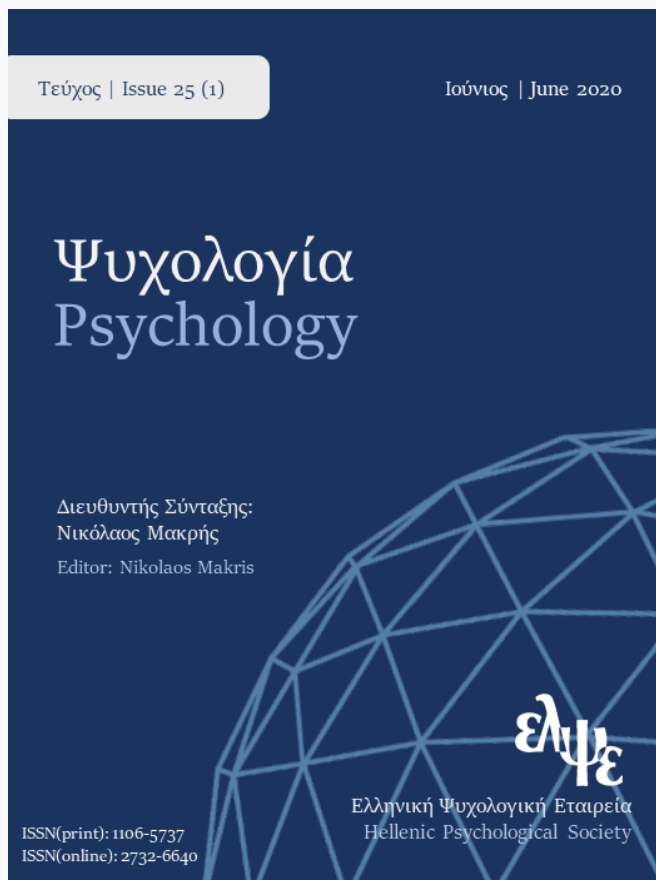


# Psychology: the Journal of the Hellenic Psychological Society

Vol 25, No 1 (2020)

Special Issue - Positive Psychology in Greece: latest developments



## Dispositional Optimism in Cardiac Patients and Their Spouses: Dyadic Relations to Well-being and Positive Affect

*Evangelos Karademas, Christoforos Thomadakis*

doi: [10.12681/psy\\_hps.25364](https://doi.org/10.12681/psy_hps.25364)

Copyright © 2020, Evangelos Karademas, Christoforos Thomadakis



This work is licensed under a [Creative Commons Attribution-ShareAlike 4.0](https://creativecommons.org/licenses/by-sa/4.0/).

### To cite this article:

Karademas, E., & Thomadakis, C. (2020). Dispositional Optimism in Cardiac Patients and Their Spouses: Dyadic Relations to Well-being and Positive Affect. *Psychology: The Journal of the Hellenic Psychological Society*, 25(1), 151–163. [https://doi.org/10.12681/psy\\_hps.25364](https://doi.org/10.12681/psy_hps.25364)

## ΕΜΠΕΙΡΙΚΗ ΕΡΓΑΣΙΑ | RESEARCH PAPER

# Dispositional Optimism in Cardiac Patients and Their Spouses: Dyadic Relations to Well-being and Positive Affect

Evangelos C. KARADEMAS<sup>1</sup>, Christoforos THOMADAKIS<sup>1</sup><sup>1</sup> Department of Psychology, University of Crete, Greece

## KEYWORDS

cardiovascular disease,  
dyadic relations,  
dispositional optimism,  
positive affect,  
well-being

## ABSTRACT

The aim of this prospective study was to examine the relation of a positive personal characteristic, i.e., dispositional optimism, to physical and emotional well-being and positive affect in a sample of chronic cardiac patients and their partners. One hundred and four cardiac patients (25 women; mean age = 64.36 years) and their spouses (mean age = 60.04; all couples were married) participated in the study. Patient and partner dispositional optimism was assessed at baseline; well-being and positive affect, four months later. The Actor-Partner Interdependence Model was used to examine the dyadic effects of optimism on physical and emotional well-being and positive affect. Structural equation modeling (SEM) was applied to run these analyses. In almost all cases, patient and spouse baseline optimism was positively related to their own well-being and positive emotions. Furthermore, patient optimism positively predicted spouse outcomes. However, spouse optimism was not related to any of the patients' indicators of well-being or positive emotions. These findings provide further support to the beneficial role of optimism, at an intra- and also inter-personal level. Furthermore, they indicate that, even when dealing with severe chronic disease, there are still positive personal characteristics, like dispositional optimism, which may help patients and their partners achieve better adaptation and higher levels of well-being.

## CORRESPONDENCE

Evangelos C. Karademas,  
Department of Psychology,  
University of Crete, 74100,  
Rethymno, Greece,  
email [karademas@uoc.gr](mailto:karademas@uoc.gr)

A positive personality characteristic that has repeatedly been related to health and well-being in patient and healthy populations is dispositional optimism (Carver & Scheier, 2001; Scheier & Carver, 1985). Dispositional optimism is, moreover, a significant determinant of adaptation to stressful conditions, like chronic illness, and an important facilitator of effective self-regulation (Carver & Scheier, 2001; Rasmussen et al., 2006). In this context, the aim of our prospective study was to examine the impact of chronic cardiac patients' and their partners' dispositional optimism on their physical and emotional well-being, as well as their positive affect.

## *Optimism and adaptation to chronic illness*

Dispositional optimism has been defined as the generalized tendency to expect positive outcomes even in the face of adversity, and described as the “major determinant of the distinction between two classes of behaviour: (a) continued striving versus (b) giving up and turning away” (Scheier & Carver, 1985, p. 227). As Carver and Scheier (2001) have argued, the individuals who preserve their optimism tend to be more confident as far as their ability to manage difficulties is concerned, more persistent in the effort to achieve their goals or develop new ones, and they are more likely to effectively cope with aversive situations. As a

result, it is possible for these persons to adapt more effectively to stressors and experience more positive feelings and higher levels of well-being (Rasmussen et al., 2006).

Indeed, optimism has been negatively related to anxiety and depression symptoms, and positively to subjective well-being and positive mood in the general population (e.g., Carver et al., 2005). With regard to chronic physical illness, optimism has been related to swifter and more successful recovery, lower mortality, and fewer or less intense physical and psychological symptoms across several medical conditions, including cardiovascular diseases, cancer, HIV/AIDS, diabetes and autoimmune disorders (e.g., Barry et al., 2007; Contrada et al., 2008; Ferreira & Sherman, 2007; Oxland & Wade, 2008; Rasmussen et al., 2006; Shen et al., 2004; Symister & Friend, 2003). Furthermore, as far as cardiovascular diseases are concerned, optimism has been related to a more 'positive' representation of illness (i.e., as less threatening and more controllable; Karademas et al., 2011), to the promotion of more beneficial health habits, and the use of more adaptive coping strategies, such as problem-solving and positive reappraisal (Barry et al., 2007; Contrada et al., 2008; Oxland & Wade, 2008; Scheier & Carver, 1987). In addition, there is some evidence that optimism protects against all-cause and cardiovascular mortality in old age (Giltay et al., 2004).

The relation of optimism to health and well-being appears to be both direct as well as indirect, which is through other factors that serve as links between optimism and well-being. Effective self-regulation, positive mood, higher self-esteem, the use of health-promoting habits and more effective strategies for coping with stress (e.g., problem-focused coping), as well as the use of effective ways to regulate emotion, have been proposed as potential pathways through which optimism is linked to well-being (Carver & Scheier, 2001; Symister & Friend, 2003).

### ***Adaptation to illness as a dyadic process***

The experience of illness is not an individual or isolated process. According to many studies, adaptation to chronic illness refers not only to patients but also to their partners. For example, couples seem to develop a shared appraisal and understanding of illness and common ways of dealing with its impact and consequences (Berg & Upchurch, 2007; Bodenmann, 2005). Also, as found in studies with patients suffering from cardiovascular disease (e.g., Bertoni et al., 2015) or cancer (e.g., Otto et al., 2015), partners are often involved in the management of illness (e.g., they help patients deal with symptoms or adhere to physicians' advice), while their own well-being is closely related to patients' levels of well-being. Overall, it seems that patients and partners form a bidirectional system within which the 'individual' self-regulation processes of each member of the couple are mutually affected in complex ways (Bodenmann, 2005).

It is worth noting that according to certain recent studies, personal optimism is related not only to own but also to one's partner well-being. Kim et al. (2014) found that both partners' higher levels of optimism predicted better physical well-being in older adults and their spouses. Lower levels of optimism in stroke survivors were related to more depression symptoms in their spouses (Chung et al., 2016). Also, in a sample of patients with an autoimmune disease and their spouses, patient optimism predicted their own and partner perceptions about the consequences of illness and personal control over it (Karademas et al., 2017).

### ***The present study***

This study is part of a broader research effort aiming to examine the relationship between certain personality traits, illness-related self-regulation, affect and quality of life in a sample of patients with cardiovascular disease and their partners (see, for example, Karademas et al., 2019). Cardiovascular

diseases continue to be the leading cause of death globally (Pagidipati & Gaziano, 2013; World Health Organisation [WHO], 2017), despite the decline in mortality due to them (Mensah et al., 2017). They often represent a devastating event causing severe limitations to functioning and physical strength, long-term negative emotional reactions (e.g., depression), significant financial burden, and negative changes in social relationships (Bennett, 2007; Suchday et al., 2002). Additionally, close family members, especially partners, often experience high levels of distress as a result of the limitations and problems imposed on patients by the disease (Bennett, 2007).

Here, we report the findings of our study regarding the relationship between optimism and physical and emotional well-being, at a dyadic level (i.e., patient and partner). Given the crucial role of optimism in general (Carver & Scheier, 2001; Symister & Friend, 2003) and in cardiovascular diseases in particular (e.g., Oxland & Wade, 2008), as well as the significance of each partner's behavior for the well-being of the other partner (Berg & Upchurch, 2007; Bertoni et al., 2015), it is important to investigate into the ways that patient and partner optimism affects their adaptation to cardiovascular disease. This will facilitate a better understanding of the processes that are involved in dyadic adaptation to this severe illness, as well as the development of potentially more effective interventions.

Besides the relation of optimism to well-being, here we also focus on its relationship to positive affect. Positive affect has been described as the feelings resulting from a pleasing interaction with the environment, including happiness and joy (Clark et al., 1989). Positive affect is generally associated with better physical and psychological health (Pressman & Cohen, 2005), and with decreased mortality in coronary patients (e.g., Brummett et al., 2005). A relatively recent meta-analysis of prospective studies showed that positive affect is related to reduced mortality in healthy and patient populations, including patients with cardiac disease (Chida & Steptoe, 2008). Moreover, there is evidence that positive affect is related to a more positive representation of illness as a more controllable and less troublesome condition (Moss-Morris et al., 2002). Thus, positive affect seems to be a central aspect of adaptation to illness and a major predictor of patients' well-being.

Given the positive relation of optimism to well-being and positive emotions (Carver et al., 2005; Contrada et al., 2008), our first hypothesis was that each participant's optimism will be positively related to own physical and emotional well-being, as well as positive affect. Also, to the extent that patients and their partners form a bidirectional, mutually affected system (Bodenmann, 2005), we expected the levels of optimism of each member of the couple to predict the well-being and the positive affect of the other member of the couple. As optimism is typically expressed in one's behavior (e.g., the strive to achieve goals) and attitudes (e.g., higher self-esteem, perception of illness as more controllable; Carver & Scheier, 2001; Karademas et al., 2011; Rasmussen et al., 2006), it is likely for these reactions to also promote partners' well-being. Hence, our second hypothesis was that patients' optimism is positively related to their partners' well-being and positive affect. Likewise, we expected partner optimism to be positively related to patient well-being and positive affect.

## **Method**

### ***Participants***

Consecutive patients with a chronic cardiovascular disease visiting the outpatient cardiology departments of two public hospitals in Crete, Greece, as well as their partners were invited to participate in the study. Inclusion criteria for the patients were a chronic cardiovascular disease (e.g., coronary artery disease), age over 18, being able to understand the study protocol and provide informed consent, and also consenting to

have their partner be involved in the study. Inclusion criteria for the partners were age over 18, being free of any chronic or severe illness, and being able to understand the study protocol and provide informed consent.

The final sample consisted of 104 patients (25 women) and their spouses (all couples were married). Of the patients, 24 (23.08%) had suffered a myocardial infarction; 40 (38.44%) were dealing with coronary artery disease; 23 (22.12%) were suffering from arrhythmias, and 17 (16.36%) from various heart conditions (e.g., valvular disease). The average duration of illness was 8.00 years (SD=5.92; min=1, max=34). The patients' mean age was 64.36 years (SD=11.75; min=32, max=80), while their spouses' mean age was 60.04 years (SD=13.94; min=31, max=83). Regarding education, 38.5% of the patients and 37.5% of the spouses had completed the 9-year mandatory education or less; 39.4% and 46.2%, respectively, had completed high school; 22.1% of the patients and 16.3% of the spouses were holders of a higher education degree.

### **Measures**

*Optimism.* Dispositional optimism was assessed with the Life Orientation Test-Revised (Scheier et al., 1994), as adapted in Greek for the purposes of an older study of ours (Karademas et al., 2007). It consists of 10 items, six of which measure optimism (e.g., In uncertain times, I usually expect the best) and the remaining four are fillers (Cronbach's  $\alpha = .72$  and  $.79$ , for patients and spouses, respectively). Participants responded on a 5-point Likert type scale ranging from 1 ("I disagree a lot") to 5 ("I agree a lot"), with higher scores indicating higher levels of optimism.

*Well-being.* The Physical Functioning and the Emotional Well-being scales from the RAND 36-item Health Survey ([http://www.rand.org/health/surveys\\_tools/mos/mos\\_core\\_36item.html](http://www.rand.org/health/surveys_tools/mos/mos_core_36item.html)) were used to assess physical and emotional well-being (a Greek version is available upon request). The Physical Functioning scale consists of 10 items regarding current limitations imposed by health status (e.g., climbing several flights of stairs; Cronbach's  $\alpha = .90$  and  $.91$ , for patients and spouses, respectively). The Emotional Well-being scale consists of five items regarding personal feelings during the past four weeks (e.g., have been a very nervous person; Cronbach's  $\alpha = .80$  and  $.73$ , for patients and spouses, respectively). Participants' responses were transformed so as the final score to range from 0 to 100, with higher scores indicating better well-being.

*Positive affect.* Positive affect was assessed with the corresponding scale from the Positive and Negative Affectivity Schedule (Watson et al., 1988), as adapted in Greek by Karademas et al. (2007). The scale consists of ten adjectives that describe positive affect (e.g., interested, active; Cronbach's  $\alpha = .85$  and  $.83$ , for patients and spouses, respectively). Participants responded on a 5-point Likert type scale ranging from 1 ("very slightly or not at all") to 5 ("extremely"). They were asked to indicate the extent to which they felt each feeling/emotion during the last 15 days.

### **Procedure**

Patients, as well as those of the partners who were present at the hospital, were approached by a research assistant who provided information about the purpose of the study and invited them to participate. The patients and their partners who agreed to participate were asked to respond to the study questionnaire separately. The partners that were not present at the hospital during the first contact by the research team, were approached by phone and were invited to complete the study questionnaire at a scheduled appointment with a research assistant. To examine the prospective relation of optimism to well-being and positive affect, as well as to avoid the possibility of an only temporal association between these variables

and all other limitations resulting from a cross-sectional study (Marks & Yardley, 2004), patient and partner dispositional optimism was assessed at baseline, while physical and emotional well-being and positive affect were assessed four months later. The study was approved by the University of Crete Ethics Committee (No 57/30-06-2014).

## Analyses

The Actor-Partner Interdependence Model (APIM; Kenny, 1996; Kenny & Cook, 1999; Kenny et al., 2006) was used to examine the dyadic (actor and partner) effects of optimism on well-being and positive affect. APIM integrates the concept of dyadic interdependence with the appropriate statistical analyses. According to APIM, the relation of a person's independent variable to their own dependent variable is referred to as the *actor effect* (i.e., the effects of a person's characteristics on own outcomes), while the relation to partner's dependent variable is referred to as the *partner effect* (i.e., the effects of a person's characteristics on their partner's outcomes). In order to examine the nonindependence of the outcome variables, which is a prerequisite for dyadic analyses (Kenny et al., 2006), the correlations between patient and spouse physical and emotional well-being, and positive affect, after controlling for the independent and control variables, were computed.

Structural equation modeling (SEM) using LISREL 8.80 (Jöreskog & Sörbom, 2006) was applied to run the APIM analyses (three separate analyses were performed, each for physical well-being, emotional well-being, and positive affect). The beta-coefficients from the SEM analyses are estimates of actor and partner effects. A statistically significant coefficient represents a significant actor or partner effect. Actor effects are estimated after controlling for partner effects, and vice versa. In these analyses, optimism served as the independent variable, and well-being and positive affect as the dependent variables. As this is a saturated model, it has zero degrees of freedom (Kenny & Cook, 1999). A post hoc examination revealed a statistical power equal to about .80 at an alpha level equal to 5% and a medium effect size for the analyses performed.

## Results

### Preliminary results

According to a series of paired-*t*-tests, patients reported worse physical well-being than their spouses ( $t(103)=-2.07, p<.05$ ), and lower positive affect ( $t(103)=-2.84, p<.01$ ). No other statistically significant differences between patients and spouses were found ( $ts(103)<|.84|, p>.10$ ). Also, according to a series of MANOVAs, there were no statistically significant differences in patient variables, with respect to patients' gender, education level (i.e., higher vs. non higher education) and whether they were surgically operated in the past or not,  $Fs(4, 93)<1.90, p>.05$ , partial  $\eta^2<.08$ . Likewise, there were no differences in spouse variables, regarding spouses' gender and education level,  $Fs(4, 97)<1.00, p>.05$ , partial  $\eta^2<.05$ . Time since diagnosis was not related to any of the variables (Pearson  $rs<|.19|, p>.05$ ). Patient age was negatively related to own and spouse positive affect and physical well-being (Pearson  $rs>-.25, p<.01$ ). Likewise, spouse age was negatively related to patient positive affect, and own and patient physical well-being (Pearson  $rs>-.21, p<.05$ ). Therefore, dyadic analyses were performed after controlling for patients' age (to avoid multicollinearity, we did not control for spouses' age as well; patient/spouse age Pearson  $r=.83, p<.001$ ).

Finally, the partial correlations between patient and spouse well-being and affect, after controlling for optimism and patient age, were Pearson  $r = .27$  and  $.26, p < .01$ , for the physical and the emotional well-

being, respectively, as well as  $.47, p < .01$ , for the positive affect. Thus, dyadic analyses are suitable for this set of data.

### ***Dyadic effects of optimism***

The correlations among all study variables are presented in Table 1. Significant positive correlations were found between patient optimism and their own and spouse emotional well-being and positive affect. Spouse optimism was positively related to their own physical and emotional well-being and positive affect. It was not related to any patient variable. Patient and spouse optimism were moderately related (Pearson  $r = .23, p < .05$ ).

**Table 1**

*Descriptive Statistics and Intercorrelations of Patient and Spouse Optimism, Physical and Emotional Well-being, and Positive Affect ( $N_{couples} = 104$ )*

<b>Variables</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
1. Patient Optimism	1.00							
2. Spouse Optimism	.23*	1.00						
3. Patient Physical WB	.16	.18	1.00					
4. Spouse Physical WB	.08	.22*	.35**	1.00				
5. Patient Emotional WB	.22*	.16	.53**	.21*	1.00			
6. Spouse Emotional WB	.21*	.23*	.04	.11	.32**	1.00		
7. Patient Positive Affect	.31**	.15	.46**	.10	.47**	.07	1.00	
8. Spouse Positive Affect	.26*	.35**	.17	.25*	.22*	.30**	.52**	1.00
Mean	3.58	3.49	64.91	70.48	59.04	60.63	2.99	3.19
Standard Deviation	.74	.91	23.39	24.62	17.52	15.68	.72	.71

\* Note. WB: well-being, \* $p < .05$ , \*\* $p < .01$

Figures 1 to 3 present the results of the APIM analyses. As far as the effects of patient and spouse optimism on both partners' scores of physical well-being is concerned (see Figure 1), only one actor effect was identified: spouse optimism predicted own physical well-being ( $\beta = .20, p < .05$ ). No other actor or partner effects were found. With regard to emotional well-being (see Figure 2), patient well-being was predicted by own optimism (actor effect;  $\beta = .21, p < .05$ ), while spouse emotional well-being was predicted by own ( $\beta = .21, p < .05$ ) and patient optimism (partner effect;  $\beta = .20, p < .05$ ). Finally, regarding positive affect (see Figure 3), patient affect was predicted only by own optimism ( $\beta = .27, p < .05$ ), whereas spouse positive affect was predicted by own ( $\beta = .30, p < .01$ ) as well as patient optimism ( $\beta = .19, p < .05$ ).

### **Discussion**

The aim of this prospective study was to examine the relation of dispositional optimism to physical and emotional well-being, as well as to positive emotions in a sample of chronic cardiac patients and their spouses. To our knowledge, no previous studies have examined these relationships. Overall, the data provided support to our first hypothesis regarding actor effects. In almost all cases, patient and spouse baseline optimism was positively related to own outcomes, which were assessed four months later.

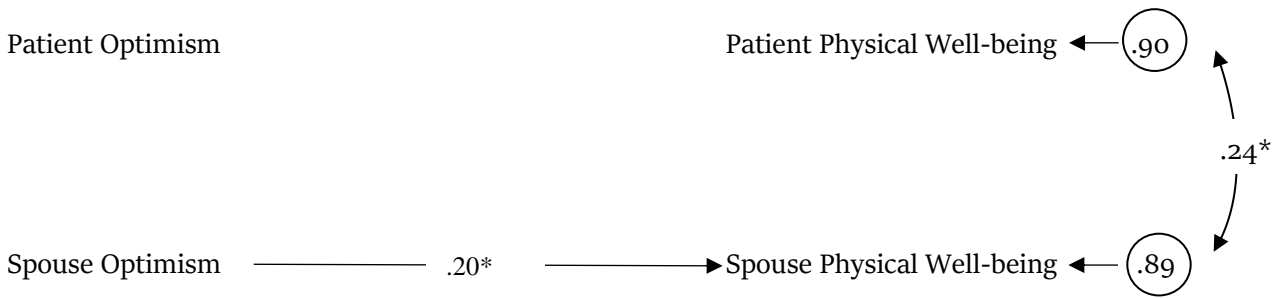


Figure 1 Beta-coefficients from the SEM analysis testing for actor and partner effects of optimism on physical well-being ( $N = 104$  couples).<sup>1</sup>

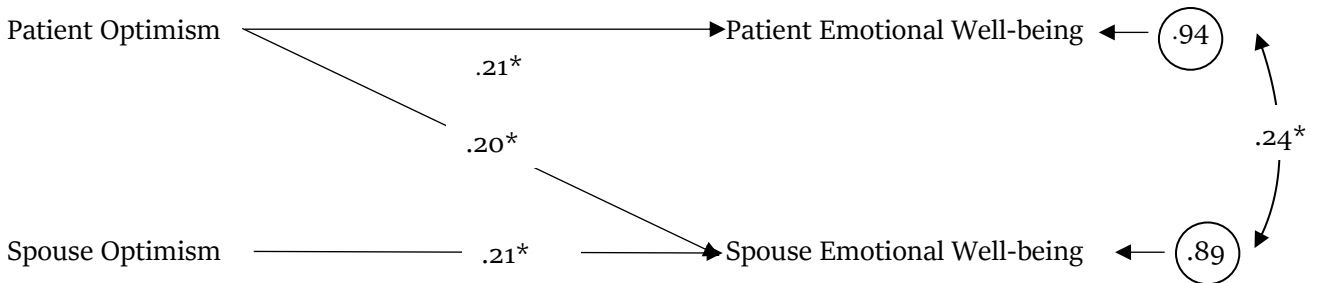


Figure 2 Beta-coefficients from the SEM analysis testing for actor and partner effects of optimism on emotional well-being ( $N = 104$  couples).<sup>2</sup>

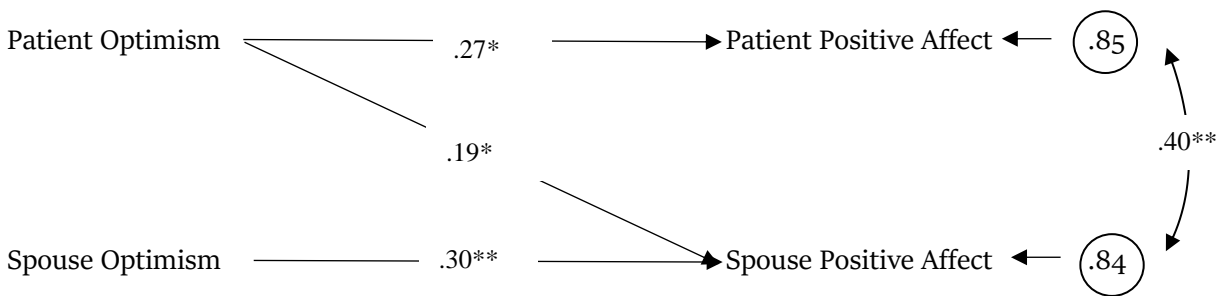


Figure 3 Beta-coefficients from the SEM analysis testing for actor and partner effects of optimism on positive affect ( $N = 104$  couples)<sup>3</sup>

<sup>1</sup>For clarity reasons, covariances among explanatory variables, as well as the non-significant paths are omitted from the figure (\* $p < .05$ ).

<sup>2</sup>For clarity reasons, covariances among explanatory variables, as well as the non-significant paths are omitted from the figure (\* $p < .05$ ).

<sup>3</sup>For clarity reasons, covariances among explanatory variables, as well as the non-significant paths are omitted from the figure (\* $p < .05$ , \*\*  $p < .01$ )



Regarding the second hypothesis concerning partner effects, however, the data provided partial support. It was only patient optimism that predicted spouse outcomes.

Across a great number of studies and in several populations, including patients with cardiovascular disease, optimism has emerged as one of the most consistent predictors of health-related outcomes, such as physical and psychological well-being, functioning, symptoms, and even mortality (Carver & Scheier, 2014; Giltay et al., 2004; Rasmussen et al., 2006). Thus, it comes with no surprise that, also in this study, personal optimism was related to patient and spouse well-being and positive emotions. Probably optimism helps individuals establish and maintain a more efficient self-regulation mechanism which in turn allows them to continue their efforts to overcome adversities (like a chronic cardiac illness), feel more confident in their abilities, commit to more effective coping and also adapt their goals and future plans to their needs (Carver & Scheier, 2014; Scheier & Carver, 1985). Through these pathways, which have repeatedly been associated with better health outcomes and better adaptation to illness (Carver & Connor-Smith, 2010; Helgeson & Zajdel, 2017; Stanton et al., 2007), optimism may also lead to better health.

Still, it is interesting that patient physical functioning, which was used here as an indicator of physical well-being, was not predicted by patient optimism. In fact, even the correlation coefficient between these two variables was rather weak. A possible explanation might be that several of the physical limitations imposed by the chronic cardiac problem will persist, to the knowledge of patients, in the future (Bennett, 2007). Thus, the perception of current or future physical condition probably remains unaffected by the ways patients construct their generalized expectations.

Likewise, it was not surprising that several partner effects were found in the study. The finding that patient optimism predicts spouses' health outcomes in a positive way is in accordance with the results of previous studies which have shown that patient optimism may impact partners' adaptation to illness (e.g., Karademas et al., 2017), as well as with the definition of optimism as a personal characteristic which may also have an interpersonal impact (e.g., on other persons' mood and attitudes; Carver & Scheier, 2014). Moreover, findings like this emphasize adaptation to illness as a dyadic process. As Bodenmann (2005) underlined, coping with a diverse condition is a dyadic phenomenon that is defined and shaped by processes that take place in both partners. After all, it should not escape our attention that most of the individual reactions are shaped in relation to other persons' behavior (Shoda et al., 2002).

In this respect, it is possible that spouses evaluate patient optimism as a general positive indicator of patients' adaptation to their health condition (Karademas et al., 2017). In other words, patient higher levels of optimism may function as an encouraging signal for spouses, which helps them maintain and report higher levels of well-being and better mood. Indeed, previous studies have already shown that patients and their partners use a variety of information resources in order to understand each other's condition, as well as in order to develop their own perceptions and behavior towards illness (which in turn affect well-being; Dimitraki & Karademas, 2014; Leventhal et al., 2016).

However, against our hypotheses, spouse dispositional optimism was not related to any of the patients' indicators of well-being or positive emotions. This finding was unexpected, but not unprecedented. Although it is in contrast to the results of a previous study (Chung et al., 2016), according to which partner optimism was related not only to own but also to patient well-being, Karademas et al. (2017) also reported that spouses' optimism was unrelated to the illness representations of patients with an autoimmune disorder. The authors asserted that such findings do not necessarily mean that spouse optimism is not important for patients' adaptation to illness. They suggested that partner optimism may, in fact, impact patient well-being through its relationship to patient optimism. That is, as a reinforcer of the latter which in turn affects patient and partner adaptation to illness. Besides this, however, the differences noticed between the findings coming from the two studies with Greek samples and the findings from international

studies may reflect cultural differences. Therefore, more research is warranted to examine the relation of Greek partners' optimism to patients' adaptation to illness.

The study is faced with certain limitations. First, the time interval between the assessment of optimism and the assessment of well-being and positive emotions was rather short. Adaptation to chronic illness is a dynamic process and, thus, the associations between its particular aspects are changing over time as illness evolves (Leventhal et al., 2016). Hence, future studies should examine the impact of optimism after longer periods of time so as to evaluate its long-term impact on patient and partner self-regulation processes. All couples who participated in the study were married; no other types of romantic relationships were included. Although this is typical of the local culture and customs, it may have affected the results. In addition, the sample size, although adequate for the type of analyses performed here, was rather modest and did not permit additional analyses (e.g., the potential impact of gender). Also, patient-participants were suffering from a diversity of cardiac problems. Future studies need to focus on particular cardiovascular diseases (e.g., only stroke patients or only heart failure patients), as well as on patients suffering from other diseases, such as cancer, diabetes, etc., as the diversity of needs and processes that take place in different diseases may lead to dissimilar findings. Finally, only certain aspects of adaptation to illness (namely, well-being and positive affect) were examined in this study. Future studies should also examine the impact of positive personal characteristics on additional adaptation-related variables such as illness perceptions and coping behaviors.

Nevertheless, the findings of this study provided further support to the role of dispositional optimism as a facilitator of adaptation to chronic illness, at an intra- and inter-personal level (at least, as far as cardiac patients' optimism is concerned). Moreover, the findings indicate that, even when faced with a highly aversive condition, like a life-threatening disease that imposes severe limitations on everyday life, there are still positive personal characteristics that may help patients and their partners achieve better adaptation and higher levels of well-being. Such recognition points to the need to continue and further our research efforts so as to gain a broader understanding of the ways that these positive characteristics may promote self-regulation and health. This is especially important for patients with cardiovascular disease and their partners, as the disease takes a significant toll on their well-being, while its progress heavily depends on patients' and partners' illness-related behavior (e.g., adherence to medical advice; Bennett, 2007). Hence, a clear understanding of the factors that may act as facilitators of an effective adaptation to illness will lead to (a) the construction of more accurate theoretical frameworks that will focus not solely on the more "negative" aspects of adaptation, but will also encompass the positive features or determinants of this process (e.g., positive expectations, positive emotions); (b) the development of more effective intervention programs that will take into account the potential impact of positive personal characteristics.

So far, several dyadic intervention and/or educational programs have successfully been developed for many conditions, including cardiovascular diseases (Martire et al., 2010). Especially regarding the latter, dyadic interventions have been developed to help patients and partners to cope with problems that are associated with poor well-being, such as inadequate self-care, low family support, high caregiver distress (e.g., Bakas et al., 2014; Sebern & Woda, 2012). The majority of these interventions, however, have not focused on the 'positive' aspects of self- and dyadic-regulation in illness. Thus, the findings of this and similar studies underline the need for (and may guide) future intervention efforts to also address patients' and partners' positive characteristics in order to enhance their well-being. For instance, strengthening patient and partner realistically positive expectations about illness may lead to the augmentation of health-promoting responses which are connected to optimism, such as the more frequent use of effective coping behaviors and the adoption of health behaviors (e.g., regular exercise; Symister & Friend, 2003).

## Funding

This work was supported by the University of Crete Special Account for Research under Grant 4376.

## Conflict of interest

The authors declare that they have no conflict of interest.

## References

- Barry, L. C., Lightman, J. H., Spertus, J. A., Rumsfeld, J. S., Vaccarino, V., Jones, P. G., Plomondon, M. E., Parashar, S., & Krumholz, H. M. (2007). Patient satisfaction with treatment after acute myocardial infarction: Role of psychosocial factors. *Psychosomatic Medicine*, *69*, 115-123. <https://doi.org/10.1097/PSY.0b013e31802f2785>
- Bennett, P. (2007). Coronary heart disease: Impact. In S. Ayers (Ed.), *Cambridge handbook of psychology, health, and medicine* (pp. 644-647). Cambridge University Press.
- Berg, C. A., & Upchurch, R. A. (2007). Developmental-contextual model of couples coping with chronic illness across the adult life span. *Psychological Bulletin*, *133*, 920-954. <https://doi.org/10.1037/00332909.133.6.920>
- Bertoni, A., Donato, S., Barello, G., & Parise, M. (2015). Engaged patients, engaged partnerships: singles and partners dealing with an acute cardiac event. *Psychology, Health, and Medicine*, *20*, 505-517. <https://doi.org/10.1080/13548506.2014.969746>
- Bodenmann, G. (2005). Dyadic coping and its significance for marital functioning. In T. Revenson, K. Kayser & G. Bodenmann (Eds.), *Couples coping with stress: Emerging perspectives on dyadic coping* (pp. 33-50). American Psychological Association.
- Bakas, T., Clark, P. C., Kelly-Hayes, M., King, R. B., Lutz, B. J., & Miller, E. L. (2014). Evidence for stroke family caregiver and dyad interventions. *Stroke*, *45*, 2836-2852. <https://doi.org/10.1161/STR.000000000000033>
- Brummett, B. H., Boyle, S. H., Siegler, I. C., Williams, R. B., Mark, D. B., & Barefoot, J. C. (2005). Ratings of positive and depressive emotion as predictors of mortality in coronary patients. *International Journal of Cardiology*, *100*, 213-216. <https://doi.org/10.1016/j.ijcard.2004.06.016>
- Carver, C. S., & Connor-Smith, J. (2010). Personality and coping. *Annual Review of Psychology*, *61*, 679-704. <https://doi.org/10.1146/annurev.psych.09008.100352>
- Carver, C. S., & Scheier, M. F. (2001). Optimism, pessimism, and self-regulation. In E.C. Chang (Ed.), *Optimism and Pessimism: Implications for Theory, Research, and Practice* (pp. 31-51). American Psychological Association.
- Carver, C. S., & Scheier, M. F. (2014). Dispositional optimism. *Trends in Cognitive Sciences*, *18*, 293-299. <https://doi.org/10.1016/j.tics/2014.02.003>
- Carver, C. S., Smith, R. G., Antoni, M. H., Petronis, V. M., Weiss, S., & Derhagopian, R. P. (2005). Optimistic personality and psychosocial well-being during treatment predict psychosocial well-being among long-term survivors of breast cancer. *Health Psychology*, *24*, 508-516. <https://doi.org/10.1037/0278-6133.24.5.508>
- Chida, Y., & Steptoe, A. (2008). Positive psychological well-being and mortality: a quantitative review of prospective observational studies. *Psychosomatic Medicine*, *70*, 741-756. <https://doi.org/10.1097/PSY.0b013e31818105ba>
- Chung, M. L., Bakas, T., Plue, L. D., & Williams, L. S. (2016). Effects of self-esteem, optimism, and perceived control on depressive symptoms in stroke survivor-spouse dyads. *Journal of Cardiovascular Nursing*, *31*, E8-E16. <https://doi.org/10.1097/JCN.000000000000232>
- Clark, L. A., Watson, D., & Leeka, J. (1989). Diurnal variation in the positive affects. *Motivation and Emotion*, *13*, 205-234. <https://doi.org/10.1007/BF00995536>

- Contrada, R. J., Boulifard, D. A., Hekler, E. B., Idler, E. L., Spruill, T. M., Labouvie, E. W., & Krause, T. J. (2008). Psychosocial factors in heart surgery: Presurgical vulnerability and postsurgical recovery. *Health Psychology, 27*, 309-319. <https://doi.org/10.1037/0278-6133.27.3.309>
- Dimitraki, G., & Karademas, E. C. (2014). The association of type 2 diabetes patient and spouse illness representations with their well-being: A dyadic approach. *International Journal of Behavioral Medicine, 21*, 230-239. <https://doi.org/10.1007/s12529-013-9296-z>
- Ferreira, V. M., & Sherman, A. M. (2007). The relationship of optimism, pain and social support to well-being in older adults with osteoarthritis. *Aging and Mental Health, 11*, 89-98. <https://doi.org/10.1080/13607860600736166>
- Giltay, E. J., Geleijnse, J. M., Zitman, F. G., Hoekstra, T., & Schouten, E. G. (2004). Dispositional optimism and all cause and cardiovascular mortality in a prospective cohort of elderly Dutch men and women. *Archives of General Psychiatry, 61*, 1126-1135. <https://doi.org/10.1001/archpsyc.61.11.1126>
- Helgeson, V. S., & Zajdel, M. (2017). Adjusting to chronic health conditions. *Annual Review of Psychology, 68*, 545-571. <https://doi.org/10.1146/annurev-psych-010416-044014>
- Jöreskog, K. G., & Sörbom, D. (2006). *LISREL 8.8 for Windows*. Skokie. Scientific Software International.
- Karademas, E. C., Barouxi, E., & Mavrovides, G. (2019). Positive and negative affect and well-being in cardiac patients and their spouses: The mediating role of illness representations. *Psychology and Health, 34*, 289-305. <https://doi.org/10.1080/08870446.2018.1525490>
- Karademas, E. C., Kafetsios, K., & Siderides, G. (2007). Optimism, self-efficacy and information processing of threat and well-being related stimuli. *Stress and Health, 23*, 285-294. <https://doi.org/10.1002/smi.1147>
- Karademas, E. C., Kynigopoulou, E., Agathangelou, E., & Anestis, D. (2011). The relation of illness representations to the 'end-stage' appraisal of outcomes through health status, and the moderating role of optimism. *Psychology and Health, 26*, 567-583. <https://doi.org/10.1080/08870441003653488>
- Karademas, E. C., Ktistaki, G., Dimitraki, G., Papastefanakis, E., Mastorodemos, V., Repa, A., Gergianaki, I., Bertsiyas, G., Sidiropoulos, P., & Simos, P. (2017). Patient and partner dispositional optimism as a long-term predictor of illness representations in autoimmune diseases. *Journal of Health Psychology, 22*, 1691-1700. <https://doi.org/10.1177/1359105316633287>
- Kenny, D. A. (1996). Models of non-independence in dyadic research. *Journal of Social and Personal Relationships, 13*, 279-294. <https://doi.org/10.1177/0265407596132007>
- Kenny, D. A., & Cook, W. L. (1999). Partner effects in relationship research: Conceptual issues, analytic difficulties, and illustrations. *Personal Relationships, 6*, 433-448. <https://doi.org/10.1111/j.1475-6811.1999.tb00202.x>
- Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis*. Guilford.
- Kim, E. S., Chopic, W. J., & Smith, J. (2014). Are people healthier if their partners are more optimistic? The dyadic effect of optimism on health among older adults. *Journal of Psychosomatic Research, 76*, 447-453. <https://doi.org/10.1016/j.jpsychores.2014.03.104>
- Leventhal, H., Philips, L. A., & Burns, E. (2016). The Common-Sense Model of Self-regulation (CSM): a dynamic framework for understanding illness self-management. *Journal of Behavioral Medicine, 39*, 935-946. <https://doi.org/10.1007/s10865-016-9782-2>
- Marks, D. E., & Yardley, L. (Eds.) (2004). *Research methods for clinical and health psychology*. Sage.
- Martire, L. M., Schulz, R., Helgeson, V. S., Small, B. J., & Saghafi, E. M. (2010). Review and meta-analysis of couple-oriented interventions for chronic illness. *Annals of Behavioral Medicine, 40*, 325-342. <https://doi.org/10.1007/s12160-010-9216-2>
- Mensah, G. A., Wei, G. S., Sorlie, P. D., Fine, L. J., Rosenberg, Y., Kaufmann, P. G., Mussolino, M. E., Hsu, L. L., Addou, E., Engelgau, M. M., & Gordon, D. (2017). Decline in cardiovascular mortality: Possible causes and implications. *Circulation Research, 120*, 366-380. <https://doi.org/10.1161/CIRCRESAHA.116.309115>
- Moss-Morris, R., Weinman, J., Petrie, K. J., Horne, R., & Cameron, L. D. (2002). The Revised Illness Perception Questionnaire (IPQ-R). *Psychology & Health, 17*, 1-16. <https://doi.org/10.1080/08870440290001494>

- Otto, A. K., Laurenceau, J. P., Siegel, S. D., & Belcher, A. J. (2015). Capitalizing on everyday positive events uniquely predicts daily intimacy and well-being in couples coping with breast cancer. *Journal of Family Psychology*, 29, 69-79. <https://doi.org/10.1037/fam0000042>
- Oxland, M., & Wade, T. D. (2008). Longitudinal risk factors for adverse psychological functioning six months after coronary bypass graft surgery. *Journal of Health Psychology*, 13, 79-92. <https://doi.org/10.1177/1359105307084314>
- Pagidipati, N. J., & Gaziano, T. A. (2013). Estimating deaths from cardiovascular disease: A review of global methodologies of mortality measurement. *Circulation*, 127, 749-756. <https://doi.org/10.1161/CIRCULATIONAHA.112.128413>
- Pressman, S. D., & Cohen, S. (2005). Does positive affect influence health? *Psychological Bulletin*, 131, 925-971. <https://doi.org/10.1037/0033-2909.131.6.925>
- Rasmussen, H. N., Wrosch, C., Scheier, M. F., & Carver, C. S. (2006). Self-regulation processes and health: The importance of optimism and goal adjustment. *Journal of Personality*, 74, 1721-1747. <https://doi.org/10.1111/j.1467-6494.2006.00426.x>
- Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology*, 4, 219-247. <https://doi.org/10.1037//0278-6133.4.3.219>
- Scheier, M. F., & Carver, C. S. (1987). Dispositional optimism and physical well-being: The influence of generalized outcome expectancies on health. *Journal of Personality*, 55, 169-210. <https://doi.org/10.1111/j.1467-6494.1987.tb00434.x>
- Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the Life Orientation Test. *Journal of Personality and Social Psychology*, 67, 1063-1078. <https://doi.org/10.1037//0022-3514.67.6.1063>
- Sebern, M. D., & Woda, A. (2012). Shared care dyadic intervention: Outcome patterns for heart failure care partners. *Western Journal of Nursing Research*, 34, 289-316. <https://doi.org/10.1177/0193945911399088>
- Shen, B. J., McCreary, C. P., & Myers, H. F. (2004). Independent and mediated contributions of personality, coping, social support, and depressive symptoms to physical functioning outcome among patients in cardiac rehabilitation. *Journal of Behavioral Medicine*, 27, 39-49. <https://doi.org/10.1023/b:jobm.0000013643.36767.22>
- Shoda, Y., Lee Tierman, S., & Mischel, W. (2002). Personality as a dynamic system: Emergence of stability and distinctiveness from intra- and interpersonal interactions. *Personality and Social Psychology Review*, 6, 316-325. [https://doi.org/10.1207/S15327957PSPR0604\\_06](https://doi.org/10.1207/S15327957PSPR0604_06)
- Stanton, A. L., Revenson, T. A., & Tennen, H. (2007). Health Psychology: Psychological adjustment to chronic disease. *Annual Review of Psychology*, 58, 565-592. <https://doi.org/10.1146/annurev.psych.58.110405.085615>
- Suchday, S., Tucker, D. L., & Krantz, D. S. (2002). Diseases of the circulatory system. In T. L. Boll, S. B. Johnson, N. W. Perry & R. H. Rozensky (Eds.), *Handbook of clinical health psychology: Vol.1. Medical Disorders* (pp. 203-238). American Psychological Association.
- Symister, P., & Friend, R. (2003). The influence of social support and problematic support on optimism and depression in chronic illness: A prospective study evaluating self-esteem as a mediator. *Health Psychology*, 22, 123-129. <https://doi.org/10.1037//0278-6133.22.2.123>
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063-1070. <https://doi.org/10.1037//0022-3514.54.6.1063>
- World Health Organization. (2017). *Cardiovascular diseases: key facts*. [http://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-\(cvds\)](http://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds))

## ΕΜΠΕΙΡΙΚΗ ΕΡΓΑΣΙΑ | RESEARCH PAPER

# Προδιαθεσική Αισιοδοξία σε Καρδιολογικούς Ασθενείς και τους Συντρόφους τους: Δυαδικές Σχέσεις με την Ευημερία και το Θετικό Συναίσθημα

Ευάγγελος Χ. ΚΑΡΑΔΗΜΑΣ<sup>1</sup>, Χριστόφορος ΘΩΜΑΔΑΚΗΣ<sup>1</sup><sup>1</sup> Τμήμα Ψυχολογίας, Πανεπιστήμιο Κρήτης, Ελλάδα

ΛΕΞΕΙΣ ΚΛΕΙΔΙΑ	ΠΕΡΙΛΗΨΗ
<p>δυαδικές σχέσεις, ευημερία, θετικό συναίσθημα, καρδιαγγειακή νόσος, προδιαθεσική αισιοδοξία</p>	<p>Σκοπός της προδρομικής αυτής έρευνας ήταν να εξεταστεί η σχέση ενός θετικού προσωπικού χαρακτηριστικού, δηλαδή, της προδιαθεσικής αισιοδοξίας, με την σωματική και συναισθηματική ευημερία, και το θετικό συναίσθημα, σε ένα δείγμα χρόνιων καρδιολογικών ασθενών και των συντρόφων τους. Εκατόν τέσσερις καρδιολογικοί ασθενείς (25 γυναίκες, μέση ηλικία = 64.36 έτη) και οι σύζυγοί τους (μέση ηλικία = 60.04, όλα τα ζευγάρια ήταν παντρεμένα) συμμετείχαν στην έρευνα. Η προδιαθεσική αισιοδοξία ασθενών και συζύγων αξιολογήθηκε στην αρχική μέτρηση, ενώ η ευημερία και το θετικό συναίσθημα τέσσερις μήνες αργότερα. Το Μοντέλο Αλληλεξάρτησης Δρόντα Προσώπου - Συντρόφου (Actor-Partner Interdependence Model) χρησιμοποιήθηκε για να εξεταστούν οι δυαδικές επιδράσεις της αισιοδοξίας στη σωματική και συναισθηματική ευημερία και το θετικό συναίσθημα. Μοντέλα Δομικών Εξισώσεων χρησιμοποιήθηκαν για την πραγματοποίηση των αναλύσεων. Σε όλες σχεδόν τις περιπτώσεις, τα αρχικά επίπεδα της αισιοδοξίας των ασθενών και των συζύγων τους σχετιζόταν θετικά με την ευημερία και το θετικό συναίσθημα των ίδιων των ατόμων, τέσσερις μήνες αργότερα. Επιπλέον, η αισιοδοξία των ασθενών προέβλεψε την ευημερία και το θετικό συναίσθημα των συζύγων. Όμως, η αισιοδοξία των συζύγων δεν σχετιζόταν με κανέναν από τους δείκτες ευημερίας ή το θετικό συναίσθημα των ασθενών. Τα ευρήματα αυτά προσφέρουν περαιτέρω στήριξη στον επωφελή ρόλο της αισιοδοξίας, σε ενδο- και δια-προσωπικό επίπεδο. Επίσης, δείχνουν ότι, ακόμα και σε μία σοβαρή χρόνια ασθένεια, υπάρχουν κάποια προσωπικά χαρακτηριστικά, όπως είναι η προδιαθεσική αισιοδοξία, που μπορούν να βοηθήσουν τους ασθενείς και τους συντρόφους τους ώστε να επιτύχουν καλύτερη προσαρμογή και υψηλότερα επίπεδα ευημερίας.</p>
ΣΤΟΙΧΕΙΑ ΕΠΙΚΟΙΝΩΝΙΑΣ	
<p>Ευάγγελος Χ. Καραδήμας. Τμήμα Ψυχολογίας, Πανεπιστήμιο Κρήτης, 74100, Ρέθυμνο, email <a href="mailto:karademas@uoc.gr">karademas@uoc.gr</a></p>	