

PERCEIVED CONTROL, COPING AND THEIR RELATIONSHIP TO MOOD IN A GREEK RHEUMATOID ARTHRITIS POPULATION*

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Abstract: This study examined the relationship between patterns of control, coping and mood in a Greek sample of rheumatoid arthritis patients. We measured perceptions of control and coping regarding two different aspects of the disease, the course of illness and its daily symptoms. We hypothesized that a flexible pattern of perceiving control and of coping (i.e., accurate appraisal of the controllability of the different aspects of the stressor and employment of active coping with changeable aspects of the stressor and emotion-focused coping with unchangeable aspects of the stressor) would be negatively related to negative mood and positively related to positive mood. We found that control over the symptoms (compensatory) was related to positive mood and negatively related to negative mood and that seeking social support and venting of emotions were related to negative mood. In addition, participants characterized by 1) high emotion-focused engagement coping with both the course of illness and its symptoms, low active coping, low perceptions of primary control and a trend indicating high compensatory control, or 2) patterns of high perceptions of primary control, active coping and emotion-focused engagement coping experienced higher positive mood and lower negative mood than participants that were characterized by high active coping and involuntary emotion-focused engagement coping.

Key words: rheumatoid arthritis, patterns of coping, perceived control, active coping, emotion-focused engagement coping

The goal of the present study was to examine the relationship between patterns of control, coping and mood in a Greek sample of rheumatoid arthritis patients. Although initially it was proposed that primary control (the belief that one can influence existing realities or change the

outcome of the stressor; Rothbaum, Weisz, Snyder, 1982) is adaptive (Taylor, Brown, 1988, 1994), more recent work has shown that the relationship between control and adjustment is a function of the context (Cheng, 2003). More specifically, primary control has been found to be negatively related to distress in changeable situations (Macrodimitris, Endler, 2001; Smari, Valtyisdottir, 1997), but its relationship to distress in unchangeable situations has been found to be non-significant (Folkman, Lazarus, Dunkel-Schetter, DeLongis,

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Gruen, 1986; Helgeson, 1992). In addition, it has been proposed that in an unchangeable situation, it may be more adaptive to find other forms of control (Rothbaum et al., 1982; Thompson, 1993), such as control over the consequences of the stressor, that is, compensatory control (Thompson, 1993). Research findings have partially supported this hypothesis. For example, it has been found that in situations where primary control could not be exercised, other forms of control were negatively related to distress (Roussi, Miller, Shoda, 2000; Taylor, Helgeson, Reed, Skokan, 1991; Taylor, Lichtman, Wood, 1984; Thompson, Sobolew-Shubin, Galbraith, Schwankovsky, Cruzen, 1993).

Similarly, for coping, it has been proposed that problem-focused coping (i.e., coping efforts to change the source of the problem; Band, Weisz, 1988) is adaptive, and emotion-focused coping (i.e., coping efforts to manage or reduce emotional distress; Band, Weisz, 1988) is maladaptive (Kohn, 1996; Moos, Schaefer, 1993). However, studies that have explored the interaction between context and coping have found that problem-focused coping is negatively related to distress in changeable situations first and foremost (Macrodimitris, Endler, 2001; Roussi et al., 2000). Findings are equivocal as regards emotion-focused coping. Two reasons have been put forward to explain the inconsistent findings. First, it has been proposed that the operationalization of emotion-focused coping is problematic (Austefeld, Stanton, 2004). Stanton, Danoff-Burg, Cameron, and Ellis (1994) have pointed out that most measures of emotion-focused coping are confounded with measures of distress and that it is important to measure several aspects of emotion-focused coping, such as acceptance, emotional processing, and emotional expression. Second, the initial

differentiation between problem- and emotion-focused coping, although useful, is not considered sufficient to account for the findings regarding the relationship between coping and distress (Compas, Connor, Osowiecki, Welch 1997). Compas et al. (1997) proposed that a useful distinction is that between engagement and disengagement coping. Engagement responses refer to all coping efforts that result in contact with the stressor and with the emotions associated with it. Disengagement responses refer to all coping efforts that result in distancing oneself from the stressor and the emotions associated with it (Compas et al., 1997). Several recent studies have shown that in unchangeable situations, emotion-focused engagement coping, when it is effortful, is negatively related to distress (Austefeld, Stanton, 2004; Carver et al., 1993; Roussi, Krikeli, Hatzidimitriou, Koutri, in press; Stanton et al., 2000; Wadsworth, Rieckmann, Benson, Compas, 2004), whereas problem-focused coping is unrelated to distress (Carver et al., 1993; Roussi et al., in press; Stanton et al., 2000). Disengagement coping and involuntary (automatic) engagement emotion-focused coping have been found to be related to distress (Carver et al., 1993; Epping-Jordan et al., 1999; Roussi et al., in press; Stanton et al., 2000). Furthermore, it has been proposed that individuals who are able to vary their perceptions of control and their coping strategies as a function of the characteristics of the stressful situations, that is, they are flexible in their appraisal of control and coping, are less likely to experience distress (Cheng, 2001, 2003; Chiu, Hong, Mischel, Shoda, 1995; Roussi et al., 2000).

In the present study, we wanted to examine the relationship of control and coping with positive and negative mood

among a group of Greek rheumatoid arthritis (RA) patients. RA has been described as a relatively uncontrollable stressor because of the unpredictable flare-ups of the illness, as well as the chronic pain and disability experienced by the patients that contract the disease (Fournier, de Ridder, Bensing, 2002; Knotek, 2001; Newman, Mulligan, 2000). However, studies have shown that perceptions of control in RA are multifaceted and patients may have low perceptions of control over the course of the disease but high perceptions of control regarding other aspects of the disease, such as its symptoms (Affleck, Tennen, Pfeiffer, Fifield, 1987; Ryan, Hassell, Dawes, Kendall, 2003). Because of the multifaceted nature of the disease, RA gives one the opportunity to explore whether individuals who vary their perceptions of control and their coping as a function of the aspect of the illness they face, experience less distress than individuals who do not.

Several studies have explored the relationship between control and distress in RA patients. These studies have shown that the belief that the illness can be controlled by oneself or others is negatively related to depression and positively related to positive affect, although not consistently (Groarke, Curtis, Coughlan, Gsel, 2004; Moss-Morris et al., 2002). Control over symptoms of the disease has consistently been shown to be related to positive mood and negatively related to negative mood (Barlow, Cullen, Rowe, 2002; Lefebvre et al., 1999).

Regarding coping, the existing literature has shown that passive (e.g., withdrawing from activities) and avoidant coping to deal with pain are negatively related to psychological health and positively related to functional disability and depression (Covic, Adamson, Spencer, Howe, 2003;

Curtis, Groarke, Coughlan, Gsel, 2005; Evers, Kraaimaat, Geenen, Jacobs, Bijlsma, 2003; Groarke et al., 2004; Scharloo et al., 1999; Smith, Wallston, Dwyer, Dowdy, 1997; Zautra et al., 1995; van Lankveld, Naering, van't Pad Bosch, van de Putte, 2000). In contrast, active coping (the main problem-focused strategy) to deal with pain was in some studies unrelated to depression (Lorig, Holman, 1993), whereas in others it was negatively related to distress and positively related to positive mood and life satisfaction (Groarke et al., 2004; Smith et al., 1997). Seeking emotional support and venting of emotions to cope with pain were associated with negative mood and more pain next day (Affleck et al., 1999; Keefe et al., 1997), although a positive relationship between seeking emotional support and positive mood has also been found (Keefe et al., 1997). Finally, effortful emotion-focused engagement coping, such as acceptance and positive reinterpretation, has been found to be negatively related to negative mood and functional disability (Danoff-Burg, Revenson, 2005; Evers et al., 2001; Groarke et al., 2004; Smith et al., 1997).

Two studies in the RA field have also looked at combinations of coping strategies and how these relate to adjustment. For example, cluster studies have revealed distinct patient groups, each of which is differentially related to psychological adjustment. For example, individuals who concurrently employed active coping, positive reinterpretation, and distraction (Smith, Wallston, 1996) or active coping and emotional expression (Newman, Fitzpatrick, Lamb, Shipley, 1990) to deal with pain were found to have had better adjustment than those who employed several passive or avoidant strategies. Thus, optimal adaptation may involve a continuous process of balancing active coping

to change the condition with emotion-focused coping to adapt to the condition (McCracken, Carson, Eccleston, Keefe, 2004).

Based on the RA findings and recent theorizing in the stress literature regarding perceptions of control and coping, we hypothesized that: 1) Perceptions of compensatory control (control over symptoms) would be positively related to positive mood and negatively related to negative mood. 2) Effortful emotion-focused engagement coping (i.e., acceptance, positive reinterpretation, and humor) would be negatively related to negative mood and positively to positive mood. 3) Involuntary emotion-focused engagement coping (i.e., venting of emotions) would be positively related to negative mood and negatively to positive mood. 4) The use of active coping to deal with the symptoms would be positively related to positive mood and negatively related to negative mood. Finally, we explored the relationship between distress and patterns of perceptions of control and coping. Specifically, we hypothesized that individuals that show a flexible pattern across the two aspects of the disease would experience less negative mood and more positive mood, when compared to individuals that show inflexible patterns. A flexible pattern was characterized by low primary control/ high compensatory control and low active coping with the course of illness, high active coping with the symptoms and high effortful emotion-focused engagement coping to cope with both the course of illness and its symptoms. An inflexible pattern was characterized by high perceptions of control and high active coping, both with the course of illness and the symptoms, and/or involuntary emotion-focused engagement coping with both the course of illness and the symptoms.

METHOD

Participants

Participants were 102 patients with rheumatoid arthritis diagnosed for at least a year, attending the outpatient Rheumatology Clinic of the University Hospital of Heraklion for a regular follow-up visit. They were consecutively referred by their rheumatologist to the hospital psychologist over a two year period. They were 100% native Greeks. Seventy-five of them (74%) were women and twenty-seven (26%) were men. Ages ranged between 22 and 80, with a mean of 53.83. Seventy percent had at least some years of primary education, 21% had secondary education, and 9% had some type of higher education. Eighty-seven percent were married, 9% were single, 1% were divorced, and 3% were widowed. As regards the present state of illness, 34% of the participants were in exacerbation and 66% were in remission, according to the clinical examination and recent laboratory tests (i.e., ESR, C-reactive protein). As regards the overall severity of illness, for 18% of the participants the severity was rated as mild, for 42% as moderate and for 40% as high, according to their medical record and previous laboratory tests. A high percentage of the patients were in remission, despite the severity ratings, because the sample was drawn from the regular follow-up service of the clinic. Ten patients declined to participate in the study.

Procedure

All participants were patients admitted for regular follow-up at the outpatient Rheumatology Clinic of the University General Hospital of Heraklion, and were

referred by their rheumatologist to the hospital psychologist (first author). The two referring doctors provided clinical evaluation of the present state of illness and its overall severity (Groarke et al., 2004). After giving their informed consent, participants were asked to respond to a number of questionnaires, using an interview format. The data presented here is part of a larger study. The data was collected in the following order: a) demographics and medical information; b) mood, using the Profile of Mood Scale (POMS; McNair, Lorr, Droppelman, 1971); c) perceptions of control, using questions designed for the present study; and d) coping, using the Coping Orientation to Problems Experienced (COPE; Carver, Scheier, Weintraub, 1989). The measures for perceptions of control and coping were administered twice, once for the course of illness and once for the daily symptoms of the illness. The sequence of questioning about illness and symptoms was counterbalanced in order to control for order effects.

Measures

Mood: Mood was assessed using the POMS. The POMS is a 65-item self-report measure designed to assess several moods: tension-anxiety, depression-dejection, anger-hostility, fatigue, confusion-bewilderment, and vigor (McNair et al., 1971). The participants are presented with 65 adjectives and are asked to rate on a 5-point scale the extent to which they experienced these over the past week. A short version of the scale was used in this study, with a total of 30 items. A composite score of negative mood was calculated consisting of the tension, depression, anger, fatigue, and confusion subscales, with an alpha of .82. Positive mood was assessed using the standardized score on the vigor subscale of

the POMS, with a total of four items and an alpha of .64. The POMS has been adapted to Greek and has been found to have satisfactory psychometric properties (Roussi, 2001).

Perceptions of control: Perceived control (primary and compensatory) was assessed using two questions designed for this study (Thompson, Collins, Newcomb, Hunt, 1996). In each case, participants were asked to rate their perceptions of control on a scale ranging from 1 (no control at all) to 5 (totally in control). Primary control over the course of illness was assessed by asking, "To what extent do you believe you have control over the course of your illness?" Compensatory control over the daily symptoms was assessed by asking, "To what extent do you believe you have control over the daily symptoms of your illness?"

Coping: Coping was assessed using the COPE, a 60-item self-report questionnaire in which one indicates either how one generally deals with stressful situations (dispositional form) or how one dealt with a specific stressor (situational form) (Carver et al., 1989). In the present study, a short version of the situational form was administered twice. Participants were asked to choose the appropriateness of each statement on a 4-point scale, regarding the course of their illness, in the first version, and regarding their daily symptoms, in the second one. Six of the 15 subscales were included in the present study because of their theoretical interest: active coping, seeking social support, positive reinterpretation, acceptance, venting of emotions, and humor.

The COPE has been adapted to Greek and has been found to have adequate psychometric properties (Roussi, 2001). Internal reliability (Cronbach's alpha) of the six subscales has varied between .50 and .96.

RESULTS

First, we explored the relationship between distress and demographic and medical variables. Second, we examined the differences in perceptions of control across the two aspects of the disease, the course of illness and the daily symptoms. Third, we explored the relationship between mood and perceptions of control and coping. Finally, we explored individual patterns of perceptions of control and of coping with the two aspects of the stressor and their relationship to distress. Degrees of freedom vary somewhat because of missing data.

Relationship Between Mood and Background Variables

A nonparametric test (Kendall's tau) was used to explore the relationship between the dependent variables (positive and negative mood) and severity of illness, as it was ordinal data. Parametric tests were used for the rest of the analyses. Education and marital status were dichotomized for the analyses, based on the distribution of responses. No significant relationships were found between the dependent variables and sex, state of illness, referring doctor, and order of questioning. Age was positively related to negative mood ($r = .20$; $p < .05$), and individuals with primary education or less experienced more negative mood than individuals with at least some high school education ($t(98) = 2.79$; $p < .01$; primary or less: $M = 25.19$, $SD = 12.82$; more than primary: $M = 17.83$, $SD = 10.09$). Duration of illness was related to both positive and negative mood ($r = -.29$; $p < .01$; $r = .20$; $p < .05$, respectively). Severity of illness was also related to both positive and negative mood ($\tau =$

$-.17$; $p < .05$; $\tau = .31$; $p < .01$). All variables that were significantly related to the dependent variables were treated as covariates in subsequent analyses.

Differences in Perceptions of Control Between the Two Aspects of the Illness

Differences in perceptions of control over the course of illness and daily symptoms were examined using a t test for dependent samples. Perceptions of control did not differ significantly between the course of illness and the daily symptoms ($t(101) = -1.11$, ns).

Relationship Between Mood and Perceptions of Control

Partial correlations were used in order to take into account the background variables that were significantly related to positive and negative mood. Compensatory control was positively related to positive mood ($r = .28$, $p < .01$) and negatively related to negative mood ($r = -.22$, $p < .05$). Primary control was not related to mood.

Relationship Between Mood and Coping

Partial correlations were used, controlling for the relevant background variables. Regarding coping with the course of illness, the following significant relationships emerged: a) The use of social support seeking was positively related to negative mood ($r = .43$; $p < .01$) and negatively related to positive mood ($r = -.32$; $p < .01$). b) The use of venting of emotions was positively related to negative mood ($r = .35$; $p < .01$) and negatively related to positive mood ($r = -.33$; $p < .01$). Regarding coping with the symptoms, the use of social support seeking and venting of emo-

tions were found to be positively related to negative mood ($r = .36$; $p < .01$; $r = .24$; $p < .01$).

Patterns of Perceived Control and Coping and their Relationship to Mood

In order to explore individual patterns of perceived control and coping, we conducted hierarchical cluster analysis, which allows the partition of the sample into homogeneous groups on a number of variables. In this instance, the variables used for cluster formation were perceptions of control over the course of illness and over the daily symptoms, and the coping strate-

gies for both course of illness and daily symptoms. Ward's minimum variance was used as the grouping method and squared Euclidean distance was used as the proximity measure in clustering the data; the tree diagram indicated a three-cluster solution. The three groups differed on 11 of the 14 variables used to form them (Multivariate $F(28, 172) = 11.03$, $p < .01$, $\eta^2 = 0.64$). Acceptance, both of the course of illness and the symptoms, (course of illness: Univariate $F(2, 98) = 2.51$, $p = .09$; symptoms: Univariate $F(2, 98) = 2.89$, $p = .06$) and compensatory control differed marginally across the three clusters (Univariate $F(2, 98) = 2.27$, $p = .11$).

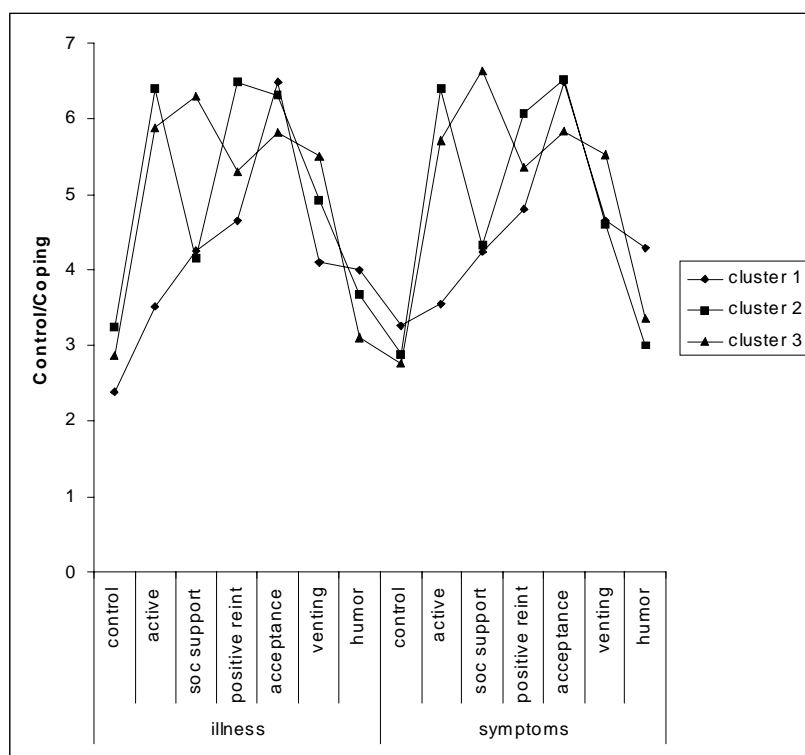


Figure 1. Patterns of perceptions of control and coping with rheumatoid arthritis

The means and standard deviations for perceptions of control and coping by cluster are shown in Table 1 and Figure 1. The first group (N = 31) was characterized by high use of humor, acceptance, and compensatory control, although differences regarding acceptance and compensatory control were only a trend. Perceptions of primary control and use of other coping were low. The second group (N = 25) was characterized by high perceptions of primary control, active coping, and positive reinterpretation. The third group (N = 45) was characterized by active coping, seeking social support, and venting of emotions.

Analyses of covariance, controlling for the relevant background variables, indicated that the three groups differed significantly on levels of positive (F (2, 87) = 4.08, $p < .05$, $\eta^2 = 0.09$) and negative mood (F (2, 76) = 6.89, $p < .01$, $\eta^2 = 0.15$) (Table 1). Specifically, the third cluster experienced less positive mood and more negative mood than both the first and the second clusters. We also examined whether the three groups differed on the demographic and medical variables. Gender differences emerged, with males being overrepresented in the second cluster ($\chi^2 = 7.89$, $p < .05$).

Table 1. Patterns of perceptions of control, coping and their relationship to mood

	Cluster 1		Cluster 2		Cluster 3	
	M	SD	M	SD	M	SD
Course of illness ^a						
Control ^{1,2}	2.39	1.20	3.24	1.01	2.87	1.08
Active coping ^{1,2,3}	3.52	1.48	6.40	1.15	5.89	1.34
Social support ^{1,2,3}	4.26	1.81	4.16	1.18	6.29	1.21
Positive reinterpretation ^{2,1,3}	4.65	1.85	6.48	1.29	5.31	1.65
Acceptance	6.48	1.46	6.32	1.03	5.82	1.40
Venting of emotions ^{1,2,3}	4.10	1.19	4.92	1.15	5.51	1.22
Humor ^{1,3}	4.00	1.69	3.68	1.57	3.11	1.32
Symptoms						
Control	3.26	0.97	2.88	1.05	2.76	1.05
Active coping ^{1,2,3}	3.55	1.41	6.40	1.08	5.71	1.41
Social support ^{1,2,3}	4.23	1.54	4.32	1.44	6.64	1.21
Positive reinterpretation ^{1,2}	4.81	1.83	6.08	1.50	5.36	1.54
Acceptance	6.48	1.34	6.52	0.96	5.84	1.55
Venting of emotions ^{1,2,3}	4.65	1.54	4.60	1.44	5.53	1.42
Humor ^{1,2,3}	4.29	1.81	3.00	1.08	3.36	1.63
Positive mood ^{1,3}	10.20	2.76	10.04	3.09	8.80	3.42
Negative mood ^{1,2,3}	19.03	11.62	19.8	10.81	27.00	12.83

^a Numbers refer to clusters. Numbers separated by a comma signify a significant difference

DISCUSSION

Our findings provide partial support for our hypotheses. More specifically, compensatory control was positively related to positive mood and negatively related to negative mood (Lefebvre et al., 1999), but primary control was not. In contrast to our hypothesis that active coping and effortful emotion-focused engagement coping would be related to mood (Groarke et al., 2004; Hamilton, Zautra, Reich, 2005), no such relationships emerged from our findings when this relationship was examined for individual strategies only. Consistent with the existing literature, involuntary emotion-focused engagement coping, such as venting of emotions, was positively related to negative mood and negatively related to positive mood (Affleck et al., 1999; Keefe et al., 1997). Although the existing literature is equivocal regarding the relationship between seeking social support and mood (Affleck et al., 1999; Keefe et al., 1997), our findings showed a negative relationship with positive mood and a positive relationship with negative mood for both the course of illness and the symptoms.

More importantly, we found that the participants can be grouped according to their patterns of perceptions of control and coping with the course of illness and the daily symptoms of the disease. Specifically, three groups were formed. Broadly, the first group was characterized by low primary control/ active coping, low involuntary emotion-focused engagement coping, high effortful emotion-focused engagement coping and high perceptions of compensatory control, although the latter was only a trend (engagement group). The second group was characterized by high primary control/ active coping, combined

with effortful emotion-focused engagement coping, such as positive reinterpretation (active group). The third group was characterized by active coping, combined with involuntary emotion-focused engagement coping (involuntary engagement group). In terms of background variables, our findings indicate that males are over-represented in the active group. In addition, the first and second groups experienced more positive mood and less negative mood than the third group.

Although our study is cross-sectional, and thus we cannot speculate about causal relationships between clusters and mood, our findings imply that the combined effect of specific control perceptions with the concurrent use of specific coping strategies is different from that observed with individual strategies alone (Smith, Wallston, 1996). For example, individuals in the first group, which showed the more flexible pattern (i.e., effortful emotion-focused engagement coping with both the course of illness and the symptoms, low active coping, low perceptions of primary control and a trend indicating high compensatory control) were found to experience high positive mood and low negative mood. This finding provides some preliminary support for the hypothesis that individuals who are able to vary their perceptions of control and coping as a function of the controllability of the various aspects of the stressful situations are less likely to experience negative mood (Austenfeld, Stanton, 2004; Cheng, 2001, 2003; Roussi et al., 2000). In addition, individuals with high perceptions of primary control and who use active coping with both the course of illness and its symptoms combined with emotion-focused engagement coping, experience more positive mood and less negative mood than individuals who use active coping combined

with involuntary emotion-focused engagement coping. Males are overrepresented in the former group, consistent with the existing literature which shows that they tend to have high perceptions of primary control and to use active coping to a greater degree than women (Fickova, 2005; Thompson, 2002). These findings suggest that an illusion of primary control may be related to psychological health (Taylor, Brown, 1988, 1994), particularly when combined with emotion-focused engagement coping that appears to be appropriate, given the demands of RA.

Our study has several limitations. First, it was conducted with a rural population of low education. Thus, these findings cannot be generalized to the Greek population without being replicated. Second, as rated by our participants, the two aspects of the disease did not differ, even though previous studies have found that patients consider the symptoms of the disease more controllable than the course of illness (Affleck et al., 1987). This limited our findings, in that the initial goal of finding clearly different patterns of perceptions of control and coping with the course of illness as opposed to daily symptoms was not realized. The lack of differences in perceptions of control may in part reflect the fact that the participants had to respond twice on questions regarding control and coping with different aspects of the disease. It may be that, even though our instructions were clear, they responded as to how they cope with the disease in general. Finally, our study was cross-sectional and thus our discussion regarding causal relationships between perceptions of control, coping and mood is speculative. Furthermore, we cannot rule out the possibility that a personality characteristic, such as optimism, could account for both the differences in coping as well as in mood, although most

studies show that coping mediates the impact of personality characteristics on mood (Brissette, Scheier, Carver, 2002; Carver et al., 1993). It will in future be important to conduct perspective studies, with larger samples, in order to be able to clarify causal relationships.

In conclusion, our study provides support for the hypothesis that individuals form distinct groups, based on their perceptions of control and coping, and that these groups show a differential relationship to positive and negative mood. Also, our findings indicate that low levels of negative mood and high levels of positive mood may be associated with more than one pattern of perceptions of control and coping, which may reflect not only the demands of the situation but also the characteristics of the individual, such as gender.

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VNÍMANÁ KONTROLA, ZVLÁDANIE A ICH VZŤAH K NÁLADĚ GRÉCKYCH PACIENTOV S REUMATOIDNOU ARTRITÍDOU

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Súhrn: Sledovali sme vzťah medzi kontrolou, zvládaním a náladou u gréckych pacientov s reumatoidnou artritídou. Sledovali sme vnímanie kontroly a zvládania z hľadiska dvoch aspektov ochorenia - priebehu choroby a jej každodenných symptómov. Predpokladali sme, že flexibilný model vnímania kontroly a zvládania (t.j. presný odhad kontrolovateľnosti rôznych aspektov stresora a aktívne zvládanie meniteľných aspektov stresora a na emócie zamerané zvládanie nemeniteľných aspektov stresora) bude negatívne súvisieť s negatívnou náladou a pozitívne s pozitívnou náladou. Zistili sme, že kompenzačná kontrola symptómov súvisela s pozitívnou náladou a negatívne s negatívnou náladou, a že hľadanie sociálnej podpory a odreagovanie emócií súviseli s negatívnou náladou. Okrem toho, jednotlivci charakterizovaní: 1) veľmi na emócie zameraným zvládaním priebehu choroby a jej symptómov, málo aktívnym zvládaním, slabým vnímaním primárnej kontroly a sklonom k vysokej kompenzačnej kontrole, alebo 2) silným vnímaním primárnej kontroly, aktívnym zvládaním a na emócie zameraným zvládaním prežívali viac pozitívnu náladu a menej negatívnu náladu, než jednotlivci charakterizovaní vysoko aktívnym zvládaním a neúmyselným na emócie zameraným zvládaním.