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Patients' coping profiles and partners' support provision

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Abstract
This study explored whether 13 coping strategies exhibited in the week after cancer surgery could be aggregated into a smaller number of meaningful coping profiles. Moreover, patients' coping profiles and genders were examined as predictors of partners' support provision in the month after surgery. Coping strategies were measured with Brief COPE questionnaire, and provided partner support was assessed with Berlin Social Support Scales. Cluster analysis based on 321 patients yielded three distinct coping patterns: Accommodative Coping, Disengaging Coping, and Assimilative Coping. These encapsulate ways and extent of coping during the week after cancer surgery. Accommodative Coping was characterized by low levels of active problem-directed strategies but a high degree of acceptance and humour, whereas Assimilative Coping represented positive reframing and active strategies. Based on 122 couples, associations between patients' coping profiles and subsequent spousal support provision were examined. Partners provided least support to patients in the Accommodative Coping category and most support to patients in the Assimilative Coping category. Female partners provided more support than did male partners. Patients' coping behaviours in the week after cancer surgery affected subsequent provision of support by their partners.

Keywords: *Social support, spouses, cancer, dyadic coping, partner effects*

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Introduction

The present study aims to identify distinct coping patterns of cancer patients after surgery and relate them to subsequent spousal support provision. Coping can be defined as an effort to manage and overcome demands and critical events that pose a personal challenge, threat, harm, loss, or benefit (Lazarus, 1991). Diagnosis and treatment of cancer are threatening to both patients and their partners. Patients may live with a constant threat of recurrence, experience compromised quality of life, and undergo vocational, emotional, and social changes. At such times, partners play an important role in patients' adjustment to illness (DeLongis, Capreol, Holtzman, O'Brien, & Campbell, 2004; Revenson, Kayser, & Bodenmann, 2005). Support from a partner has been shown to influence how patients adjust to their disease (Bodenmann, 1997; Clark & Stephens, 1996; Coyne & Fiske, 1992; Coyne & Smith, 1991). However, little is known about the predictors of spousal support provision during partners' initial treatment. This article explores relations between patients' coping characteristics and partners' support provision in the early phase of cancer treatment (i.e., 1 week to 1 month after surgery).

Dunkel-Schetter and Skokan (1990) have extended the prosocial behaviour literature, which traditionally focused on the provider side of helping behaviour, to cover unsolicited social support. In their review, the authors distinguish four categories of predictors that may be associated with granting more or less support to a well-acquainted or intimate partner: stress factors (e.g., the situation), recipient factors (e.g., mobilization skills), provider factors (e.g., altruism), and relationship factors (e.g., marital quality). In this study, we explore recipient characteristics as potential predictors of spousal support provision following patients' cancer surgery.

In terms of recipient factors, findings have shown that if a potential recipient signals excess distress, especially over a long period of time, supportive interactions remain minimal, and negative responses may even be elicited from potential support providers (Dunkel-Schetter & Skokan, 1990). The recipient's coping effort is another determinant of support provision (Schwarzer & Weiner, 1991). In an experimental scenario study, Schwarzer and Weiner (1991) examined affective reactions toward eight disease-related stigmas and the intention to extend social support. In addition to the condition "controllability of the stigma onset," the target person was described either as actively coping with the stigma (e.g., by changing health behaviours to alleviate the problem) or failing to cope. Both experimental factors (i.e., controllability and coping) elicited the motivation to help. However, the coping dimension appeared to be a stronger predictor.

Another important predictor of support provision is recipient's gender. Gender differences in social support have been discussed by various authors (Glynn, Christenfeld, & Gerin, 1999; Goldsmith & Dun, 1997; Knoll & Schwarzer, 2002). The question of the quantity of support received and provided by men and women is controversial (Gurung, Taylor, & Seeman, 2003). Women provide more emotional support to both men and women and, on average, seem to

receive more help in return (Klauer & Winkeler, 2002). Explanations for such discrepancies focus on gender differences in emotionality and emotional expressiveness (Burleson, 2003). Women generally have more close friends than do men, and tend to emphasize intimacy, empathy, and self-disclosure in their friendships. In short, women seem to devote more of themselves to their family and friends than do men, and hence may often receive more support in return (Cutrona, 1996; Glynn et al., 1999).

Aim of the study

This study investigates whether coping profiles among men and women with cancer determine provision of support from their partners. First, it was examined whether 13 coping strategies exhibited in the week after cancer surgery can be aggregated into meaningful coping profiles by using cluster analysis. Second, patients' coping profiles and gender were examined as possible predictors of their partners' support provision in the month after cancer surgery. Based on prior evidence (Schwarzer & Weiner, 1991), we expected that a narrow patient-reported range of coping efforts with little use of active coping strategies should be associated with low levels of partner support. In accordance with the literature, we also expected more support provision by female than by male partners.

Method

Procedure

Patients were recruited within the Berlin Longitudinal Study of Quality of Life after Tumor Surgery. Data were collected in cooperation with four hospitals in Berlin, Germany. Inclusion criteria were (a) preliminary diagnosis of cancer, (b) surgery scheduled within the next few days, and (c) fluency in German. Research assistants approached patients in the week before surgery, informed them about the purpose and design of the study, and asked them to participate. Disease-related and sociodemographic data were collected. One week post surgery, patients were approached by the researchers and asked to complete a questionnaire about their coping strategies. This second point of data collection took place within the hospitals and was individually assisted by the researchers.

Partners were recruited by asking patients 1 week after surgery to identify the person who is closest to them (e.g., their spouses). If the patient agreed, a partner questionnaire and stamped, addressed envelopes were supplied. Partners received their questionnaire about 1 month after surgery.

Participants

Four hundred and eighty cancer patients (60.2% men; mean age = 62, SD = 11.8) agreed to participate. One week following surgery, 321 patients completed a coping questionnaire. Patients who dropped out at 1 week after surgery were either unavailable (discharged from hospital) or unable to complete the questionnaire

due to their condition. Attrition was examined by comparing patients who participated with those who dropped out, controlling for medical (e.g., type of surgery, comorbidity) and demographic (e.g., age, gender) variables. No significant differences between the two groups were found. Thus, the *patient* data analysis was based on 321 individuals (57.0% men, mean age of 62, SD = 10.86) who completed the coping questionnaire about 1 week after surgery.

Among the 321 patients, the most frequent tumor sites were colon (26%), rectum (21%), stomach (12%), liver and gall bladder (12%), lung and bronchi (9%), pancreas (8%), and esophagus (8%). Patients were classified as being in Stage I (18.8%), Stage II (19.4%), Stage III (27.1%), or Stage IV (34.7%) of their cancer. Illness attributes (type of cancer, stage of disease, and received treatment) were unrelated to patients' gender and age. None of the medical variables was associated with any of the study variables.

Of 321 significant others, a total of 224 responded to the invitation to participate. Of these, 173 were intimate partners (spouses or equivalent), and the remaining 51 were children, grandchildren, siblings, parents, or friends. For the present analysis, only husbands, wives, or life partners were included. Children, friends, and caregivers were excluded. A subsample of 122 partners provided complete data on their support provision 1 month after surgery. Thus, a total of 122 couples were included in the second part of the study: 79 men and 43 women patients and their intimate partners.

Differences between partners included in analyses (complete cases) and those excluded (with missing data) were examined by comparing the subsample of 122 partners with those who did not provide complete data on support provision in terms of demographic characteristics. No significant differences between the two groups were found.

Among the 122 couples, the mean age of *patients* was 63 years (SD = 9.5) for men, and 60 years (SD = 12) for women. On average, male *partners* were 60 (SD = 12) and female partners were 58.5 years old (SD = 11).

Measures

Coping. To assess coping, the Brief COPE (Carver, 1997), consisting of 13 scales, was chosen to achieve maximum parsimony (Tables I and II). Subscale 14 (substance use) was excluded from analyses because it lacked variance. Patients were directed to focus on their recent cancer surgery and their coping efforts during the past 3 days. Responses were: *strongly disagree* (1), *disagree* (2), *agree* (3), *strongly agree* (4). Although the number of items in these scales is minimal (two items in each scale), the scales appear to have sufficient validity (Carver, 1997; Schulz & Schwarzer, 2004). For instance, Knoll, Rieckmann, and Schwarzer (2005) used the German version of the Brief COPE in a study with cataract patients around their scheduled surgeries. A second-order confirmatory factor analysis of the two-item Brief COPE scales yielded a pattern of inter scale relations similar to the one reported in the present study (Table I) and also resembled the second-order structure reported by Carver, Scheier, and

Table I. Intercorrelations of the 13 profile-defining coping constructs entered into the cluster analysis.

	1	2	3	4	5	6	7	8	9	10	11	12
1. Distraction	–											
2. Active coping	0.21*	–										
3. Denial	0.17*	0.05	–									
4. Emotional support	0.18*	0.35*	0.14**	–								
5. Instrumental support	0.08	0.39*	0.18*	0.42*	–							
6. Disengagement	−0.03	−0.25*	0.09	−0.10	−0.07	–						
7. Venting	0.00	0.20*	0.23*	0.46*	0.24*	0.03	–					
8. Positive reframing	0.20*	0.42*	0.12**	0.27*	0.18*	−0.12**	0.22*	–				
9. Planning	0.21*	0.51*	0.06	0.27*	0.20*	−0.26*	0.16*	0.50*	–			
10. Acceptance	0.09	0.11**	−0.07	0.10	−0.04	−0.05	0.23*	0.40*	0.33*	–		
11. Humour	0.14**	0.23*	−0.05	0.14**	0.06	−0.07	0.10	0.40*	0.30*	0.40*	–	
12. Religion	−0.02	0.19*	0.07	0.23*	0.16*	−0.03	0.11**	0.28*	0.21*	0.17*	0.09	–
13. Self-blame	0.02	0.10	0.08	0.02	0.07	0.17**	0.08	0.02	0.02	−0.05	−0.05	0.02

$N = 321$. **$p < 0.05$; *$p < 0.01$.

Table II. Coping characteristics at 1 week after surgery for three subgroups identified at 1 week after surgery ($N = 321$): Scores standardised to a mean of 50 and a SD of 10.

Subgroups	Distraction	Active coping	Denial	Emotional support	Instrumental support	Disengagement	Venting	Positive reframing	Planning	Acceptance	Humour	Religion	Self-blame
1 ($n = 99$)	49.26	**45.20**	**45.43**	**42.81**	**43.43**	49.71	**43.67**	49.49	49.95	52.57	52.55	47.46	**45.94**
2 ($n = 82$)	46.29	44.34	50.40	48.27	49.32	**54.68**	49.27	**40.10**	**40.68**	**40.96**	**40.74**	47.29	51.60
3 ($n = 140$)	52.70	**56.71**	53.00	**56.10**	**55.04**	**47.31**	**54.90**	**56.16**	**55.49**	53.48	53.62	53.39	51.76
Internal consistency (r)	0.70	0.48	0.52	0.40	0.75	0.49	0.41	0.39	0.43	0.49	0.50	0.79	0.62

Boldfaced numbers indicate defining peaks of the profiles that were ≥ 0.5 SD above or below the sample mean. 1: Accommodative Coping, 2: Disengaging Coping, 3: Assimilative Coping. Internal consistencies are expressed as interitem correlations.

Weintraub (1989) for the full version of the COPE. Specifically, Knoll et al. (2005) found that Active Coping and Planning scales as well as Use of Instrumental and Use of Emotional Support scales revealed medium to high interrelations. Moreover, in accordance with findings for the English version of the Brief COPE (Carver, 1997), positive reframing showed medium associations with both active coping and planning in the present study. In accordance with assumptions, Knoll et al. (2005) reported positive associations between the Brief COPE scales Humour, Acceptance, and Positive Reframing, and extraversion and positive affect surrounding surgery. Also, Denial and Self-Blame were associated with higher negative affect and/or higher neuroticism.

Partner support provision. The Provided Support subscale of the Berlin Social Support Scales (BSSS; Schulz & Schwarzer, 2003, 2004) was used to assess provided instrumental, emotional, and informational social support. Partners were instructed thus: "Now think about the patient. How did you interact with him/her during the past week?" The Provided Support subscale consisted of 11 items, such as "I comforted him/her when he/she was feeling bad," "I helped her/him to find something positive in their situation," and "I took care of daily duties that she/he could not fulfill on her/his own". Responses were *strongly disagree* (1), *disagree* (2), *agree* (3), *strongly agree* (4). In the present study Cronbach's alpha for the scale was 0.75 and mean item scores ranged from 1.33 to 4.00, with higher scores indicating higher levels of provided support.

Data analyses

Data were examined by cluster analysis and univariate two-factorial analyses of variance. Cluster analysis represents a methodological tool that can be used to identify subgroups of individuals in a given data set. Cluster analysis uses information about level, variability, and shape of the profiles to classify individuals into homogeneous subgroups so that members of one subgroup share communalities in the subgroup-defining constructs, but differ from members of other groups (Bergman, Magnusson, & El-Khouri, 2003). Analogous to research on personality prototypes (e.g., Asendorpf, Borkenau, Ostendorf, & Van Aken, 2001) and lifespan development (e.g., Smith & Baltes, 1997), a sequential combination of hierarchical methods (e.g., Ward, 1963) and nonhierarchical methods (e.g., *k*-means) was utilized to identify subgroups. Starting with each participant forming his or her own subgroup, Ward's (1963) method adjoins those subgroups whose combination leads to a minimum increase in the within-subgroup sum of squares (using the squared Euclidean distance as distance measure) while maximizing the between-subgroup sum of squares. Hierarchical methods do not allow for revision of assigned group membership in subsequent steps, thus potentially resulting in nonoptimal solutions (Hair & Black, 2000; Milligan & Cooper, 1987). Hence, Ward's method, as implemented in the SAS software package (SAS Institute, 1997), was used to evaluate the optimal number of clusters in the data and to produce the initial seed points for

the subsequent *k*-means procedure, which determined the final case location in the separate subgroups. The *k*-means clustering is an iterative partitioning procedure that reproduces the *k* number of nonoverlapping subgroups through minimizing the sum of the squared distances from the subgroup centroid means. In nonhierarchical methods, assigned group membership can be revised in later steps; the *k*-means was implemented using the SPSS procedure QUICK CLUSTER, option NOUPDATE (SPSS, 1990).

As there is no standard internal statistical criterion available for deciding upon the optimal number of subgroups in a given data set (Aldenderfer & Blashfield, 1984; Milligan & Cooper, 1987), the current study used multiple criteria. The first criterion was an atypical decrease in overall between-cluster variance (R^2) and an increase in within-cluster variance with no reverse trend in subsequent steps (which is similar to a scree plot in factor analysis). The average within-cluster distance can be used as a measure of overall dissimilarity, with a large increase indicating that two rather distinct subgroups were joined. Second, a local (rather than global) peak in *Pseudo F* combined with a small *Pseudo* T^2, with *Pseudo F* indicating the separation among all subgroups at the current step, and *Pseudo* T^2 indicating the separation of the two subgroups immediately joined at the current step. Third, a peak in Sarle's cubic clustering criterion (CCC; Sarle, 1983) was considered, which relates the proportion of variance accounted for by the subgroups to the dimensionality of the between-subgroup variation.

Results

The results section is divided into two parts. First, outcomes of the cluster analysis on patient coping data are reported. Second, relations between partner support provision and patterns of coping are presented.

Profiles of coping in the week after cancer surgery

A set of 13 constructs, which index different coping strategies as measured by the Brief COPE (Carver, 1997), was used to identify subgroups of individuals. Table I shows zero-order intercorrelations among these profile-defining constructs that were entered into the cluster analyses. At best, these show moderate intercorrelations ($r = 0.50$ between active coping and planning), and hence indicate that the constructs can be considered sufficiently distinct from one another.

To assure that each construct contributed equally to subgroup definition, each participant's score was standardized prior to cluster analysis, using the *T* metric, $M = 50$; $SD = 10$. Each measure was also screened prior to clustering for the presence of extreme outliers that might disrupt the clustering procedure (Bergman, 1988). Scores of participants who were outside a range of 3.0 SD above or below the sample mean on any of the 13 variables entered into the cluster analyses ($n = 11$; 3.4% of the sample) were recoded at $SD = 3.0$ (*T* score of 20 and 80, respectively).

The three statistical criteria from Ward's hierarchical procedure indicated that either a three- or a four-subgroup solution was appropriate for the present data set. To determine the robustness and replicability of the subgroups identified, participants were randomly assigned to two mutually exclusive samples. These random-split halves of the full sample were stratified by age (using the sample median of 63 years as cut-off) and gender to assure that the two generated data sets could be considered replication samples. In a series of 10 analyses, the preceding two-step clustering procedure was applied to each half. Agreement between the subgroup solutions from the two halves was compared as follows. In a first step, the SPSS procedure QUICK CLUSTER (option CLASSIFY) was used to assign participants from each sample half to new subgroups using the Euclidean distances to the subgroup centers of the respective other half of the sample. In a second step, these new subgroups were compared with the original subgroups from the total sample using Cohen's k. The resulting two ks from each sample half were averaged. This procedure was repeated 10 times, using different seeds as a random number generator to select different random samples. Median agreement coefficients for the three-subgroup solution were $k = 0.71$; for the four-subgroup solution, $k = 0.51$; and for the five-subgroup solution, $k = 0.42$. Following research on personality prototypes (e.g., Asendorpf et al., 2001), an agreement of at least median $k = 0.60$ can be considered acceptable. Given this, and for reasons of parsimony and robustness, a three-subgroup solution was favoured in the present study.

Table II displays average patterns of coping characteristics for the three subgroups. Cluster 1 ($n = 99$) was labeled "Accommodative Coping." This indicates a lack of general coping effort, but a relatively high degree of acceptance and humour. These patients appear to have already come to terms with their illness and surgery, and may not need much support. Similarly to Brandtstädter's (1989) understanding of adaptation processes following a stressful event, individuals in the accommodative mode adjust by accepting constraints and redefining challenges such that they become easier to tackle.

Cluster 2 ($n = 82$) was labeled "Disengaging Coping." This is a way of coping that may be positively associated with neuroticism and may decrease well-being. Typical strategies are denial, disengagement, self-blame, and venting (Bolger, 1990; Carver, 1997; Knoll et al., 2005; McCrae & Costa, 1986), thus resembling Krohne's (2001) "highly anxious copers," who switch between avoidant (denial, disengagement) and vigilant coping strategies (in this case, self-blame). Partners might react to patients' disengaging coping with a sense of helplessness that, together with a lack of positive interactions, might deplete their own resources.

Cluster 3 ($n = 140$) was labeled "Assimilative Coping." This construct is very much the converse of Cluster 1. There is a broad range of visible coping, characterized in particular by active coping, positive reframing, and support seeking. The assimilative coping method represents the most common reaction within this sample. Heightened active coping by the patient involves greater effort, and hence might trigger more support provision by the partner. These actions resemble Brandtstädter's (1989) assimilative processes of adjustment to

stressful events that are complementary to accommodative processes. In the assimilative mode, an individual attempts to change the stressful situation through active interventions, such as instrumental coping or mobilizing support.

We also examined subgroup differences on demographic and medical variables. The three subgroups did not differ in terms of marital status, cancer relapse, surgical therapy (curative/palliative), tumor site, and cancer stage. Significant differences between the groups were found for age, $F(2, 317) = 3.7$, $p < 0.05$, and gender, $\chi^2(2) = 6.6$, $p < 0.05$. Specifically, although participants in all three clusters were on average in their early 60s, the Accommodative Coping group ($M = 63.6$; SD = 9.8) was slightly older than the Disengaging Coping ($M = 63.2$; SD = 9.5) and Assimilative Coping groups ($M = 60.2$; SD = 12.1). The Accommodative Coping group also comprised relatively more women than men (67%; Disengaging Coping group: 67% women; Assimilative Coping group: 57% women). Finally, members of the Accommodative Coping group reported fewer depression symptoms ($M = 12.9$; SD = 3.8), as compared with both the Disengaging Coping ($M = 17.6$; SD = 4.5) and the Assimilative Coping groups ($M = 14.4$; SD = 3.9).

Association between patients' coping profiles and partners' support provision

One month after surgery, partners reported the extent of social support they had provided to their significant others over the previous week. At the level of 122 patient–partner dyads, the relationship between coping profiles and support provision was examined. For this purpose, a two-factorial analysis of variance was computed with the coping clusters and partner gender as factors, and partners' support provision as the dependent variable. There was a main effect for partner gender, $F(1, 116) = 11.8$, $p = 0.001$, $\eta^2 = 0.09$, and another main effect for coping clusters, $F(1, 116) = 3.86$, $p < 0.05$, $\eta^2 = 0.06$, but no interaction (Figure 1).

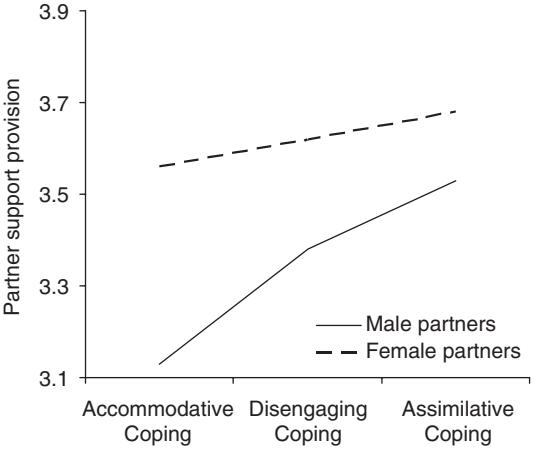

Figure 1. Provided support by male and female partners (at 1 month after surgery) to patients with different coping profiles (at 1 week after surgery).

Overall, female partners reported providing more support than did male partners. Partners provided least support to patients in the Accommodative Coping category and most to patients in the Assimilative Coping profile. Thus, the extent and way of coping were related to the subsequent support provided by partners.

Discussion

The present study identified and related coping patterns of cancer patients after surgery to subsequent spousal support provision. The first research question dealt with the clustering of 13 coping strategies to uncover a parsimonious number of distinct profiles. Cluster analysis ascertained three meaningful clusters. Robustness was tested, and the final solution was found to be satisfactory. The profiles were labelled Accommodative Coping, Disengaging Coping, and Assimilative Coping, each encapsulating different ways of coping with cancer during the week after surgery. Accommodative Coping was characterized by low levels of active problem-directed strategies, but high degree of acceptance and humour. Individuals from the Accommodative Coping cluster adjust to constraints by accepting them and redefining the challenges so as to become easier to tackle.

The data cannot explain why people undertake different coping efforts. This may potentially be due to personality differences (i.e., neuroticism) or diverse perceptions of situational threat, as well as cancer type, functional involvement, previous traumatic stress experiences, etc. The latter explanation might also account for the lower level of depressive symptoms in the Accommodative Coping cluster when compared with the other groups.

Assimilative Coping generally represented a reversed pattern, comprising individuals who scored above average in coping strategies that attempt to change the stressful situation through active interventions, such as instrumental coping and mobilization of support. These two profiles point to some quantitative and qualitative differences. In contrast, Disengaging Coping referred to those patients who did not search for meaning and tended to disengage from the stressful encounter.

Assimilative Coping was characterized by a search for meaning (namely positive reframing), whereas acceptance was characteristic of Accommodative Coping. Searching for meaning has been found to be a constructive way to cope while adapting to cancer diagnosis and surgery. Patients after cancer surgery who were frequently using assimilative coping strategies (i.e., positive reframing and active coping) were more likely to find benefits in their disease (Urcuyo, Boyers, Carver, & Antoni, 2005). Finding benefits in disease, together with an increased appreciation of life and altered priorities are among the positive consequences of negative life crises (Antoni et al., 2001; Folkman & Moskowitz, 2000; Park & Folkman, 1997; Tedeschi, Park, & Calhoun, 1998; Tomich & Helgeson, 2004; Updegraff & Taylor, 2000; Weiss, 2004). Thus, if "disengaged copers" do not search for meaning, they might be disadvantaged compared to their counterparts who seek and may find benefit in the adverse experience.

The second aim of the study was to examine the relationship between patients' coping profiles and subsequent provision of social support by their intimate partners, assessed 1 month after surgery. It was found that levels of partner support provision varied in accordance with the ways in which patients coped with their illness 1 week after surgery. Similar results were found by Schwarzer and Weiner (1991) and Silver, Wortman, and Crofton (1990). However, these early experimental studies employed student samples, whereas the present findings are based on a large sample of patients in a clinical setting where data were gathered from both sides of the dyad and measured about three weeks apart. Our data showed that partners provided least support to patients in the Accommodative Coping category and most support to patients in the Assimilative Coping category. Where partners realized that their spouses invested considerable coping effort and sought support, partners contributed additional support. Where partners believed, however, that there was only little coping effort from their spouse, partners seemed not to get the message and did not assist patients (see also Schwarzer & Weiner, 1991).

Why is support provision contingent upon the behaviour of the recipient? There are several possible explanations. If patients invest effort to deal with their fate, they appear to deserve help. Joining forces and giving assistance represents a good social investment if someone struggles to recover. Another explanation is that help is a response to a signal of need. Observing patients in trouble, fighting illness and negative affect, mobilizes the social network. Moreover, coping also includes support mobilization. Patients with the Assimilative Coping profile displayed above-average mean scores on emotional and instrumental support seeking. This suggests that the elevated levels of support provided to such patients may be a reaction to patients' active mobilization attempts (Schulz & Schwarzer, 2004). Moreover, support provision may simply represent a habit based on the history of intimate interaction within a long-term relationship. This corresponds with research on dyadic support in cancer patients (see Hagedoorn et al., 2000). Reciprocity is seen as one determinant of support provision (Cutrona, Hessling, & Suhr, 1997; Gleason, Iida, Bolger, & Shrout, 2003; Knoll, Burkert, & Schwarzer, 2006; Liang, Krause, & Bennett, 2001). Couple-coping interventions (Scott, Halford, & Ward, 2004) may be implemented where partners learn about the needs of each other in times of crisis and ways to cope with difficulties after cancer surgery.

It remains unclear from the present data set whether the Disengaging Coping profile represented passive withdrawal or rather functional disengagement by directing attention to distracting factors. The latter is less likely, given that this group also engaged in fairly high levels of self-blame, which can be considered a more vigilant coping response (Carver, 1997). Future research should attempt to replicate these three coping profiles and validate the present interpretation by providing criteria that allow evaluation of the findings.

There are several limitations to this study. Firstly, the temporal stability of the coping profiles could not be determined. This would have required multiple measurement time points. However, we have identified highly similar profile

subgroups across a series of ten random-split halves of our sample (stratified by age and gender), as is typically done in personality prototype research (e.g., Asendorpf et al., 2001). Having applied these rigorous methodological tests, we conclude that the three subgroups can be considered a robust grouping in the present data set. Secondly, in the present study, only self-report data were available. There were no objective data on patient–partner interactions. It is not clear to what degree the self-reported support provision by partners actually occurred and to what degree support was actually received by the patients. Thirdly, measures of coping and social support captured short time periods (i.e., 3 days and 1 week, respectively). It is possible that levels of support or coping differed between the first and fourth week after surgery. However, retrospective self-reports dealing with longer periods of time can be biased due to memory distortion (Stone & Shiffman, 2002), and should not therefore capture time periods longer than 1 or 2 weeks. Future studies should include more measurement timepoints. Fourthly, whether support is a genuinely causal response to observed coping, and whether partners held accurate perceptions of how patients coped, remains unknown. Another limitation of the present study lies in the low values of the reliability coefficients for some of the Brief COPE scales. Consequently, a replication is warranted.

Notwithstanding these limitations, the present findings yield further substantial evidence for a relationship between patients' coping profiles and subsequent spousal support provision. The availability of dyadic data and the temporal distance between patient data and partner data are the strengths of the study. On the basis of a relatively large sample of couples under stress, it can be concluded that extending support may depend on a few coping aggregates differing in quantity and quality of coping. These aggregates refer to accepting the constraints (Accommodative Coping), active attempts to change the stressful situation (Assimilative Coping), and disengagement from the stressful encounter.

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