to have clients wait before receiving the efficacious intervention; b) The findings of a recent meta-analysis of randomized controlled investigations in the field of Behavioural Marital Therapy (Baucom, Hahlweg, & Kuschel, in press) indicate that, on average, distressed couples who are placed on waiting lists make no improvements during the waiting period. Therefore, it seemed not necessary to include a control group.

## Method

### *Participants*

As in the study by Kaiser et al. (1988), couples with a minimum partnership duration of three years were recruited in Kiel and Braunschweig (two German cities of about 250,000 inhabitants each). They were self-referred, responding to newspaper articles offering training for couples to learn to communicate more successfully with each other and to solve relationship problems. The newspaper articles clarified that the seminars were not intended as marital therapy. Ways of recruiting and the assessment procedure were as similar as possible in both studies.

### *Recruitment*

The recruitment was similar to the EPL II study by Kaiser et al. (1998). A total of  $N = 85$  couples responded to the newspaper announcement and  $N = 62$  couples participated the EPL II-B training. The non-participating couples elected not to participate for various reasons, usually because of time restrictions. There were no significant differences between EPL II-B couples and non-participating couples on any of the socio-demographic and relationship variables at pre-test. With regard to these variables and intervention effectiveness, there were no significant differences between the couples from the two different cities. Therefore, the results are collapsed for the two samples.

### *Socio-demographic variables*

The demographic characteristics of the participants at pre-test were as follows: average age of the women was 40.3 years ( $SD = 8.6$ , range = 28–63); average age of the men was 43.3

years ( $SD = 9.4$ , range = 31–68). All participants were Caucasian; 77% were married, and 66% had at least one child. The average duration of marriage was 14.4 years ( $SD = 10.3$ , range = 2–40). About 66% had at least a high school education. EPL II-B couples were significantly older and longer married than EPL II couples. The two groups did not differ on any other socio-demographic or relationship variable.

## Measures

### *Relationship Self-Report Inventories*

Partnerschaftsfragebogen (*PFB (Partnership Questionnaire)*). The PFB (Hahlweg, 1996; for the English version see Hahlweg, Schindler, Revenstorf, & Brengelmann, 1984) is a 30-item instrument that measures marital quality. It consists of three scales (Quarreling, Tenderness, and Togetherness and Communication), which can be combined to yield a PFB total score (PFBT, Cronbach's Alpha: .95). The total score discriminates reliably between distressed and nondistressed couples and sensitively monitors changes resulting from marital therapy. The PFBT correlates highly ( $r = 0.85$ ; Hahlweg, Klann, & Hank, 1992) with the Dyadic Adjustment Scale (DAS; Spanier, 1976). A PFBT of 54 is regarded as a cut-off for low marital quality. According to that cut-off, 72% of the EPL II-B couples were maritally distressed (70% of the EPL II couples), although the advertisement for couples made clear that marital therapy was not being offered.

*Problem List (PL)*. The PL assesses the number of problem areas in the marital relationship (Hahlweg, 1996; for the English version, see: Hahlweg, Schindler, et al., 1994). It contains 23 possible areas of relationship conflicts (e.g. communication, sexuality, social activities, finances, or alcohol problems). Each problem area is rated by each partner using the following categories: 0 = no problems, 1 = problems, but we can usually solve them; 2 = problems we cannot find solutions for, and we often quarrel about; 3 = problems we cannot find solutions for, and don't discuss any more. For the purpose of evaluating therapy, the number of items marked 2 or 3 are totalled, yielding one PL Score (PLS) for each person. The internal consistency of the PLS is .84. The PLS discriminates reliably between distressed and non-distressed couples and sensitively monitors progress in marital therapy (Hahlweg, 1996).

*Center for Epidemiological Studies – Depression Scale (CES-D; Radloff, 1977)*. The German version of the CES-D was used to measure depression (Hautzinger & Bailer, 1992). It contains 20 items, was developed for epidemiological purposes, and has an internal consistency of .90. Raw scores greater than 22 were used as a cut-off for clinical depression. According to this criterion, 16% of the females and 11% of the males were clinically depressed. These rates are somewhat comparable to those found in the German standardization sample (24% and 11% respectively).

### *Communication measure*

*Kategoriensystem für partnerschaftliche Interaktion (KPI; Coding System for Marital/Family Interaction; Hahlweg, Reisner, et al., 1984)*. Verbal and nonverbal behaviours were assessed on the basis of couples' videotaped discussions of a relationship problem. The basic coding unit is a verbal response that is homogenous in content or theme without regard

to its duration or syntactical structure. The KPI consists of 10 verbal categories, which have been derived primarily from assumptions about effective communication. These categories were supplemented by some of the more salient categories and definitions from other coding systems, notably the Marital Interaction Coding System (Hops, Wills, Patterson, & Weiss, 1972) and the Couples Interaction Scoring System (Gottman, 1979; Notarius & Markman, 1981).

*Verbal positive* categories include self-disclosure, positive solutions, acceptance, and agreement. *Verbal neutral* categories are problem description and meta-communication. *Verbal negative* categories include criticism, negative/destructive solution, justification, and open disagreement.

All of the content categories described also receive a nonverbal rating as either positive, negative, or neutral (see Gottman, 1979; Notarius & Markman, 1981). In a hierarchical order, first the facial cues of the speaker or listener are evaluated as positive, neutral, or negative. If the coder is unable to code the facial expression as positive or negative, the tone of voice is evaluated, followed by body cues. Then, the appropriate rating is applied. In the analyses that follow, percentage scores were used, calculated by dividing the frequency of each communication category by the total number of utterances.

Four coders were trained for 70 hours. To establish reliability, the coders' ratings were compared to those of a criterion rater. Coders started rating "real"-tapes after having coded 6 to 8 training-tapes and having reached the cut-off of 75% verbal place-to-place-agreement with the criterion rater. About 20% of the tapes were used for reliability checking. Percentage agreement among the coders ranged from 72% (nonverbal neutral) to 85% (positive verbal). Besides percentage agreement, Cohen's Kappa coefficients were computed, yielding Kappa's of .77 ( $p < .0001$ ) for positive verbal and .67 ( $p < .0001$ ) for negative verbal codes and of .71 ( $p < .0001$ ) for nonverbal positive and .65 ( $p < .0001$ ) for nonverbal negative codes.

### *Procedure*

Couples took part in the pre-assessment, the weekend intervention, two individual booster sessions (duration 50 minutes each) one and three months after the weekend, the post assessment ( $n = 62$ ) immediately after the second booster session, and the 1-year follow-up ( $n = 52$ ).

### *Assessment*

At pre and post, couples participated in a 2.5-hour-long assessment session. During this session, couples were interviewed and completed the questionnaires. They also participated in a 15-minute videotaped problem-solving interaction task, discussing one of their top relationship problem areas, which they selected conjointly from the Problem List. At the follow-up, couples were interviewed by telephone and completed the questionnaires.

### *Intervention program*

The EPL II is based on the Premarital Relationship Enhancement Program PREP (Markman et al., 1986) and has been shown to be effective with premarital couples (Hahlweg et al.,

1998). The EPL II is delivered at a weekend meeting (typically Friday evening to Sunday afternoon). Group sizes vary from 3 to 4 couples with two trainers for each group. The couples meet as a group for the lecture portions of the sessions, but meet alone and work with a trainer for all other aspects of each session.

*Part 1.* The first part of the EPL II deals primarily with communication skills training (4 hr). To facilitate the teaching, we showed a videotaped example of dysfunctional couple communication. In a group discussion, dysfunctional patterns are identified and functional patterns are listed, such as speaking for oneself, expressing feelings, staying on topic, and paraphrasing the partner's point of view. Each couple practises the application of these skills while discussing a positive relationship topic. One trainer helps each of two couples in turn to use the skills appropriately, splitting the time between the two couples. Without the trainer present, the couple tries to employ the communication skills alone. *Part 2* (4 hr) is devoted to the expression of negative feelings and to the way the partner should respond to such a self-disclosure. In *Part 3* (4 hr) a structured 5-step problem-solving scheme is introduced, and the couples apply this scheme to one of their current relationship problems. *Part 4* (3 hr) is devoted to the effects that expectations can have on a relationship. It emphasizes the negative effects of vaguely understood and poorly expressed expectations. *Part 5* (3 hr) is devoted to communication in the sexual domain, stressing the fact that ineffective or non existing communication about sexual needs and wishes may lead to sexual dissatisfaction. During the focus on sexuality, each couple rank orders cards with a concept printed on it, such as, happiness, fantasy, creativity, body contact, orgasm, relaxation, tenderness, love, or reproduction. Couples can also decide to build a house using the cards. Cards at the basement are more important for sexuality than cards (concepts) further up. The aim is to discuss in specific terms the meaning of the concepts for the individual and the marriage.

Trainers had a Bachelor's ( $n = 5$ ) or Master's ( $n = 4$ ) degree in psychology. They received 4 days of training consisting of reading the detailed treatment manual (including transcripts for lectures presented to the couples, notes on the styles of intervention, and a specific timetable for delivering the program) and intensive, supervised role play training in groups of four trainees. The training workshops were conducted by Christoph Braukhaus and Kurt Hahlweg. We attempted to assure treatment integrity by providing ongoing supervision. Furthermore, we teamed a more experienced trainer with an inexperienced co-trainer as often as possible, thus providing supervision during the intervention. However, because of financial constraints, we could not quantify integrity (e.g. by videotapes and ratings of trainer's in-session behaviour).

## Results

In order to investigate whether we were able to replicate the findings of the EPL II study by Kaiser et al. (1998), the effects of the interventions at pre, post, and follow-up were evaluated, comparing the EPL II-B with EPL II couples (EPL II treatment group,  $n = 31$ ; EPL II control group,  $n = 36$ ). A  $3 \times 2 \times 2$  (Group  $\times$  Sex  $\times$  Time) repeated measures multivariate analysis of variance (MANOVA) using the set of criterion variables was conducted, including the EPL II treatment and wait list control groups and EPL II-B as the three groups. The Group  $\times$  Time effect was highly significant,  $F(12, 226) = 4.53, p < .000$ ,

indicating that both treatment groups were more effective than the wait list condition (for means and standard deviations for the EPL II control group see Kaiser et al., 1998, p. 757). For the remainder of the analyses, EPL II and EPL II-B are focused upon to investigate whether the booster sessions were helpful to the couples.

A  $2 \times 2 \times 2$  (Group  $\times$  Sex  $\times$  Time) repeated measures multivariate analysis of variance (MANOVA) was conducted, followed by univariate repeated measures analyses variance (ANOVAS). Sex was a within-subjects factor in all analyses to take into account dependency between husband's and wife's scores (Kraemer & Jacklin, 1979). Following significant Time  $\times$  Group interaction effects, analyses of covariance (ANCOVA) with pre scores as covariates were used to test for significant group differences at post assessment.

#### *Intervention effects: pre-post comparisons*

*Self-report variables.* The first multivariate repeated measures MANOVA using the relationship (PFBT, PLS), and depression (CES-D) self-report variables resulted in a significant Time effect,  $F(3, 76) = 16, 95, p = .000$ , and Sex effect,  $F(3, 76) = 3, 52, p = .019$ . Effects for Group and the interaction effects were all non-significant.

The first set of univariate repeated measures ANOVAs investigated differences between EPL II and EPL II-B on the self-report measures. The means and standard deviations are shown in Table 1. For the PFB Total Score,  $F(1, 78) = 24, 1, p = .000$ , and the PLS,  $F(1, 78) = 46, 8, p = .000$ , there was a significant Time effect. For PLS,  $F(1, 78) = 5, 1, p = .027$ , and CES-D,  $F(1, 78) = 6, 3, p = .014$ , the Sex effect was significant.

#### *Couple communication during the interaction tasks*

The second set of repeated measures MANOVA using the communication variables resulted in a significant Group effect,  $F(4, 81) = 5, 59, p = .001$ , Time effect,  $F(4, 81) = 14, 77, p = .000$ , and a significant Sex effect,  $F(4, 81) = 4.77, p < .002$ . The interaction effect for Group  $\times$  Sex  $\times$  Time were all non-significant.

As a follow-up to the MANOVA, a set of univariate repeated measures ANOVAs investigated whether EPL II couples in comparison with EPL II-B couples used the communication skills more often after the training. Means and standard deviations of the KPI variables for EPL II and EPL II-B are shown in Table 1. Significant Group effects for nonverbal positive,  $F(1, 84) = 18, 1, p = .000$ , and negative nonverbal behaviour,  $F(1, 84) = 6, 0, p = .017$ , emerged, indicating that EPL II-B couples interacted nonverbally in a more appropriate way than EPL II couples. However, there was no Group  $\times$  Time effect.

### **Follow-up results**

Fifty couples took part in the 1-year follow-up; however, there were no differences between follow-up participants and refusers on any of the measures at pre and post. The results for the follow-up couples are shown in Table 2.

A  $2 \times 2 \times 2$  MANOVA (Group  $\times$  Time  $\times$  Sex) was used to compare pre to follow-up data for the self-report variables (PFBT, PLS, CES-D). A significant effect for Time ( $F(3, 81) = 4, 97, p = .003$ ) and Sex ( $F(3, 81) = 3, 43, p = .021$ ) resulted. The effects for Group,

**Table 1.** Means and standard deviations for self-report and KPI communication variables for EPL II-B and EPL II husbands and wives

Variable	EPL II-B		EPL II		EPL II-B		EPL II		
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	
	Husbands				Wives				
Self-report variables:									
PFBT									
<i>M</i>	49.8	53.4	46.3	48.5	49.8	55.3	45.9	48.9	
<i>SD</i>	13.5	13.3	11.8	15.9	12.1	13.4	12.2	13.2	
PLS									
<i>M</i>	4.8	3.0	5.5	3.3	5.0	3.3	6.7	4.7	
<i>SD</i>	3.2	2.8	3.3	3.0	2.8	2.9	3.5	4.3	
CES-D									
<i>M</i>	14.1	12.5	13.3	12.4	15.9	15.5	16.4	14.0	
<i>SD</i>	9.1	8.7	7.3	7.4	9.2	9.9	10.3	10.2	
KPI communication variables									
verbal positive									
<i>M</i>	29.5	39.9	24.1	31.5	27.5	39.8	26.4	36.1	
<i>SD</i>	16.5	21.9	12.1	12.9	16.8	21.4	8.6	14.6	
nonverbal positive									
<i>M</i>	31.4	41.5	19.1	24.9	31.3	45.3	21.4	29.8	
<i>SD</i>	18.0	19.6	14.0	19.9	19.1	21.0	16.1	25.1	
verbal negative									
<i>M</i>	35.2	22.1	32.1	25.6	37.4	24.2	37.7	26.2	
<i>SD</i>	15.0	13.1	14.9	12.1	16.2	14.6	13.4	13.5	
nonverbal negative									
<i>M</i>	25.1	15.5	28.6	23.4	23.0	13.9	32.7	24.0	
<i>SD</i>	19.9	15.5	23.3	21.4	17.8	16.1	22.5	23.3	

*Note.* KPI = Kategoriensystem fuer partnerschaftliche Interaktion (Coding System for Marital and Family Interaction);

pre = preassessment; post = postassessment; PFBT = Partnerschaftsfragebogen (Partnership Questionnaire) total score; PLS = Problem List total score; CES-D = Center for Epidemiological Studies – Depression Scale.

and the interaction effects Time  $\times$  Group, Time  $\times$  Sex, Group  $\times$  Sex and Group  $\times$  Time  $\times$  Sex were non-significant. The univariate ANOVA resulted in a significant Time effect with improvement over time for PFBT,  $F(1, 83) = 9, 2, p = .003$ , and PLS,  $F(1, 83) = 11, 3, p = .001$ . A significant Sex effect for PLS,  $F(1, 83) = 4, 5, p = .038$ , and CES-D,  $F(1, 83) = 4, 3, p = .040$  indicated that females listed more problem areas and were more depressed overall. There was a significant interactional Time  $\times$  Group effect for PFBT,  $F(1, 83) = 4, 4, p = .039$ .

Following up the significant Time  $\times$  Group ANOVA, an analysis of covariance (ANCOVA) with pre scores as covariates showed significant group differences at the 1-year-follow-up for PFBT,  $F(1, 98) = 8, 67, p = .000$ , with higher relationship satisfaction for EPL II-B couples.



**Table 2.** Means and standard deviations for self-report variables for EPL II-B and EPL II husbands and wives at preassessment (Time 1) and at the 1-year-follow-up (Time 3)

Variable	EPL II-B		EPL II		EPL II-B		EPL II	
	Time 1	Time 3	Time 1	Time 3	Time 1	Time 3	Time 1	Time 3
	Husbands				Wives			
<b>FPBT</b>								
<i>M</i>	50.2	54.7	48.3	49.6	51.0	54.4	49.8	50.3
<i>SD</i>	13.5	12.8	12.6	14.2	10.7	11.2	14.3	14.3
<b>PLS</b>								
<i>M</i>	4.6	3.3	5.1	4.5	5.1	3.9	6.1	5.0
<i>SD</i>	3.1	3.7	4.2	3.9	3.4	3.3	3.8	4.6
<b>CES-D</b>								
<i>M</i>	14.3	13.8	12.9	12.0	16.7	15.4	15.2	13.1
<i>SD</i>	9.3	9.0	8.3	7.9	8.7	8.4	10.0	9.2

Note. PFBT = Partnerschaftsfragebogen (Partnership Questionnaire) total score; PLS = Problem List total score; CES-D = Center for Epidemiological Studies – Depression Scale.

*Effect sizes*

To assess the magnitude of change, intra-group effect sizes (IGES) were calculated. The IGES can be computed without a control group, defined as the mean difference between the pre- and post-means of the particular group divided by the pooled pre-post standard deviation. In Table 3, the effect sizes for both EPL groups and assessment times are shown. While there were no significant differences at post, EPL II-B couples reported significantly higher relationship quality (PFBT) than EPL II couples at the 1-year follow-up (wives:  $t(94) = -2.14, p = .035$ ; husbands:  $t(96) = -2.41, p = .018$ ).

**Table 3.** Intragroup effect sizes IGES (means and standard deviations) for EPL II-B and EPL II husbands and wives at post assessment and at the 1-year-follow-up

Variable	Post assessment		Follow-up	
	EPL II-B	EPL II	EPL II-B	EPL II
	( <i>N</i> = 62)	( <i>N</i> = 31)	( <i>N</i> = 52)	( <i>N</i> = 48)
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )
PFBT Husbands	.27 (0.56)	.21 (0.68)	.39 (0.61)	.09 (0.62)
PFBT Wives	.45 (0.61)	.27 (0.75)	.36 (0.77)	.03 (0.75)
PLS Husbands	.59 (0.85)	.70 (1.08)	.44 (1.03)	.15 (0.78)
PLS Wives	.64 (0.96)	.50 (0.87)	.40 (1.20)	.24 (0.84)
KPI Husbands	.64 (0.64)	.36 (0.75)	—	—
KPI Wives	.68 (0.68)	.59 (0.87)	—	—
Total IGES Husbands	.48 (0.42)	.43 (0.61)	.41 (0.66)	.13 (0.55)
Total IGES Wives	.60 (0.50)	.44 (0.52)	.40 (0.77)	.12 (0.69)

Note. PFBT = Partnerschaftsfragebogen (Partnership Questionnaire) total score; PLS = Problem List total score; KPI = Kategoriensystem fuer partnerschaftliche Interaktion (Coding System for Marital and Family Interaction).

Furthermore, the total IGES (based on PFBT and PLS) at the 1-year-follow-up were significantly different between the two groups, favouring the EPL II-B couples (husbands:  $t(97) = -2, 30, p = .024$ ; and as a tendency for wives,  $t(98) = -1, 85, p = .067$ ).

### Discussion

The first set of results showed that we were able to replicate the findings of Kaiser et al. (1998) at post assessment, using different couples (older, longer married) and trainers. Especially the age difference seems to support the validity of our replication findings, because age correlates negatively with outcome (Turkewitz & O'Leary, 1981). Thus, one would have expected a lower effectiveness for the EPL II-B couples.

Interestingly, the proportion of relationship dissatisfied couples was not significantly different between the two studies. When offering indicated prevention programs, one can expect that about 70% of the couples will be experiencing distress. The replicated findings indicate that the intervention can be used with a variety of couples and trainers, providing the training and supervision of trainers is delivered as described.

Of course, in the current investigation, couples were not randomly assigned to the booster condition. Therefore, although the findings are promising, further investigation with random assignment is important to fully demonstrate the utility of booster sessions. However, we are confident that the current results would also hold up in a controlled trial. The findings of a recent meta-analysis of randomized controlled investigations in the field of Behavioural Marital Therapy BMT (Baucom et al., in press) support the view that, at least in BMT, it may not be necessary to include a control group in future treatment studies. The average intra-group effect size for couples in waiting lists was  $ES = -0.09$ , demonstrating that distressed couples do not improve while on waiting lists. On the contrary, on average, there is a small amount of deterioration reported. One way of calculating the "true" effect size in an uncontrolled investigation would be to subtract the average effect size for control groups from the intra-group effect size of the treatment condition under investigation. Here, the resulting "true" effect size for EPL II-B is 0.50, still showing a medium effect.

Although many couples demonstrated signs of marital distress, they were not seeking marital therapy. Thus, it appears that at least some couples at risk for significant distress might be reached through the offering of a low threshold communication training that is not labelled as marital therapy. The participation resulted for most couples in an enhancement of their relationship. For some couples, it may eventually clear the way for seeking more intensive treatment should problems increase and the relationship is in danger of deteriorating even further.

The idea of adding individual booster sessions was partly introduced by the couples themselves who requested further meetings after the EPL II training. It was encouraging to us that many participants wanted some additional sessions, showing their general acceptance of the training. It appears that when the intervention is provided in a safe, non-threatening context, couples become comfortable discussing their relationship issues and, in fact, desire additional opportunities to do so.

The hypothesis that individual booster sessions would enhance the effectiveness of the group intervention in the long term was also supported for relationship satisfaction and the overall effect-size. The effect sizes achieved for the EPL II-B were of medium size and comparable to the moderate success rate found by Whisman (1990). However, they were

considerably lower than the effect sizes of Behavioural Marital Therapy (0.95; see Hahlweg & Markman, 1988) but higher than those for everyday marital counselling in Germany (0.28; Hahlweg & Klann, 1997).

The booster sessions as practised allow the trainer to individualize and intensify the intervention after having provided the necessary communication skills. There are at least two mechanisms that might have contributed to the additional effect of the booster sessions: first, the booster sessions provided the couples with additional opportunities to practise the newly learned skills. This may be very important for distressed couples as their communication patterns are often inflexible and ritualized. Changing destructive communication is even harder as negative cognitions may influence the learning procedure. Second, the booster sessions provide the opportunity to individualize the intervention after each couple has had opportunities to experience ongoing difficulties or repetitive interaction patterns in their relationship. Gottman and Levenson (1999) noted that many distressed couples appear to have “perpetual issues”, discussing the same problems over and over in the same way over long time periods. The booster-sessions with one trainer present for the whole time may have offered an opportunity to discuss these basic conflicts in a safe and supportive setting, and may have changed the ritualized discussions.

Although we can only speculate that the additional effect results from intensifying skill training and the opportunity to select subjectively important topics to consider with the trainer present, the current findings suggest that we can increase the effects of indicated prevention by booster sessions.

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