

## Balancing Work and Relationship: Couples Coping Enhancement Training (CCET) in the Workplace

Marcel Schaer,\* Guy Bodenmann and Thomas Klink  
*University of Fribourg, Switzerland*

The current study is among the first to address the question of efficacy of a couple-oriented prevention program in the context of the workplace. As many spillover and cross-over effects between the workplace and couples' private lives are known, such a focus seems promising. One hundred and fifty-seven couples participating in the study were randomly assigned to three treatment conditions: a couple-oriented intervention (Couples Coping Enhancement Training; CCET), an individual-oriented coping intervention (ICT), and a waiting-list control group. Self-report data were collected at pre-test, post-test (2 weeks after the intervention), and at follow-up (5 months after the training). Results are promising for the couple-oriented intervention that significantly outperformed both the ICT and the waiting-list control group. CCET participants scored not only higher in relationship variables (such as communication and dyadic coping) after the training but also in individual variables (e.g. burnout). These findings support the notion that companies should invest more in the well-being of the relationships of their employees.

Cette étude compte parmi les premières à aborder la question de l'efficacité d'un programme de prévention centré sur le couple dans l'environnement professionnel. Cette approche semble prometteuse puisque l'on a mis en évidence de nombreux processus de compensation et de transfert entre la vie de travail et la vie privée des couples. 157 couples relevant de la recherche ont été aléatoirement distribués dans trois conditions: une intervention centrée sur le couple (Formation des couples au renforcement du « faire-face »—CCET), une intervention sur le « faire-face » centré sur l'individu (ICT), et une liste d'attente faisant office de groupe contrôle. Des données fournies par les sujets ont été recueillies en pré-test, en post-test (deux semaines après l'intervention) et en suivi (cinq mois après l'intervention). Les résultats sont prometteurs pour l'intervention centrée sur le couple qui se révèle significativement plus performante que l'ICT et le groupe témoin. Les participants CCET ont de meilleurs résultats non seulement pour les variables relationnelles (telles que la communication et le faire-face à deux) à l'issue de la formation, mais aussi pour les variables individuelles (par exemple le burnout). Ces constatations renforcent l'idée que les entreprises devraient investir davantage dans le bien-être relationnel de leurs salariés.

---

\* Address for correspondence: Marcel Schaer, University of Fribourg, Institute for Family Research and Counseling, Rue de Faucigny 2, 1700 Fribourg, Switzerland. Email: marcel.schaer@unifr.ch

## INTRODUCTION

In the second half of the last century, tremendous environmental, economic, political, and sociocultural changes contributed to the restructuring of couples in their relation to work (see Cooper, Dewe, & O'Driscoll, 2001). Several fundamental changes in family and work structures, such as the participation of women in the workforce, family arrangements that deviate from traditional gender-based roles (e.g. dual-earner couples), and technological changes (e.g. cell phones, portable computers) have reduced the separation between job and family life. Work and relationships are no longer separate domains but rather two closely interconnected facets of human life (e.g. Edwards & Rothbard, 2000). Work and relationship can influence each other in both positive and negative ways (Grzywacz & Marks, 2001; Rogers & May, 2003), mainly by two processes: spillover and cross-over. Spillover is an intra-individual transmission of experience from one domain to another domain while a cross-over effect is an inter-individual transmission from one member of a dyad to the other. A large body of research highlights the aspects of negative spillover from work experience on family life. Several studies show that stress in the workplace, such as days characterized by a high workload or annoying social interactions, were correlated with greater anger or withdrawal during interactions with the partner at home (Repetti, 1989; Story & Repetti, 2006). Job stressors also showed a negative impact on daily parenting behavior (Repetti & Wood, 1997). On the other hand, previous studies yielded empirical evidence for inverse patterns, namely that negative experiences in the family might spill over to one's performance at the workplace (Peeters, Montgomery, Bakker, & Schaufeli, 2005). Thus, job satisfaction was found to be correlated with family stress (Rogers & May, 2003) as well as with job burnout, especially in men (Peeters et al., 2005). Conversely, positive experiences in the non-work domain (i.e. close relationship) were found to be positively associated with one's functioning at work (Sonnentag, 2003).

In addition to the spillover effects, cross-over effects are presented (Demerouti, Bakker, & Schaufeli, 2005; Matthews, Del-Priore, Acitelli, & Barnes-Farrell, 2006; Neff & Karney, 2007). Matthews et al. (2006) found that when women reported more work-relationship conflict, men reported a higher level of relationship tension. Neff and Karney (2007) showed that when women reported higher stress, husbands scored lower in marital satisfaction. In another study, women's feelings of depression or overload were greater when husbands reported more pressure at work (Crouter, Bumpus, Maguire, & McHale, 1999). These studies illustrate that apart from spillover effects, cross-over effects may also play an important role for couples. Partners bring their stress home, which affects the whole dyad, triggering dyadic stress (Bodenmann, 2005). One study done by Bodenmann, Ledermann, and

Bradbury (2007) has shown that external stress significantly triggers internal stress (within-dyad stress as dyadic arguments and conflicts) which is negatively associated with relationship quality and sexual functioning.

In sum, current findings strongly support the notion that experiences at the workplace and couple's life are closely connected to each other and that unresolved stress in one domain affects the other domain in a significant manner. In consequence, companies should be motivated to consider these interconnections (spillover and cross-over processes) in helping employees not only to handle more effectively their individual stress but also in helping to reduce stress in the relationship. Although this idea is perhaps far from current practice, it is a logical consequence of research which follows the above-reported findings.

## Intervention Programs in Companies

Currently, most of the programs focus on a reduction of individual stress and on an enhancement of work-related personal resources of employees (such as teaching adequate coping skills, introducing relaxation methods, offering cognitive-behavioral interventions) (see van der Klink, Blonk, Schene, & van Dijk, 2001). However, as Peeters et al. (2005) noted in their conclusion: "Companies are usually quite ready to provide work related training and support to employees, but maybe it's time that organizations also try to provide training and support for non-work-related demands" (p. 58). But do such programs exist and what is their efficacy? These questions are easily answered, as only a few programs for non-work-related demands have so far been presented in companies.

In this context, Martin and Sanders (2003) developed a parenting program (Triple P) for the workplace to strengthen education-related skills (because work stress often weakens parenting skills; see Repetti & Wood, 1997). Results of this intervention showed that parents in the intervention group reported significantly lower levels of disruptive child behavior, dysfunctional parenting practices, and higher levels of self-efficacy in managing both home and workplace demands. These improvements were maintained until the 4-month follow-up.

Markman and colleagues adapted the Prevention and Relationship Enhancement Program (PREP; e.g. Markman, Stanley, Blumberg, Jenkins, & Whitely, 2004) and implemented their modified program (Building Strong and Ready Families Program) in the United States Army. Results suggested that the program yielded positive effects on relationship satisfaction, going alongside a reduction in spillover of stress into the relationship (Stanley, Allen, Markman, Saiz, Bloomstrom, Thomas, Schumm, & Bailey, 2005). The generalisation of these findings is, however, limited because of a lack of a control group as well as long-term follow-up measures. Furthermore, the

authors were confronted with a very high drop-out rate for the 1-month follow-up. To our knowledge, these two programs are the only ones reported so far that address the topic of helping employees to deal with private demands.

To conclude, recent interventions in companies tried mainly to reduce work-related stress or very rarely family-related stress. Research findings on spillover and cross-over effects of stress suggest that to reduce stress in an efficient manner, it would be helpful if stress prevention training in companies offered both work- and family-related stress management and prevention strategies; but not all stress can be prevented. On this account, the employees should also learn to handle the transmission effects of stress.

A program that may have the potential to do this is the Couples Coping Enhancement Training (CCET) (Bodenmann & Shantinath, 2004), an evidence-based preventive intervention that addresses individual and dyadic stress and teaches couples individual and dyadic coping (the way partners cope together with stress; for a definition of dyadic coping, see Bodenmann, 2005). Although this program has not yet been used in the context of workplace interventions, the CCET has proven its efficacy in previous studies, showing that the training was able to improve relationship quality, individual and dyadic competences (such as coping, communication, problem-solving), as well as psychological well-being (e.g. Bodenmann, Pihet, Shantinath, Cina, & Widmer, 2006; Ledermann, Bodenmann, & Cina, 2007; Pihet, Bodenmann, Cina, Widmer, & Shantinath, 2007; Widmer, Cina, Charvoz, Shantinath, & Bodenmann, 2005). These studies yielded effect sizes of  $d = .40$  to  $.80$  within 2 years.

## Overview of Current Study

The goal of this study is to implement the Couples Coping Enhancement Training (CCET) in a nationwide telecom company in Switzerland (Swisscom) and to evaluate the efficacy of this program in a randomised controlled trial including three intervention groups. In the first group couples participated in CCET, in the second group only the partner working in the company received an individual coping training (ICT, described below), and in the third group couples formed a waiting-list control group.

It is hypothesised that CCET should increase dyadic competencies (such as dyadic coping, communication). In addition to these primary target variables, we also expected positive effects of the training on general well-being and life satisfaction and workplace variables (such as less burnout, less work stress). Secondly, we expected significant effects of the individual-oriented intervention group (ICT) on the individual variables (e.g. burnout, work stress, general well-being, and life satisfaction), with comparable effects, however, to the CCET group. Third, we hypothesised that ICT and CCET are superior to the waiting-list control condition.

## METHOD

## Participants

The study was conducted with employees of a nationwide operating telecom company in Switzerland (Swisscom). One hundred and sixty-eight couples participated in this study. The demographic characteristics of the participants at pre-test were as follows: the average age of the employees was 40.79 years ( $SD = 7.83$ ; range = 20–62 years) and the average age of their partner was 39.27 years ( $SD = 7.71$ ; range = 25–63 years). Eighty per cent of the employees were male. The mean duration of their relationship was 12.8 years ( $SD = 9.14$ ; range = 1–39). The demographic characteristics of the participants at pre-test are presented in Table 1.

Eleven couples (7%) dropped out prior to the start of the training due to sickness, pregnancy, or miscellaneous reasons. Thus, the final sample was composed of  $N = 157$  couples. Fifty-five couples were in the CCET group,

TABLE 1  
Sample Characteristics

Variable	CCET Group		ICT Group		Control Group	
	M	SD	M	SD	M	SD
Degree of occupation (%)						
Employees	92.9	19.1	93.0	15.7	92.9	16.5
Non-employees	67.2	35.3	75.4	28.7	73.5	29.2
Duration of relationship	14.9	10.8	12.4	9.1	11.6	6.8
Number of children	1.3	1.3	1.11	1.0	1.5	1.1
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Marital status						
Unmarried	25	45.5	14	27.5	15	26.0
Married	30	54.5	34	72.5	39	74.0
Household						
With partner	51	92.7	44	91.7	49	89.6
Without partner	4	7.3	4	8.3	5	10.4
Type of employment for employees						
Specialist	26	47.4	28	58.3	26	48.1
Management	25	45.4	13	27.1	23	42.6
Miscellaneous	4	7.2	7	14.6	5	9.3
Type of employment for non-employees						
Specialist	19	34.5	19	39.6	16	29.6
Management	10	18.3	5	10.5	8	14.9
Househusband/wife	14	25.5	11	22.9	17	31.5
Miscellaneous	12	21.8	13	27.1	13	24.1

48 couples in the ICT group, and 54 couples in the control condition. The attrition rate within the 5-month follow-up was 11% (17 couples; seven for the CCET, four for the ICT, and six for the control group). Missing data were replaced by the stochastic Regression Imputation (Little & Rubin, 2002). A variety of analyses, based on demographic and the dependent variables, indicated at pre-test no significant differences between couples who remained in the study and those who dropped out, with two exceptions: Non-employees in couples who drop out show marginally higher irritation disengagement ( $F(1, 154) = 3.66, p = 0.06$ ) and marginally lower life satisfaction ( $F(1, 154) = 3.30, p = 0.07$ ).

Participants were recruited by means of an in-house newspaper. Each couple paid a nominal sum equivalent to \$120 to participate in the program. Full confidentiality was assured.

## Procedure

The efficacy of the couple-oriented program (CCET) was tested using a longitudinal design that lasted 5 months. Participants were assessed three times: at pre-test (Time 1, 2 weeks prior to the intervention); post-test (Time 2, 2 weeks after the intervention), and 5-month follow-up (Time 3). Participants were randomised to three different groups: (a) CCET intervention group ( $N = 55$  couples), (b) individual-training intervention ( $N = 48$  couples), and (c) a waiting-list control group ( $N = 54$  couples). After the follow-up (7 months after the registration) the control group couples and the individual group couples also received the CCET. Questionnaires were mailed to the couples at home. Participants were asked to complete them independently from one another.

## Measures

*Dyadic Coping Inventory (DCI; Bodenmann, 2007)*. This 37-item questionnaire assesses stress communication and dyadic coping as perceived by each partner about: (1) their own coping (“What I do when I am stressed and what do I when my partner is stressed”) (2) each partner’s perception of the other’s coping (“What does my partner do when he/she is stressed, and what does my partner do when I am stressed?”), and (3) each partner’s view of how they cope as a couple (“What we do when we are stressed as a couple”). Although there is a total of nine subscales or two aggregated scales (positive dyadic coping and negative dyadic coping) we used the total score of the DCI in this study ( $\alpha = .92$  for both genders).

*Marital Communication Questionnaire (MCQ; Bodenmann, 2000b)*. This questionnaire assesses different positive and negative marital communication

behaviors in conflict situations such as criticism, defensiveness, contempt, belligerence, domineering, positive affect, and care. It is based on the communication categories proposed by the SPAFF coding system developed by Gottman (1994), and contains 19 items which are administered on a 6-point scale (1 = never, 6 = very often). The items can be combined into a global score measuring the quality of marital communication (Cronbach's  $\alpha = .78$ ) with high scores indicating high quality of marital communication. The validity of the questionnaire has been demonstrated in previous studies (Bodenmann, 2000b).

*Questionnaire Assessing Well-Being (QAWB).* This questionnaire, developed by Bodenmann-Kehl (1999), assesses psychological and physiological well-being with six items (three items for each aspect). The Cronbach's alpha for the total score in our sample was  $\alpha = .84$ .

*General Life Satisfaction Questionnaire (GLS).* The GLS (Bodenmann-Kehl, 1999) comprises four items, each measured on a 5-point scale ranging from "not at all" to "very much", evaluating general life satisfaction (Cronbach's alpha in our sample:  $\alpha = .78$ ).

*The Oldenburg Burnout Inventory (OLBI).* This was developed by Demerouti (1999) and assesses symptoms of burnout on two dimensions: (1) Exhaustion (six items;  $\alpha = .80$ ) refers to general feelings of emptiness, overtaxing from work, a strong need for rest, and a state of physical exhaustion and (2) Disengagement (seven items;  $\alpha = .74$ ), which refers to distancing oneself from the object and the content of one's work and to negative, cynical attitudes and behaviors toward one's work in general. Exploratory and confirmatory factor analysis confirmed its two-dimensional factor structure (Demerouti, Bakker, Vardakou, & Kantas, 2003).

*Irritation (IR).* The irritation questionnaire was used to assess subjective perceived emotional and cognitive strain in the professional context. The questionnaire was developed by Mohr, Rigotti, and Mueller (2005) and encompasses seven items that are administered on a 7-point scale. The two dimensions (cognitive and emotional irritation) can be summed up to a composite index. Internal consistencies in our study were .88 and .91 for cognitive and emotional irritation, respectively. The validity of the instrument has been demonstrated (Mohr, Mueller, & Rigotti, 2005).

## The Intervention Programs

*Individual coping Training (ICT).* The individual coping training (ICT) consisted of two modules addressing stress and coping in individuals. In the

first module, participants were introduced to the concept of stress as described by Lazarus and Folkman (1984). Here the physiological, psychological, and social consequences of stress were taught. In the second module, participants learned a variety of ways to cope and prevent individual stress. They were motivated to strengthen their repertoire of pleasant and stress-countering activities, to prevent unnecessary stress by reducing unrealistic expectations, and to manage time more realistically. Participants also were introduced to the situation-based stress approach of Perrez and Reicherts (1992) and well-known cognitive behavioral techniques such as progressive muscle relaxation (Carlson & Bernstein, 1995) and problem-solving techniques (D'Zurilla & Goldfried, 1971).

The training was completed in one day (8 hours) and included eight to 12 participants with one workshop provider leading the group. To be comparable with the CCET with regard to the duration of the program, the ICT also included four hours of individual lectures on a textbook before the training and another three hours of exercises to be administered after the program. Thus the duration of the ICT was similar to the CCET (15 hours).

*Couples Coping Enhancement Training (CCET).* The Coping Enhancement Training (CCET) is an evidence-based relationship distress prevention program that is described in more detail by Bodenmann and Shantinath (2004). The CCET was offered in a weekend format (with four to eight couples). The CCET has a duration of 15 hours and consists of six modules: The first two modules address the issue of stress (its origins, its appearance, and its consequences) while the second module teaches effective individual coping (prevention of unnecessary stress, establishing regular stress-countering activities, adequate appraisals of demanding situations, fit of coping strategies with demands of the stressful situation, etc.). The third module is based on the systemic-transactional coping approach in couples developed by Bodenmann (2005). In this module, couples learn how to enhance their dyadic coping competences through learning how to communicate explicitly their own stress to the partner, how to accurately recognise the partner's stress, and how to provide helpful and adequate dyadic coping toward the partner. The fourth module illustrates the importance of mutual fairness and equity in giving and receiving supportive dyadic coping. The last two modules are based on the communication and problem-solving training as they are used in behavioral couple therapy or prevention (see e.g. PREP; Markman, Renick, Floyd, Stanley, & Clements, 1993). The CCET encompasses four supervised communication exercises (addressing communication training, three-phase method teaching stress communication and supportive dyadic coping, problem-solving, and mutual fairness). In these exercises the couples were able to exercise and enhance the new skills, prompted by a

workshop provider in separate rooms. Regardless of group size, a ratio of one trainer per two couples was maintained during the exercises. Standardisation of training was ensured through the use of a detailed and highly structured manual for trainers (training manual published in German by Bodenmann, 2000a; English translation of the manual available). All workshop providers had received the intensive training required and were licensed to deliver the CCET, and all workshops (ICT and CCET) were conducted within 6 months.

## Statistical Analyses

To evaluate the effects of the intervention (ICT, CCET, control condition) we conducted a  $3 \times 3 \times 2$  (time  $\times$  group  $\times$  employee) repeated measures multivariate analysis of (co)variance (MANCOVA with a GLM-based procedure). Time and employment were within-dyad factors, while group (different treatment conditions) was a between-dyad factor. Time included three times of measurement (pre, post, follow-up), the variable employee included status (person employed in the Swisscom company versus non-employed partner), and the group variable represented three conditions (ICT, CCET, and waiting-list control group). Because the CCET is a couple-based training, relationship variables could have an important influence on the variation in the dependent variables. To control for this effect, relationship satisfaction and the duration of the relationship were used as covariates.

Because the individuals are the unit of our analysis, the data are not independent. This fact was accounted for in all analyses, by including dyad as a nested factor in the design (see DeCoster, 2002). With the exception of two couples, only one partner of the dyad was employed in Swisscom. That means that most of the partners within dyads were distinguishable. Because of the small number of indistinguishable dyads, this problem is ignored in the analyses and these two cases were randomly assigned to one of the groups.

## RESULTS

### Preliminary Analyses

Preliminary analyses were conducted to examine whether there were any pre-test differences between the three groups on the various demographic variables and the above-described scales measuring different aspects of relationship competencies and well-being. As statistical analyses revealed, there were no significant differences between the three groups in demographic variables and outcome measures at pre-test (before intervention).

## Results on the Efficacy of the Interventions

Means and standard deviations of the dependent variables are presented in Table 2. Because of the significant interaction effects for time  $\times$  group  $\times$  employee in most of the variables (see Table 3), we also report a priori contrasts (see Table 4).

*Results of the Intervention on Relationship Variables (Dyadic Coping and Communication).* For the dyadic coping (DCI) there were significant time, time  $\times$  group and time  $\times$  group  $\times$  employee effects (see Table 3). The CCET intervention group shows a significant increase in dyadic coping in the pre–post comparisons that was not found in the two other conditions (ICT and control group). In contrast to non-employed partners, the employed persons maintain this enhancement in dyadic coping until the follow-up and continue to show better dyadic coping 5 months later. There were no significant group differences between ICT and control group (see Table 4).

For the communication skills variable, there was a significant time  $\times$  group effect (Table 3). Couples in the CCET group showed a greater improvement in communication skills compared to the other two groups. In the follow-up, this effect remains only for the employed persons. No significant group differences were found between IC intervention and control group.

*Results of the Intervention on General Variables (Well-Being and Life Satisfaction).* For well-being (QAWB), no time or time  $\times$  group effects were found (Table 3). However, a significant effect was found for the variable employee. Employed subjects (who had received either an individual or couple-oriented intervention) showed a significant or marginal increase in well-being over the 5-month period. Compared to the ICT group and control group, the non-employed partners who had attended a CCET workshop showed a decrease in well-being, especially between post-test and follow-up (Table 4).

In the CCET group, on the one hand, the employees displayed a significant increase in life-satisfaction (GLS) in contrast to the other two groups. On the other hand, the non-employees showed first an increase and then a significant decrease. That means that only the employees in the CCET group could maintain this positive effect over the 5 months (Table 4).

*Results of the Intervention on Work-Related Variables (Burnout and Irritation Measures).* Employees in the CCET intervention group displayed a significantly greater decrease in the burnout inventory (OLBI) in the pre–post comparisons than the other two groups (OLBI<sub>TOT</sub>, see Table 4), especially in the subscale exhaustion (OLBI<sub>EXH</sub> pre–post: CCET–ICT:  $F(1, 98) = 5.693, p < .05, \eta^2 = .055$ ; CCET–Control group:  $F(1, 111) = 7.04, p < .01$ ,

TABLE 2  
Means and Standard Deviations for the Three Groups  
(CCET, ICT, control group) and for the Three Time Measurement Points

<i>Variable</i>	<i>Time</i>	<i>CCET</i>		<i>ICT</i>		<i>Control Group</i>	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<b>Dyadic Coping (DCI)</b>							
Employees	t0	124.59	19.33	125.53	14.96	123.35	17.03
	t1	130.96	13.47	126.35	15.45	124.35	15.99
	t2	130.90	17.87	123.96	17.40	123.17	18.31
Non-employees	t0	126.22	19.71	121.35	14.79	123.11	16.68
	t1	133.09	15.14	121.96	15.42	123.26	18.65
	t2	125.06	19.95	122.54	15.00	124.00	16.56
<b>Marital Communication (MCQ)</b>							
Employees	t0	88.93	9.83	87.97	8.12	90.08	8.68
	t1	93.78	5.99	90.20	7.90	90.93	6.63
	t2	93.75	7.23	90.43	7.70	91.62	8.39
Non-employees	t0	90.15	8.82	86.67	8.45	90.48	7.49
	t1	93.85	7.15	88.51	8.82	91.55	8.29
	t2	92.04	8.51	88.61	9.63	91.45	7.35
<b>Well-Being (QAWB)</b>							
Employees	t0	23.73	4.19	22.53	3.75	23.83	3.19
	t1	23.82	3.55	23.32	3.81	24.34	2.84
	t2	24.51	3.55	23.54	3.78	23.93	3.47
Non-employees	t0	23.90	3.17	22.37	4.17	23.56	3.13
	t1	24.38	3.02	22.88	4.16	23.73	3.93
	t2	23.39	3.45	22.48	4.30	23.71	3.12
<b>Life Satisfaction (GLS)</b>							
Employees	t0	15.55	2.33	15.35	2.72	16.40	1.85
	t1	16.28	1.94	15.37	2.72	16.56	1.81
	t2	16.38	2.13	15.22	2.65	16.33	2.31
Non-employees	t0	16.30	2.25	15.81	2.51	16.74	1.59
	t1	16.69	1.83	15.95	2.22	16.35	2.09
	t2	16.00	2.96	16.07	2.45	16.43	2.19
<b>Burnout (OLBI Total)</b>							
Employees	t0	34.80	6.38	34.47	5.62	34.41	5.33
	t1	32.24	5.17	34.36	5.61	33.56	5.43
	t2	32.97	5.42	34.64	6.39	33.57	5.83
Non-employees	t0	33.13	6.00	34.31	5.74	34.06	6.82
	t1	34.87	6.79	33.94	6.56	33.09	7.11
	t2	33.40	4.98	34.16	7.16	33.41	7.10
<b>Irritation/Strain (IR Total)</b>							
Employees	t0	25.96	10.43	25.48	9.94	24.74	8.57
	t1	22.09	8.64	23.74	10.11	22.95	7.79
	t2	22.11	8.28	23.14	10.06	22.15	9.10
Non-employees	t0	22.90	8.78	25.75	9.59	21.99	8.28
	t1	22.43	8.76	24.05	9.44	22.52	8.50
	t2	22.37	8.60	24.18	8.99	21.00	8.06

Note: t0 = pre-test; t1 = post-test; t2 = 5-month follow-up.

TABLE 3  
Repeated Measures of Multivariate Analyses of Variance: Overall Effects

Variable	Time			Time × Group			Time × Group × Employee		
	F	eta <sup>2</sup>	df <sup>a</sup>	F	eta <sup>2</sup>	df <sup>a</sup>	F	eta <sup>2</sup>	df <sup>a</sup>
Dyadic Coping (DCI)	4.03*	.03	1.9/289	4.19**	.05	3.9/289	5.30*	.07	4/298
Marital Comm. (MCQ)	4.07**	.05	2/298	2.40°	.02	4/298	.90	.01	3.9/288
Well-Being (QAWB)	.11	.00	1.9/288	.70	.01	3.9/287	3.52**	.05	4/298
Life Satisfaction (GLS)	.90	.01	1.9/288	2.46*	.03	3.9/288	2.68	.04	4/298
Burnout (OLBI Total)	.09	.00	1.9/282	.57	.01	3.8/282	3.29*	.04	4/298
Irritation (IR Total)	.90	.01	1.9/288	.80	.01	3.9/288	.78	.01	4/298

Note: °  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

<sup>a</sup> If the homogeneity of variance assumption has been violated, the degrees of freedom has been corrected with the Huynh-Feldt epsilon.

TABLE 4  
Repeated Measures of Multivariate Analyses of Variance:  
Contrasts for each Group

Variable	Time	CCET—ICT <sup>a</sup>		CCET—Control Group <sup>b</sup>		ICT—Control Group <sup>c</sup>	
		F	eta <sup>2</sup>	F	eta <sup>2</sup>	F	eta <sup>2</sup>
<b>Dyadic Coping (DCI)</b>							
Employees	t0–t1	5.94**	.06	4.58*	.04	.01	.00
	t0–t2	8.96**	.08	7.14**	.07	.41	.00
	t1–t2	1.32	.01	.29	.00	.28	.00
Non-employees	t0–t1	9.74***	.09	8.02*	.07	.06	.00
	t0–t2	1.37	.01	1.19	.01	.01	.00
	t1–t2	12.88***	.12	12.72***	.11	.01	.00
<b>Marital Communication (MCQ)</b>							
Employees	t0–t1	3.01*	.03	6.82*	.06	1.17	.01
	t0–t2	2.92*	.03	5.46	.05	.52	.01
	t1–t2	.03	.00	.42	.00	.23	.00
Non-employees	t0–t1	4.47*	.04	6.90**	.06	.65	.01
	t0–t2	.02	.00	.56	.01	1.06	.01
	t1–t2	3.38*	.03	3.37*	.03	.04	.00
<b>Well-Being (QAWB)</b>							
Employees	t0–t1	2.73*	.03	.96	.01	.57	.01
	t0–t2	.25	.00	2.53	.02	3.92*	.04
	t1–t2	1.34	.01	5.89**	.06	1.87°	.02
Non-employees	t0–t1	.00	.00	.94	.01	.54	.01
	t0–t2	2.21°	.02	3.92*	.04	.02	.00
	t1–t2	2.14°	.02	5.85**	.05	.71	.01

TABLE 4 (Continued)

Variable	Time	CCET—ICT <sup>a</sup>		CCET—Control Group <sup>b</sup>		ICT—Control Group <sup>c</sup>	
		F	eta <sup>2</sup>	F	eta <sup>2</sup>	F	eta <sup>2</sup>
Life Satisfaction (GLS)							
Employees	t0–t1	4.96*	.05	4.44*	.04	.20	.00
	t0–t2	6.92**	.07	7.94**	.07	.01	.00
	t1–t2	.61	.01	1.05	.01	.03	.00
Non-employees	t0–t1	1.28	.01	6.52**	.06	2.20 <sup>o</sup>	.02
	t0–t2	1.06	.01	.23	.00	2.45 <sup>o</sup>	.03
	t1–t2	5.10*	.05	2.93	.03	.01	.00
Burnout (OLBI Total)							
Employees	t0–t1	5.19*	.05	3.01*	.03	.75	.01
	t0–t2	2.38 <sup>o</sup>	.02	.92	.01	.74	.01
	t1–t2	.14	.00	.50	.01	.07	.00
Non-employees	t0–t1	6.136**	.06	8.73**	.08	.52	.01
	t0–t2	.144	.00	.995	.01	.24	.00
	t1–t2	2.276 <sup>o</sup>	.02	2.78*	.03	.00	.00
Irritation/Strain (IR Total)							
Employees	t0–t1	2.84*	.03	4.15*	.04	.00	.00
	t0–t2	.66	.01	.46	.01	.04	.00
	t1–t2	.66	.01	.92	.01	.01	.00
Non-employees	t0–t1	.86	.01	.82	.01	2.73 <sup>o</sup>	.03
	t0–t2	.40	.00	.03	.00	.16	.00
	t1–t2	.02	.00	.73	.01	1.60	.02

Note: <sup>o</sup>  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ ; t0 = pre-test; t1 = post-test; t2 = 5-month follow-up.

<sup>a</sup> degrees of freedom (df): 1/98; <sup>b</sup> degrees of freedom (df): 1/111; <sup>c</sup> degrees of freedom (df): 1/95.

$eta^2 = .07$ ). Exhaustion is still marginally lower for the employees in the CCET group 5 months later (OLBI<sub>EXH</sub> pre–follow-up: CCET–ICT:  $F(1, 98) = 1.78$ ,  $p < .10$ ,  $eta^2 = .02$ ; CCET–Control group:  $F(1, 111) = 2.20$ ,  $p < .10$ ,  $eta^2 = .02$ ). The non-employees in the CCET had shown at first (pre–post) a significant increase and then a significant decrease in the burnout inventory. On this account, there were no significant differences after 5 months between the three groups (Table 4). These changes over time are mainly due to the variances in the subscale disengagement (OLBI<sub>DIS</sub> pre–post: CCET–ICT:  $F(1, 98) = 7.36$ ,  $p < 0.01$ ,  $eta^2 = .07$ ; ICT–Control group:  $F(1, 95) = 10.29$ ,  $p < 0.001$ ,  $eta^2 = 0.9$ ; OLBI<sub>DIS</sub> pre–follow-up: CCET–ICT:  $F(1, 98) = 3.23$ ,  $p < 0.05$ ,  $eta^2 = .03$ ; ICT–Control group:  $F(1, 95) = 3.02$ ,  $p < 0.05$ ,  $eta^2 = 0.03$ ).

In the subscale disengagement the employees with the ICT intervention displayed a (marginal) increase compared with the other two groups at the

5-month follow-up (OLBI<sub>DIS</sub> pre-follow-up: CCET-ICT:  $F(1, 98) = 1.71$ ,  $p < 0.10$ ,  $\eta^2 = .02$ ; ICT-Control group:  $F(1, 111) = 2.11$ ,  $p < 0.10$ ,  $\eta^2 = 0.02$ ).

The emotional and cognitive strain and irritation (IR) in the occupational contexts could be reduced for the employees in the CCET group compared to the other groups (IR<sub>TOT</sub>, see Table 4; IR<sub>EMO</sub> pre-post: CCET-ICT:  $F(1, 98) = 1.64$ ,  $p < .10$ ,  $\eta^2 = .02$ ; CCET-Control group:  $F(1, 111) = 2.22$ ,  $p < .10$ ,  $\eta^2 = .02$ ; IR<sub>COG</sub> pre-post: CCET-ICT:  $F(1, 98) = 2.61$ ,  $p < .10$ ,  $\eta^2 = .03$ ; CCET-Control group:  $F(1, 111) = 4.00$ ,  $p < .01$ ,  $\eta^2 = .04$ ). In the follow-up 5 months later the emotional strain was still marginally deeper for the employees in the CCET group compared with the employees in the control group (IR<sub>EMO</sub> pre-follow-up: CCET-ICT:  $F(1, 98) = 1.36$ ,  $p < ns$ ,  $\eta^2 = .01$ ; CCET-Control group:  $F(1, 111) = 1.62$ ,  $p < .10$ ,  $\eta^2 = .01$ ).

## DISCUSSION

This study is among the first to evaluate the efficacy of a couple-oriented stress prevention program in the workplace. The Couples Coping Enhancement Training (CCET) (Bodenmann & Shantinath, 2004) had proven its efficacy in several previous studies in the context of universal or indicated prevention with community sample couples; however, its application in the context of a company is novel.

Overall, the findings of this study suggest that a relatively brief couple-oriented group intervention (CCET; Bodenmann & Shantinath, 2004) is able to produce significant effects that outperform the effects of individual treatment or a waiting-list control group: In terms of relationship competencies, couples who received the CCET showed a greater increase in dyadic coping and communication skills in contrast to the other two treatment conditions. This finding supports previous findings (Bodenmann, Charvoz, Cina, & Widmer, 2001; Ledermann et al., 2007) and was expected as one focus of the CCET is typically to enhance relationship competencies. Interestingly, the maintenance of this positive effect was found only in the employees (within the 5-month follow-up period). However, in addition to the positive effects of CCET on relationship competencies, significant effects of the program on individual variables were also found. After 5 months, CCET participants still reported a greater increase in life satisfaction and well-being than most other participants. A similar picture was found in work-related variables such as burnout and irritation. Employees who had attended the CCET workshop reported significantly lower scores in exhaustion (one important aspect of burnout) as well as in emotional strain and irritation.

Thus, in sum, CCET performed quite well, and results support the notion that it is worth offering prevention programs in the workplace that also involve the partner as improvements in nearly all variables were found (at least in the short term).

An interesting finding in the CCET group was that employees did benefit more from the program than their partner. This finding needs an explanation as it was not at all expected.

Employees might be reminded of the intervention on a more regular basis, simply by going to work. An association between the company and the intervention program (announced and sponsored by the organisation) might make the workplace a reminder of the strategies taught in the program (e.g. specific workplace or work-related interaction cues). This explanation depends on different learning effects. But this would also be applied to the ICT. A further explanation might be that employees were biased in their evaluation as the company had offered (and sponsored) the program and that therefore they felt a certain responsibility to perform well. However, this explanation is not really substantial or convincing as the ICT was also offered and sponsored by the company, but there no positive effects were found.

Along similar lines, the suspicion that CCET employed participants had scored higher because they feared that the company would know who they were, is not credible. Again, the same would have been the case for ICT and no such doubts were reported by participants as anonymous data collection and interpretation was guaranteed.

Thus, all these explanations lack convincing prediction of the differences between employees and their partner. A more promising interpretation might be that employees could benefit more from the program because it targeted stress and coping issues that were particularly important for the employees and less so for the partners. This assumption is strengthened through a post-hoc analysis, where the employees reported overall significantly more work stress than their partners ( $F(1, 111) = 5.45, p < .05, \eta^2 = .05$ ). The differences between employees and non-employees may also be put down to the assumption that the employee has been the one to suggest participating or attending the couples training. On this note, it could be that the employees rate the effect higher, in terms of the "Justification-of-Effort-Theory" (see Aronson & Mills, 1959).

An additional noteworthy finding is that the ICT group did not perform as well as expected. In the ICT group (where only the employees had received the training) participants showed, as hypothesised, no significant effects on relationship variables. What is more, neither were significant changes in the work-related variables (such as burnout and irritation) found compared to the control group. These results are contradictory to the hypotheses according to which we expected better outcomes in the ICT group. Participants in the ICT group reported only a significant increase in general well-being. Thus, CCET outperformed ICT. This finding is particularly important as both interventions are similar with regard to the expenditure of time (each program had a duration of 15 hours) or qualification of the program providers (all providers were well trained and licensed).

These findings support the assumption that not only work-related but also couples-related coping strategies have a relevant influence on work and that therefore organisations and companies should also provide training for non-work-related demand (Peeters et al., 2005). An intervention focusing on stress and couples' variables seems indicated and adequate, because family and work variables are intercorrelated and various spillover and cross-over effects are observable between workplace and couples' lives.

There are some limitations of this study. First, it is possible that many couples in ICT were somewhat less motivated to participate in the study. The highest appeal for most of the participants was clearly to attend the couple-oriented intervention. This could be for different reasons. The study was advertised mainly as a study including a couple-oriented intervention, and because of the randomisation some participants had first to undergo individual training (ICT) and did not receive the CCET until some months later. Furthermore, the ICT intervention was maybe less impressive for participants who might already have known some of the coping elements from previous classes. The training elements are indeed highly powerful and efficacious (van der Klink et al., 2001) but are also well known. However, the rating of satisfaction with the ICT was very good (86% of the participants were satisfied or very satisfied). Second, all data were self-report data and therefore limit generalisation. It will be necessary to have additional data (e.g. ratings from superiors, objective parameters of performance at the workplace) in a future study. Third, we could not control for gender differences because most of the employees were male (80%). Thus, no generalisation of the findings on women can be made. Fourth, with a 5-month follow-up, only medium-term and not long-term effects were assessed and the study does not provide sufficient information on the long-term stability of the effects of the intervention. Future studies should include follow-up after 1 or 2 years. This was not done in this study for two reasons. First, we had the ICT group and the waiting-list control group who were eager to receive the intervention within a certain time. Second, the company expected major changes (restructuring of staff, etc.) in the near future. We were not able to choose a longer time frame as these major changes would have severely influenced the whole design (i.e. drop-outs) and the results.

Despite these limitations, we are convinced that this study makes a significant contribution to the current knowledge of prevention in general and of prevention in companies, and offers an intriguing perspective for future research.

## REFERENCES

- Aronson, E., & Mills, J. (1959). The effect of severity of initiation on liking for a group. *The Journal of Abnormal and Social Psychology*, 59(2), 177–181.

- Bodenmann, G. (2000a). *Kompetenzen für die Partnerschaft* [Competencies for marriages]. Weinheim: Juventa Verlag.
- Bodenmann, G. (2000b). *Stress und Coping bei Paaren* [Stress and coping in couples]. Bern: Hans Huber.
- Bodenmann, G. (2005). Dyadic coping and its significance for marital functioning. In T. Revenson, G. Bodenmann, & K. Kayser (Eds.), *Couples coping with stress: Emerging perspectives on dyadic coping* (pp. 33–49). Washington, DC: American Psychological Association.
- Bodenmann, G., Charvoz, L., Cina, A., & Widmer, K. (2001). Prevention of marital distress by enhancing the coping skills of couples: 1-year follow-up study. *Swiss Journal of Psychology, 60*(1), 3–10.
- Bodenmann, G., Ledermann, T., & Bradbury, T.N. (2007). Stress, sex, and satisfaction in marriage. *Personal Relationships, 14*(4), 551–569.
- Bodenmann, G., Pihet, S., Shantinath, S.D., Cina, A., & Widmer, K. (2006). Improving dyadic coping in couples with a stress-oriented approach: A 2-year longitudinal study. *Behavior Modification, 30*(5), 571–597.
- Bodenmann, G., & Shantinath, S.D. (2004). The Couples Coping Enhancement Training (CCET): A new approach to prevention of marital distress based upon stress and coping. *Family Relations, 53*(5), 477–484.
- Bodenmann-Kehl, C. (1999). *Eine Analyse spezifischer Ansatzpunkte zur Förderung der familiären Kompetenz* [Analysis of potential approaches to the promotion of family competence]. Fribourg: Fribourg University Press.
- Carlson, C.R., & Bernstein, D.A. (1995). Relaxation skills training: Abbreviated progressive relaxation. In L. Krasner & W. O'Donohue (Eds.), *Handbook of psychological skills training: Clinical techniques and applications* (pp. 20–35). Needham Heights, MA: Allyn & Bacon.
- Cooper, C.L., Dewe, P.J., & O'Driscoll, M.P. (2001). *Organizational stress: A review and critique of theory, research, and applications*. Thousand Oaks, CA: Sage Publications.
- Crouter, A.C., Bumpus, M.F., Maguire, M.C., & McHale, S.M. (1999). Linking parents' work pressure and adolescents' well being: Insights into dynamics in dual earner families. *Developmental Psychology, 35*(6), 1453–1461.
- DeCoster, J. (2002). Using ANOVA to examine data from groups and dyads. Retrieved 6 February 2008 from <http://www.stat-help.com/notes.html>
- Demerouti, E. (1999). *OLBI: Oldenburger Burnout Inventar* [Oldenburg Burnout Inventory]. Frankfurt a.M.: Lang.
- Demerouti, E., Bakker, A.B., Vardakou, I., & Kantas, A. (2003). The convergent validity of two burnout instruments. A multitrait-multimethod analysis. *European Journal of Psychological Assessment, 19*(1), 12–23.
- Demerouti, E., Bakker, A., & Schaufeli, W. (2005). Spillover and crossover of exhaustion and life satisfaction among dual earner parents. *Journal of Vocational Behavior, 67*(2), 266–289.
- D'Zurilla, T.J., & Goldfried, M.R. (1971). Problem solving and behavior modification. *Journal of Abnormal Psychology, 78*(1), 107–126.
- Edwards, J.R., & Rothbard, N.P. (2000). Mechanisms linking work and family: Clarifying the relationship between work and family constructs. *Academy of Management Review, 25*(1), 178–199.

- Gottman, J.M. (1994). *What predicts divorce? The relationship between marital processes and marital outcomes*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Grzywacz, J.G., & Marks, N.F. (2001). Social inequalities and exercise during adulthood: Toward an ecological perspective. *Journal of Health and Social Behavior*, 42(2), 202–220.
- Lazarus, R.S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- Ledermann, T., Bodenmann, G., & Cina, A. (2007). The efficacy of the couples coping enhancement training (CCET) in improving relationship quality. *Journal of Social and Clinical Psychology*, 26(8), 940–959.
- Little, R.J.A., & Rubin, D.B. (2002). *Statistical analysis with missing data* (2nd edn.). New York: John Wiley.
- 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(1), 70–77.
- Markman, H.J., Stanley, S.M., Blumberg, S.L., Jenkins, N., & Whitely, C. (2004). *12 hours to a great marriage*. San Francisco, CA: Jossey-Bass.
- Martin, A.J., & Sanders, M.R. (2003). Balancing work and family: A controlled evaluation of the Triple P-Positive Parenting Program as a work-site intervention. *Child and Adolescent Mental Health*, 8(4), 161–169.
- Matthews, R.A., Del-Priore, R.E., Acitelli, L.K., & Barnes-Farrell, J.L. (2006). Work-to-relationship conflict: Crossover effects in dual-earner couples. *Journal of Occupational Health Psychology*, 11(3), 228–240.
- Mohr, G., Mueller, A., & Rigotti, T. (2005). Normwerte der Skala Irritation: Zwei Dimensionen psychischer Beanspruchung [Test norms for the Irritations-Skala (Irritation Scale): Two dimensions of mental strain]. *Diagnostica*, 51(1), 12–20.
- Mohr, G., Rigotti, T., & Mueller, A. (2005). Irritation—ein Instrument zur Erfassung psychischer Beanspruchung im Arbeitskontext. Skalen- und Itemparameter aus 15 Studien [Irritation, an instrument assessing mental strain in work contexts: Scale and item parameters from 15 studies]. *Zeitschrift fuer Arbeits und Organisationspsychologie*, 49(1), 44–48.
- Neff, L.A., & Karney, B.R. (2007). Stress crossover in newlywed marriage: A longitudinal and dyadic perspective. *Journal of Marriage and Family*, 69(3), 594–607.
- Peeters, M.C.W., Montgomery, A.J., Bakker, A.B., & Schaufeli, W.B. (2005). Balancing work and home: How job and home demands are related to burnout. *International Journal of Stress Management*, 12(1), 43–61.
- Perrez, M., & Reicherts, M. (1992). *Stress, coping, and health: A situation-behavior approach. Theory, methods, applications*. Bern: Hogrefe & Huber.
- Pihet, S., Bodenmann, G., Cina, A., Widmer, K., & Shantinath, S. (2007). Can prevention of marital distress improve well-being? A 1 year longitudinal study. *Clinical Psychology and Psychotherapy*, 14(2), 79–88.
- Repetti, R.L. (1989). Effects of daily workload on subsequent behavior during marital interaction: The roles of social withdrawal and spouse support. *Journal of Personality and Social Psychology*, 57(4), 651–659.
- Repetti, R.L., & Wood, J. (1997). Effects of daily stress at work on mothers' interactions with preschoolers. *Journal of Family Psychology*, 11(1), 90–108.

- Rogers, S.J., & May, D.C. (2003). Spillover between marital quality and job satisfaction: Long-term patterns and gender differences. *Journal of Marriage and Family*, 65(2), 482–495.
- Sonnentag, S. (2003). Recovery, work engagement, and proactive behavior: A new look at the interface between nonwork and work. *Journal of Applied Psychology*, 88(3), 518–528.
- Stanley, S.M., Allen, E.S., Markman, H.J., Saiz, C.C., Bloomstrom, G., Thomas, R., Schumm, W.R., & Bailey, A.E. (2005). Dissemination and evaluation of marriage education in the army. *Family Process*, 44(2), 187–201.
- Story, L.B., & Repetti, R. (2006). Daily occupational stressors and marital behavior. *Journal of Family Psychology*, 20(4), 690–700.
- van der Klink, J.J.L., Blonk, R.W.B., Schene, A.H., & van Dijk, F.J.H. (2001). The benefits of interventions for work-related stress. *American Journal of Public Health*, 91(2), 270–276.
- Widmer, K., Cina, A., Charvoz, L., Shantinath, S., & Bodenmann, G. (2005). A model dyadic-coping intervention. In T. Revenson, G. Bodenmann, & K. Kayser (Eds.), *Couples coping with stress: Emerging perspectives on dyadic coping* (pp. 159–174). Washington, DC: American Psychological Association.