

Can Prevention of Marital Distress Improve Well-Being? A 1 Year Longitudinal Study

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This study investigates the effectiveness of a marital distress prevention program for couples with low marital satisfaction with regard to a possible improvement of physical and psychological well-being. Fifty-nine couples, composing the intervention group, participated in a prevention program lasting 18 hours and focusing on the enhancement of coping resources (Couples Coping Enhancement Training). These couples were matched with 59 couples receiving no intervention (comparison group). The results reveal that the prevention program is able to improve psychological well-being among both genders and life satisfaction among women. It seems that these effects are stable over 1 year. On the other hand, no significant effects could be observed on physical well-being. Copyright © 2007 John Wiley & Sons, Ltd.

Marital distress has proved to be an important risk factor with regard to physical and mental health (for a review regarding physical health, see Robles & Kiecolt-Glaser, 2003; Schmaling & Goldman Sher, 2000; for mental health, see e.g., Assh & Byers, 1996; Coyne, Kahn, & Gotlib, 1987; Gove, Hughes, & Style, 1983; Weissman, 1987). In their literature review, Burman and Margolin (1992) assume that a high physiological arousal during marital discord may be responsible for the effects on physical health, and that stress and psychological consequences (e.g., depression) induced by marital discord may further alter the functioning of the immune system. They therefore ascertain that the prevention or treatment of marital problems should be associated with an improvement of health measures.

Further, several studies have shown that being married is associated with a better health condition than being single or separated (see e.g., Gove, 1972; Hu & Goldman, 1990), although it seems that this

benefit of marriage is only present in satisfying relationships (Burman & Margolin, 1992; Coyne & DeLongis, 1986; Waltz, Badura, Pfaff, & Schott, 1988).

Considering the high divorce rates observed in Western countries, which are above 50% in the USA (Sayers, Kohn, & Heavey, 1998) and between 30–40% in European countries (Eurostat, 2001), the risk of negative impact associated with marital distress and dissolution for health is evident. With this in mind, several scholars in marital research have developed marital distress prevention programs, most of them placing their emphasis upon the improvement of communication skills (for an overview, see Berger & Hannah, 1999), since these have repeatedly been reported as main predictors of marital quality and stability (e.g., Filsinger & Thoma, 1988; Gottman, Coan, Carrère, & Swanson, 1998; Huston & Vangelisti, 1991). Although there exists a large body of research on the effectiveness of those prevention programs with regard to improvements of marital quality and marital competencies (e.g., Bodenmann, Charvoz, Cina, & Widmer, 2001; Hahlweg, Markman, Thurmaier, Engl, & Eckert, 1998; Halford, Sanders, & Behrens, 1996; Kaiser, Hahlweg, Fehm-Wolfsdorf, & Groth, 1998; Markman, Renick, Floyd, Stanley, &

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Clements, 1993; van Widenfelt, Hosman, Schaap, & van der Staak, 1996), thus far, nearly no results have been reported on a positive impact of such programs on health issues.

This article is innovative in two senses: first, a novel prevention approach is presented, and second, effects of marital prevention on health are assessed. The general assumption of this contribution is that this marital distress prevention program (CCET) (Bodenmann, 1997a; Bodenmann & Shantinath, 2004), focusing on the enhancement of individual and dyadic coping skills, is able to improve not only marital quality (as has been shown by Bodenmann et al., 2001; Bodenmann, Pihet, Shantinath, Cina, & Widmer, 2006) but also psychological and physical well-being. When we keep in mind that stress (and in an important way marital stress) is significantly related to health problems, CCET should also improve health variables as well.

METHOD

Subjects

Participants were recruited by means of advertisements in newspapers. The couples in the intervention group responded to an advertisement about the CCET, while the couples in the comparison group answered a recruitment call for participants in a longitudinal study of predictors of marital functioning. Each couple in the intervention group paid a nominal sum equivalent to \$200 to participate in the program.

Due to the fact that the participating couples were interested in the training and registered for it, we could not randomize them into the two groups. A waiting list control group was not possible, as the duration of the study (2 years) was too long. Since the purpose of the study was to compare the evolution of two similar groups, we applied a matching procedure. Thus, our study represents a quasi-experimental design with a matched control group.

Baseline data obtained prior to the CCET were collected initially for 210 Swiss couples. Only those participants who completed all questionnaires over the 1 year period in both groups were considered. We experienced a dropout rate of 39.2% in the intervention group, and 22.2% in the comparison group. Dropout couples did not significantly differ from other couples regarding socio-demographics, but they showed a lower marital satisfaction ($t[209] = -2.93, p < 0.01$), more thoughts

concerning separation ($t[209] = 3.44, p < 0.01$) and a worse self-reported dyadic coping among men ($t[208] = -2.59, p < 0.05$). As it was not possible to track dropouts until the 1 year follow-up, we did not analyse this group further. Potential effects of the selection bias apparent here will be discussed later.

The 59 intervention couples with complete data were matched with couples from the follow-up study by means of a cluster analysis (based on squared Euclidian distances, with Ward agglomeration method), allowing to form pairs of couples with similar profiles on five variables (men's and women's ages, length of the relationship, and global marital satisfaction of each partner).

The demographic characteristics of the subjects at pre-test are presented in Table 1. The intervention and comparison group did differ neither in main demographic features nor in marital satisfaction. The 118 matched couples were on average close to 40 years old, in the relationship since around 15 years, with nearly 80% being married and around three fourths having children. They were rather highly educated with more than 90% having completed college or university study. They reported a medium level of satisfaction with an average *Partnerschaftsfragebogen* (PFB) total score of 60.5. Twenty-four percent of women and 31% of men scored below 54 (low marital satisfaction); 52% of women and 54% of men scored between 54 and 72 (medium satisfaction), and 20% of women and 12% of men scored 73 and above (high satisfaction).

Measures

The following measures were used to assess the effectiveness of the CCET intervention on well-being:

1. *General Life Satisfaction Questionnaire (Allgemeine Lebenszufriedenheit [ALZ])*. The ALZ (Bodenmann-Kehl, 1994) comprises five items, each measured on a 5-level scale ranging from 'not at all' to 'very much', evaluating the general life satisfaction (Cronbach's alpha in our sample, mean for men and women: $\alpha = 0.88$).
2. *Psychological Well-Being Questionnaire (Fragebogen zur seelischen Gesundheit, SD-Becker)*. This 18-item questionnaire developed by Becker (1984) measured on a 6-level bipolar scale the global psychological well-being, all items being coded so that high scores reflect a

Table 1. Demographics of the sample

	At pre-test											
	Intervention group (<i>n</i> = 59)						Comparison group (<i>n</i> = 59)					
	Women			Men			Women			Men		
	M	SD	Range	M	SD	Range	M	SD	Range	M	SD	Range
Age	39.5	8.0	22–58	41.7	7.7	25–60	40.9	8.1	25–62	42.8	9.0	26–65
Marital quality (PFB)	61.0	10.8	30–83	58.3	11.5	26–78	62.7	13.0	30–89	59.8	11.4	37–84
Duration of relationship (in years)	14.4		9.1	1–33		15.3		9.4	2–37			
Married couples (%)	86.4			86.4			77.6			79.7		
Living together (common household, %)	93.0			96.5			91.5			87.5		
Children (%)	71.2			74.6			81.4			78.0		
Income (family, %)	low			3.6			14.0					
	middle			56.4			66.7					
	high			40.0			19.3					
Elementary school (%)	1.8			0.0			5.3			1.8		
High school (%)	8.8			0.0			7.0			7.3		
College (%)	66.7			51.9			75.4			50.9		
University (%)	22.8			48.1			12.3			40.0		

M = mean. SD = standard deviation. PFB = *Partnerschaftsfragebogen*.

higher well-being. The total score showed discriminant validity (Bodenmann, 1995) and a satisfying reliability, with a Cronbach's alpha of $\alpha = 0.80$ in our sample (average for men and women).

3. *Physical Well-Being Questionnaire (Fragebogen zur Erfassung des Körperlichen Befindens PSSO)*. This 38-item questionnaire from Mohr (1986) assesses the frequency with which various physical symptoms such as headaches, back pain, or sleep difficulties are experienced, on a 5-level scale ranging from 'every day' to 'never'. Criterion validity of the scale is confirmed (see Mohr, 1986), and its reliability is very satisfying (Cronbach's alpha in our sample, average for men and women: $\alpha = 0.82$).
4. *Partnership Questionnaire (PFB)*. The PFB (Hahlweg, 1996) is a 30-item instrument used to measure marital quality ($\alpha = 0.95$), with scores below 54 corresponding to low, scores between 54 and 72 corresponding to medium and scores 73 and above corresponding to high levels of marital satisfaction. The PFB discriminates reliably between distressed and non-distressed couples, is sensitive to changes in marital therapy and has adequate reliability and validity (Hahlweg, 1996).

Procedure

The effectiveness of the program was tested using a longitudinal design that lasted 1 year. The participants were assessed four times: at pre-test (time 1, 2 weeks prior to the intervention), post-test (time 2, 2 weeks after the intervention), 6 month follow-up (time 3) and 1 year follow-up (time 4). Questionnaires were mailed to the couples at home. The participants were asked to complete them independently from one another.

Intervention Program

The 59 intervention couples participated in the CCET (Bodenmann, 1997b), which was offered in the form of a weekend course. The program consisted of six modules that spanned a total of 18 hours, and covered the following contents: (1) knowledge of stress and coping, (2) improvement of individual coping, (3) enhancement of dyadic coping, (4) exchange and fairness in the relationship, (5) improvement of marital communication and (6) improvement of problem-solving skills (see Widmer, Cina, Charvoz, Shantinath, & Bodenmann, 2005, for a more detailed description). All trainings for the

intervention group were conducted within a 6 month window of time.

The training was conducted in a group format, with the groups consisting of four to eight couples. Regardless of group size, a ratio of one trainer per two couples was maintained during the exercises (which involved four role plays covering stress communication and dyadic coping, fairness and boundaries, communication training and problem-solving training). A total of six trainers, all advanced-level graduate students in clinical psychology, were involved in the study. Standardization among trainers was ensured through the use of a detailed and highly structured manual for trainers (training manual published in German by Bodenmann, 2000; English translation of the manual available), used in combination with 30 hours of didactic training carried out over a 4 day period. In addition, each trainer received a total of 20 hours of group supervision before delivering the trainings and was regularly supervised during the entire study. Before delivering the training in the study, each trainer was videotaped and evaluated to ensure competence.

The couples in the comparison group did not receive any intervention at all, but were contacted only for the assessments. Help from other mental health experts (such as marital counselors or psychotherapists) was controlled for in both groups. Couples in both groups were excluded from the study in case they had such contact.

RESULTS

Differences between the intervention group and the comparison group were evaluated by means of repeated measures analyses of covariance for the well-being variables, with group as a two levels-between factor, time as a three levels-within factor (post-test vs. 6 months vs. 1 year) and gender as a two levels-within factor, in order to take into account the dependency between husbands and wives' scores. Since some differences were observed at pre-test (see below), we performed analyses of covariance, with pre-test scores entered as covariates. The hypothesis of a positive effect of the intervention would be supported by a main effect of the group factor, or less clearly by interaction effects between group and other factors. We did not test for trainer or group effects as each couple worked with all trainers during the different role plays (four in total), and the ratio of couples to trainer was always 2:1, independent of the

group size (four to eight couples). Effect sizes were indicated for significant effects by means of η^2 .

Well-Being at Pre-Test

As could be expected, men reported a significantly higher well-being at pre-test than women (multivariate analysis of variance [MANOVA] on pre-test scores, gender main effect: $[F\{1, 105\} = 6.89, p < 0.01, \eta^2 = 0.06]$). A significant gender by measure interaction ($F[1, 105] = 6.89, p < 0.01, \eta^2 = 0.06$) also reflected the fact that, in both the intervention and the control group, women had a much lower psychological well-being and a lower life satisfaction than men, whereas there were no gender differences regarding physical well-being (see Figure 1). More surprisingly, intervention couples reported an overall markedly lower well-being at pre-test, as compared with control couples, even though the two groups were matched on the marital satisfaction of both partners (MANOVA on pre-test scores, group main effect: $[F\{1, 105\} = 11.10, p < 0.001, \eta^2 = 0.10]$). This might be associated with the lower individual coping competencies observed at pre-test in the intervention group, significantly among women ($t_{[116]} = 3.23, p < 0.05$ for positive coping, and $t_{[116]} = -1.99, p < 0.05$ for negative coping) and marginally among men ($t_{[116]} = 1.88, p < 0.10$ for positive coping, and $t_{[116]} = -1.66, p < 0.10$ for negative coping).

In an attempt to better understand the state at pre-test, we further computed correlations between the various facets of well-being investigated, as well as their correlations with marital satisfaction. In both groups and for both genders, all aspects of well-being were clearly positively correlated (in the intervention group, r was between 0.39 and 0.55 for women, and between 0.30 and 0.57 for men, and, in the control group, r was between 0.34 and 0.36 for women, and between 0.25 and 0.41 for men), while the partners' well-being were not significantly correlated for neither of the facets of well-being. Interestingly, it is mostly for women that some aspects of well-being correlated with marital satisfaction: their general life satisfaction was clearly higher when they were happier in their partnership ($r = 0.41, p < 0.001$ in the intervention group and $r = 0.46, p < 0.001$ in the control group), but also when their partner was happier in their couple life ($r = 0.46, p < 0.001$ in the intervention group and $r = 0.33, p < 0.05$ in the control group); the psychological well-being of intervention women was also better when their

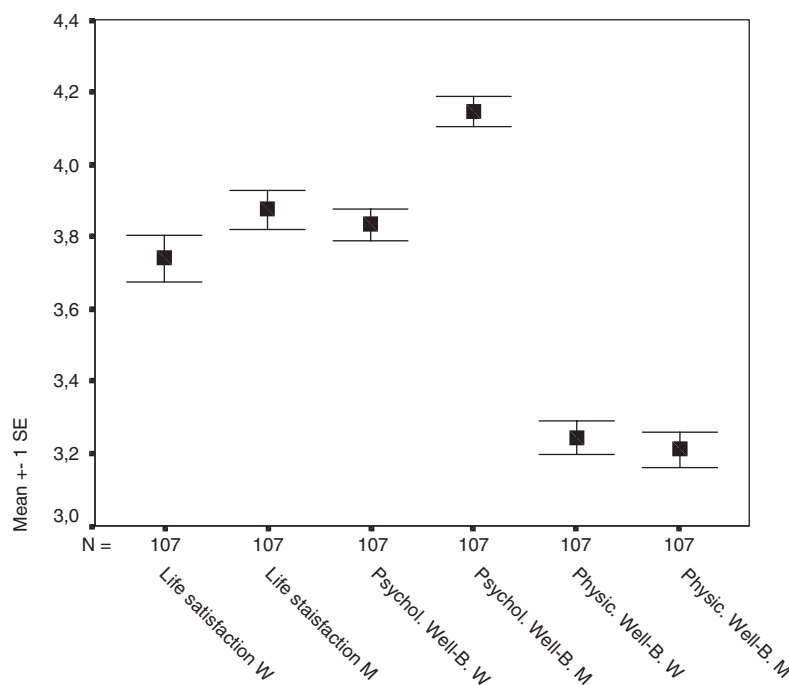


Figure 1. Differences between men (M) and women (W) at pre-test regarding the three dimensions of well-being (life satisfaction, psychological and physical well-being; mean and standard error [SE] of the mean)

partner was more satisfied from the relationship ($r = 0.36, p < 0.01$), but no such link was found in the control group. The picture differs with men, for which no association were observed between their marital satisfaction and any aspects of their well-being, except for intervention men who reported a higher life satisfaction when they were happier in the relationship ($r = 0.32, p < 0.05$).

Individual coping competencies were also related to well-being at pre-test, particularly in the intervention group: more negative coping (i.e., frequent use of self- or other-blaming, smoking or drinking, or eating or watching TV too much, escaping the situation, thinking over and over about the problem) was associated with less general life satisfaction ($r = -0.50, p < 0.001$ for intervention women and $r = -0.41, p < 0.01$ for intervention men, and $r = -0.33, p < 0.05$ for control women and $r = -0.10, p > 0.10$ for control men), as well as with less psychological ($r = -0.50, p < 0.001$; $r = -0.41, p < 0.01$; $r = -0.40, p < 0.001$; $r = -0.10, p > 0.10$, respectively) and physical well-being ($r = -0.40, p < 0.01$; $r = -0.44, p < 0.01$; $r = -0.35, p < 0.01$; $r = -0.33, p < 0.01$, respectively), while more positive coping (i.e., taking action to solve the problem,

searching for information, positive self-talk) was linked to higher general life satisfaction ($r = 0.26, p < 0.05$ for intervention women and $r = 0.27, p < 0.05$ for intervention men, and $r = 0.32, p < 0.05$ for control women and $r = 0.20, p > 0.10$ for control men), as well as to higher psychological ($r = 0.41, p < 0.01$; $r = 0.26, p < 0.05$; $r = 0.38, p < 0.01$; $r = 0.41, p < 0.01$, respectively) and physical well-being ($r = 0.07, p > 0.10$; $r = 0.23, p < 0.10$; $r = 0.21, p < 0.10$; $r = 0.01, p > 0.10$, respectively).

In summary, at pre-test, the couples who registered to participate in the CCET reported a lower well-being than couples who volunteered to take part in a longitudinal study of marital functioning. Women in both groups estimated their psychological well-being and their life satisfaction lower than men did. All individuals, independent of gender and group, reported a rather homogenous level of well-being across the three facets considered, which is clearly independent of the well-being of their partner. But women were more satisfied with their life when both they and their partner felt happier in their relationship, while men's well-being was little affected by their marital satisfaction. And the well-being of both men and women

was better among individuals reporting higher individual coping competencies, and particularly a less frequent use of negative coping strategies.

Changes in Well-Being after Taking Part in the CCET

Differences in well-being between the intervention and comparison group across the three post-intervention time points were first assessed through a multivariate analysis of covariance comprising the three questionnaires' total scores (general life satisfaction, physical well-being and psychological well-being), controlling for pre-test scores on the three variables.

Results show a significant group main effect ($F[1, 97] = 7.38, p < 0.01, \eta^2 = 0.07$; see Table 2), with a better overall well-being in the intervention couples across the three time points, i.e., from 15 days post intervention to the 1 year follow-up. Moreover, overall well-being remains stable over time in the intervention couples, while it decreases among the comparison couples (group \times time interaction effect: $F[2, 96] = 3.02, p = 0.05, \eta^2 = 0.06$). Men tend to report a better overall well-being than women (gender main effect: $F[1, 97] = 3.55, p = 0.10, \eta^2 = 0.04$), and this difference is stronger in the intervention group (gender \times group interaction effect: $F[1, 97] = 9.43, p = 0.01, \eta^2 = 0.09$). A marginally significant group \times measure interaction ($F[2, 96] = 2.97, p < 0.10, \eta^2 = 0.06$) reflects the fact that, when the groups are made equal on their pre-test levels by partialling out the pre-test scores, the intervention group tends to have a better well-being than the comparison group on some measures, while the two groups show comparable well-being for others, as illustrated below by analyses of each specific scale.

Repeated measures analysis of covariance performed separately for each scale shows that *general life satisfaction* was only slightly affected by the CCET: we observe an improvement in the intervention group parallel to a decrease in the comparison group, but the main effect did not reach significance for the partners considered together (group main effect: $F[1, 113] = 2.32, n.s.$). This effect is in fact noticeable mostly for women, with a marginally significant group by gender interaction ($F[1, 113] = 2.73, p < 0.10, \eta^2 = 0.02$). As illustrated in Figure 1, at pre-test, the difference between the intervention and comparison groups is stronger among women than among men, although always in the direction of less life satisfaction in the

Table 2. Evolution of general life satisfaction, psychological and physical well-being over the four time points in the intervention and comparison groups for men and women

	Women						Men							
	Pre-test		Post-test		6 months		12 months		Pre-test		6 months		12 months	
	M	(SD)	M	(SD)	M	(SD)	M	(SD)	M	(SD)	M	(SD)	M	(SD)
General life satisfaction—intervention group	3.59	(0.7)	3.76	(0.7)	3.60	(0.8)	3.69	(0.7)	3.78	(0.6)	3.77	(0.6)	3.84	(0.6)
General life satisfaction—control group	3.90	(0.6)	3.77	(0.6)	3.81	(0.6)	3.74	(0.6)	3.99	(0.5)	3.96	(0.5)	3.96	(0.4)
Psychological well-being—intervention group	3.20	(0.4)	3.28	(0.5)	3.27	(0.5)	3.31	(0.5)	3.15	(0.6)	3.20	(0.6)	3.23	(0.5)
Psychological well-being—control group	3.27	(0.6)	3.19	(0.6)	3.20	(0.5)	3.18	(0.6)	3.29	(0.4)	3.20	(0.5)	3.24	(0.4)
Physical well-being—intervention group	3.71	(0.4)	3.76	(0.4)	3.75	(0.5)	3.76	(0.5)	4.09	(0.4)	4.02	(0.5)	4.07	(0.5)
Physical well-being—control group	3.98	(0.5)	3.91	(0.5)	3.92	(0.5)	3.90	(0.6)	4.21	(0.5)	4.22	(0.5)	4.21	(0.5)

M = mean. SD = standard deviation.

intervention group. Nevertheless, for women, the life satisfaction improved after taking part in the CCET, and worsened without intervention, while for men, it remained mostly stable over time in both groups.

Psychological well-being was strongly affected by taking part in the CCET, showing a clear increase that remained stable over time in the intervention group, while it tended to decrease over time in the comparison group, the group main effect being very significant and explaining 11% of the variance ($F[1, 101] = 12.97, p < 0.001, \eta^2 = 0.11$). As illustrated in Table 2, after the intervention, the psychological well-being of men and women reached the level of the control group at pre-test. In comparison, the psychological well-being of couples who did not take part in the CCET clearly decreased over the time, reaching after 1 year a similar level to that of the intervention couples at pre-test.

Physical well-being did not appear to be affected by the intervention, since no clear differences in its evolution after the pre-test emerged between the two groups (group main effect: $F(1, 113) = 0.07, n.s.$; no interaction effects), which both showed rather stable levels over time (see Table 2).

Evolution in well-being is further related to changes in marital satisfaction: the more marital satisfaction improves between pre-test and 1 year follow-up, the better the life satisfaction, the psychological and the physical well-being get over the same time period, among women for all aspects ($r = 0.49, p < 0.001$; $r = 0.18, p < 0.10$ and $r = 0.19, p < 0.05$, respectively), and among men for the aspect of well-being that showed changes ($r = 0.09, n.s.$; $r = 0.21, p < 0.05$ and $r = -0.05, n.s.$, respectively).

DISCUSSION

This study evaluated the impact on well-being of a marital distress preventive program anchored in the existing body of empirical and theoretical research on marriage and stress psychology: The CCET is the first prevention program that goes beyond teaching communication skills and also addresses the acquisition of coping skills in couples. As communication deficits often occur due to inadequate stress reduction on the part of both partners, it is important not only to improve communication skills but to also enhance coping strategies in the individual as well as within the couple. To the difference of most studies concerning marital distress prevention programs, we focused on middle-aged couples living together for

several years and experiencing rather low marital quality, which can be considered at higher risk than the newlyweds frequently studied for negative impacts on their physical and psychological health (Assh & Byers, 1996; Coyne et al., 1987; Gove et al., 1983; Kiecolt-Glaser et al., 1993). However, how is it possible that at pre-test, couples who registered for taking part in the CCET initially had lower levels of well-being compared with the control group, as the two groups had been matched on age, length of the relationship and marital satisfaction of each partner? Competencies, and especially individual coping skills, have been shown to be important predictors of both the physical and the psychological health of the partners, with an even stronger predictive power than marital satisfaction (Bodenmann, 1997b). And in fact, individual coping competencies have been found to be lower at pre-test in the intervention group. The couples who volunteered to take part in the intervention might indeed have identified that they were lacking skills to cope with stress. The stronger correlations observed between marital satisfaction and some aspects of well-being among couples willing to attend a prevention workshop and among women may further reflect the fact that these individuals appear to be more affected in their well-being by what occurs in the relationship. This selection bias raises the question of whether similar results (i.e., improved well-being in the intervention group and not in the control group) would also be found if the two groups initially shared similar levels of individual coping competencies. Since some initial lack of competencies can be considered a necessary condition to expect some efficacy of an intervention focused on such competencies, we think that further randomized studies are particularly needed to compare the evolution in the well-being of groups with rather low initial competencies.

The gender differences observed in the present study are in line with the body of evidence showing that women are expected to, and do take greater responsibility for the relationship: caring and taking responsibility for the relationships within the family is a part of the woman's traditional role and of the motherhood concept (Blair-Loy, 2001; Reger, 2001) and remains discouraged in male-dominated employment areas (Mennino & Brayfield, 2002); it is also expressed in the double duty of working women who, despite career implication, continue to assume primary responsibility for the well-being of the family (Gottfried, Gottfried, Bathurst, & Killian, 1999; Huppe & Cyr,

1997; Pleck, 1977; Thomas, 2002) even though it may be detrimental to their own well-being (Haerensam & Bejerot, 2001; Krantz & Oestergren, 2001; Lundberg & Frankenhaeuser, 1999; Ozer, 1995; Simon, 1995).

After having taken part in the CCET, the couples' well-being improved significantly. Men and women receiving the intervention reported a substantial and stable improvement regarding their psychological well-being within 1 year, while the couples who did not take part in the CCET reported a decrease over this time span. A similar effect is observed regarding general life satisfaction, although of smaller magnitude and for women only. The picture differs regarding physical well-being, both groups reporting stable levels of psychosomatic complaints over time. This last dimension of well-being thus seems to remain unaffected by CCET.

It is particularly noteworthy that not only marital satisfaction and competencies tackled by the program can be improved by means of a course lasting only 18 hours in a group setting (see Bodenmann et al., 2006), but also that changes can be achieved regarding the psychological well-being of both partners, which is, after 1 year, obviously better in the intervention group. Focusing on individual and dyadic coping competencies yields very promising results, which cannot be achieved with programs limited to communication training (e.g., Halford et al., 1996; van Widenfelt et al., 1996). These results position the CCET as a particularly attractive prevention program. Other preventive programs that have recently started to include stress coping training, although from a different perspective based on a mindfulness meditation program, also seem to give promising results for improving marital satisfaction and well-being (Carson, 2003).

It is further interesting to find, on the one hand, that both genders reported similar changes on psychological well-being, and no changes in physical well-being, whereas women reported a greater change in their life satisfaction than did men. The latter may be due to the fact that the life satisfaction of women, as seen in pre-test data, is more influenced by their own and their partner's marital satisfaction than it is the case for men, which is in line with the stronger dedication and feelings of responsibility women tend to have towards their couple relationship. This is, e.g., confirmed by a study by Bodenmann (1997b), wherein the well-being of the women is associated with the communication and coping competencies of their

husbands, which is not the case the other way round. However, in the present research, changes were also observed among men, illustrating that the CCET is also able to reach the husbands. The reason why psychological but not physical well-being is found to be enhanced by the program remains unclear, since previous research has shown a negative impact of marital distress on both of these domains (Bloom, Asher, & White, 1978; Burman & Margolin, 1992; Gallo, Troxel, Matthews, & Kuller, 2003; Hintikka, Koskela, Kontula, Koskela, & Viinamaeki, 1999; Mayne, O'Leary, McCrady, Contrada, & Labouvie, 1997; Prigerson, Maciejewski, & Rosenheck, 1999), as well as a positive impact of marital satisfaction on these two domains through the buffering of psychological distress and negative life events (e.g., Waltz et al., 1988). But there is also some evidence that psychological illness can be more closely linked to marital dissatisfaction than physical illness (Bourras, Vanger, & Bridges, 1986). We guess, however, that the physical well-being of the sample is already rather high at the beginning of the study, and thus improvement is not expectable. Further research is needed to better understand the interactional processes between marital satisfaction and well-being or health changes after an intervention, and to untangle which components of the intervention are most effective to achieve which kind of changes. Another yet unanswered question is whether the impact of the intervention is direct on both marital satisfaction and well-being, or whether some improvement can be indirect. For example, can the observed improvement in the marital satisfaction be mediated by a better general well-being?

The biggest limitation of the present study is the fact that the selection bias evoked above may be held responsible for the changes observed in the well-being of the intervention couples, who selected themselves among men and women with a lower well-being at the beginning of the study, and may have thus been more prone to improve independently of any intervention. Using a randomized waiting-list control group could have prevented such a bias, but was unfortunately not feasible since the study lasted for more than 1 year. One point in favour of attributing the changes to the intervention rather than to this bias is the correlations observed between the changes in marital satisfaction (which was similar in the two groups at pre-test) and the changes in well-being between the pre-test and the 1 year follow-up. Another limitation of the present study is that it relies on self-report data, which may be influenced by the

expectations of change of couples who took part in the intervention. Previous results regarding coping competencies did not support this hypothesis, since similar results have been observed for data relying on self-report and on hetero-report by the partner Bodenmann et al., 2006). And further analysis of videotaped interactions that are currently being made will allow to shed more light on this question.

Based on these results, the CCET can be considered an efficient prevention approach not only for improving marital quality but also the well-being of both partners. This means that its usefulness for practitioners is given not only in the context of marital counseling but also in health psychology. Further research, however, should be drawn to illustrate how marital distress prevention programs may also contribute to a general improvement of health in couples.

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