

Relations between Life Satisfaction, Adjustment to Illness, and Emotional Distress in a Sample of Men with Ischemic Cardiopathy

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Fifty-two men who had suffered a first episode ischemic heart disease reported their degree of life satisfaction, the strategies they used to adjust to the illness, and the symptoms of anxiety and depression they felt. The multiple regression analyses carried out indicated that emotional distress was associated with a lower level of life satisfaction. In the analyses of anxiety symptoms, the use of negative adjustment strategies was also a significant predictor. Lastly, a significant Life Satisfaction x Type of Adjustment interaction was obtained. According to this, the patients who felt more satisfaction with their lives used more positive strategies to adjust to the illness and fewer negative ones, than the group of patients who were less satisfied. In conclusion, life satisfaction predicts emotional well-being of patients with ischemic heart disease and it enhances the implementation of appropriate strategies to cope with the disease. Moreover, although life satisfaction has been considered a stable measure, we suggest it may change as the experience of illness limits individuals' important goals.

Keywords: life satisfaction, adjustment strategies, coping, emotional distress, cardiovascular disease.

Cincuenta y dos varones que acababan de sufrir algún episodio de cardiopatía isquémica por primera vez informaron del grado de satisfacción con su vida, las estrategias empleadas para ajustarse a la enfermedad y los síntomas de ansiedad y depresión que sentían. Los análisis de regresión múltiple realizados mostraron que el malestar emocional se asociaba con una menor satisfacción vital; y en el caso de la ansiedad, se añadía una tendencia a utilizar en mayor medida estrategias negativas de ajuste. Finalmente, se obtuvo una interacción significativa satisfacción vital x tipo de ajuste a la enfermedad, indicando que los pacientes más satisfechos utilizaban más el ajuste adaptativo que los menos satisfechos, y tendían a utilizar menos que estos últimos el ajuste negativo. Puede concluirse que la satisfacción predice el bienestar emocional de los pacientes con cardiopatía isquémica, facilitando la puesta en marcha de estrategias más adecuadas ante la enfermedad. Además se sugiere la posibilidad de que el nivel de satisfacción pueda variar con el tiempo a medida que la enfermedad limite metas importantes para el individuo.

Palabras clave: satisfacción vital, estrategias de ajuste, afrontamiento, malestar emocional, trastornos cardiovasculares.

This work follows the guidelines and goals of the consolidated research group "Personality and Health" (reference G59E47) of the UNED.

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Cardiovascular disorders (CVDs) are one of the main causes of death worldwide. It is estimated that 17 million people die yearly from these disorders, which is 30% of the global mortality. Of these deaths, around 7.5 million are from ischemic cardiopathy, which, along with deaths from cerebrovascular diseases, constitute the two main entities of mortality of cardiovascular etiology (World Health Organization, 2007). In Spain, there are about 70,000 new cases each year, it is the primary cause of death, and comprises 34% of all deaths (Medrano, Boix, Cerrato, & Ramírez, 2006). Due to these great numbers, the psychological, social, and economic consequences are enormous and they constitute a problem of incalculable magnitude. It is therefore not surprising that a great quantity of research is aimed at identification of the factors that contribute to the etiology and progression of CVDs, and that such knowledge has led to improvements in medical treatments and actions to modify the risk factors, all of which has allowed many people with these illnesses to survive. Despite all these advances, all the variables studied only explain less than half of the variance of the occurrence of these disorders, and so, attention has recently been paid to certain psychosocial factors, which also have some influence on the onset and development of the illness, as well as on patients' quality of life. Psychosocial variables can affect the cardiovascular system by means of physiological alterations and by their effect on the chosen lifestyles. In this sense, the factors that have received the most attention and that are linked to the onset of some kind of CVD are the continuous experience of negative emotions (i.e., hostility, depression, or anxiety), pessimism, interpersonal isolation, and chronic stress, whereas perception of control over the illness, belief in one's capacity to cope with it, positive attitudes about its development, and the use of adequate coping strategies are some of the most relevant variables for recovery and to control the emotional distress derived from adjusting to the illness (Gallo, Ghaed, & Bracken, 2004; Stanton, Revenson, & Tennen, 2007).

The experience of the illness, in addition to the initial threat to one's life, the uncertainty about its development, and the typical physical limitations of the illness may interfere completely or partially with an individual's significant life projects. The illness also requires changing some habits (diet, exercise), so that a period of adjustment is needed during which the patient is likely to display symptoms of emotional distress such as depression or anxiety. Despite the high risk of such symptoms, there is a great variety of ways to adjust, depending on the available resources, the coping strategies employed, and the individual's personal characteristics, which also have different degrees of efficacy and which determine the duration of the adjustment period and the quantity and intensity of the symptoms of emotional distress.

The relation between clinical depression or depressive symptoms and CVDs is complex, as diverse studies have

shown that they can be both a cause and a consequence of CVDs (Glassman & Shapiro, 1998; Hemingway & Marmot, 1999; Musselman, Evans, & Nemeroff, 1998; Penninx et al., 2001). Regarding the consequences, it was found that two thirds of heart attack survivors report symptoms of depression (Gravely-Witte, De Gucht, Heiser, Grace, & Van Elderen, 2007) and the prevalence of major depression is much higher among them than in the general population (Carney, Freedland, Miller, & Jaffe, 2002; Carney, Freedland, Sheline, & Weiss, 1997). Although they have received less attention, symptoms of anxiety are also frequent in patients with a CVD (Goodwin, Davidson, & Keyes, 2009; Todaro, Shen, Raffa, Tilkemeier, & Niaura, 2007).

Detection of symptoms of anxiety and depression in CVD patients is of utmost importance because they affect diverse systems, such as increasing the activity of the sympathetic nervous system and the level stress-related hormones, which can affect the cardiovascular system, thereby worsening the prognosis of the illness (Gallo et al., 2004; Rozanski & Kubzansky, 2005). In fact, it was found that even minimal depressive symptoms increase the risk of mortality after a myocardial infarction (Bush et al., 2001) and that depression doubles the risk of a new cardiac episode after undergoing *coronary artery bypass* surgery (Blumenthal et al., 2003). It was also found that patients with high anxiety are five times more likely to experience complications or even death after a myocardial infarction (Moser & Dracup, 1996).

As mentioned above, the way that people cope with the illness partially determines their emotional well-being (Carver et al., 1993; Hart, Turner, & Cardozo, 1987; Stanton et al., 2007). It is well established that the most adequate strategy and the one most closely related to emotional well-being is active coping (which includes not only directly solving problems, but also seeking information and social support), particularly when problems are controllable, that is, when something can be done to change whatever is happening to the person. But when problems are uncontrollable, the most efficient coping strategies and the most closely associated with emotional well-being are acceptance of the problem, positive reappraisal of the situation (e.g., considering it a chance to change unhealthy habits, to develop deeper interpersonal relations, to value the truly important things, etc.), and the use of a sense of humor. In the case of uncontrollable situations, resorting to denial or to avoidance is related to the development of emotional distress (Anderson, 1996; Carver et al., 1993). It should be taken into account that the experience of illness includes controllable aspects (for example, following the treatment, changing one's lifestyle) but it also includes aspects that cannot be changed, so it will require the use of both strategies for adequate adjustment.

From the viewpoint of positive psychology (Seligman & Csikszentmihalyi, 2000), some factors have been identified

that may protect not only mental health, but also physical health. In this sense, it was found that positive attitudes and expectations about the illness can have a beneficial effect on its development and on recovery. Thus, it has been shown that positive expectations predicted patients' degree of health of six months after having undergone heart transplant surgery (Leedham, Meyerowitz, Muirhead, & Frist, 1995), and their recovery after a myocardial infarction (Agarwal, Dalal, Agarwal, & Agarwal, 1995). Dispositional optimism is also an important predictor of the progress of cardiac illness (Matthews, Raikonen, Sutton-Tyrrell, & Kuller, 2004) and of recovery after suffering some cardiovascular episode or undergoing surgery (Scheier et al., 1989).

One of the positive factors that has recently been receiving much attention is life satisfaction, which is directly associated with the report of positive emotions and inversely associated with negative emotions (Kuppens, Realo, & Diener, 2008). In most studies of life satisfaction, participants are asked to judge their life globally, without indicating to them on which facets or areas of their life to base this judgment. Thus, each respondent would take into account the aspects they considered the most relevant, thereby emphasizing the subjective nature of the rating (Diener, 2000; Diener, Lucas, & Oishi, 2002). Much fewer studies assess life satisfaction in specific spheres but, in this case, as the possible facets to be assessed are potentially very numerous, authors have focused on different aspects that they selected as a function of the goals of their study (Cummins, 1996). Depending on the areas chosen, the results may vary greatly, as it has been shown that the associations among areas range from very low to moderate (Rojas, 2006).

With regard to CVDs, we only found one study that analyzes life satisfaction, although its effect is considered along with that of other variables such as positive emotions and psychological well-being, and it concludes that the prevalence of CVD is higher among people with low levels of life satisfaction, positive affect, and psychological well-being (Keyes, 2004).

On the basis of the former evidence and suggestions, the main goal of the present work was to study the relations between life satisfaction, diverse strategies of adjustment to illness, and emotional distress, assessed through symptoms of anxiety and depression, in a sample of male patients who had recently suffered a first episode of cardiopathic ischemia (myocardial infarction, angina pectoris).

Most studies have analyzed how life events affect the level of global life satisfaction; however, very few investigations have assessed the extent to which perceived life satisfaction at a certain moment can affect the person's emotional distress when undergoing an important life event, such as the diagnosis and treatment of a severe illness, and how life satisfaction affects the positive or negative strategies used to deal with the illness, which, as mentioned, also have an impact on the derived level of anxiety or depression.

The study of satisfaction can be addressed considering it a dependent variable or result—that would derive from the person's judgment of his or her life experience—and a variable that can predict diverse criteria, for example, the way of coping with an illness. In this study, we adopted the latter perspective, considering life satisfaction a predictor variable because, given the definition of life satisfaction and the moment of its assessment, it was the most coherent perspective.

In this sense, life satisfaction was not assessed globally, but on a scale that rated concrete aspects such as satisfaction with work or with habitual daily activity, the economic situation, the achievement of life goals, and lifestyle. However, the studies carried out have shown that, even when assessing life satisfaction globally, it is fairly stable over time (Diener et al., 2002; Vinaccia, Quiceno, Gaviria, & Dey Garzón, 2008) and although certain events can make it fluctuate, people very quickly return to their original level (Diener, 2000).

We based our assessment of adjustment to illness on the proposal of Watson and Homwood (2008), given its integrative nature, including all the coping strategies that have been shown to be relevant to adapt to an illness. Thus, positive adjustment includes aspects that are directly related to emotional well-being such as active coping strategies for controllable aspects of the illness and positive reappraisal, a sense of humor, and optimistic attitudes to illness for the uncontrollable aspects. Negative adjustment is considered to be the perception of lack of control, delegation of control in others, and focusing on negative emotions, that is, all the aspects that have been associated with emotional distress.

According to the available evidence, the initial hypotheses were as follows: (a) the use of positive and negative adjustment strategies is, respectively, inversely and directly related to the report of symptoms of emotional distress, and (b) life satisfaction is directly associated with the use of positive adjustment strategies, and inversely associated with negative adjustment strategies and the report of symptoms of anxiety and depression. In addition to these hypotheses, in the present work, we proposed an additional goal of studying a research problem as yet unexplored in the literature. In this sense, there is evidence of the relations between the adjustment strategies employed and emotional distress in people who are in the process of coping with an illness (Anderson, 1996; Carver et al., 1993; Hart et al., 1987; Stanton et al., 2007). In contrast, some studies have shown that life satisfaction has an inverse relation with symptoms of emotional distress (Kuppens et al., 2008; Schimmack, Oishi, Furr, & Funder, 2004) and a direct relation with the use of positive adjustment strategies (Dubey & Agarwal, 2007). However, as we found no works that study life satisfaction, adjustment to illness, and emotional distress conjointly, we proposed to explore the relations among these three variables. Specifically, we expected that the relation between life satisfaction and

emotional distress would be mediated by the adjustment strategies employed. That is, we attempted to analyze the extent to which the association between life satisfaction and emotional distress could be explained through the effect of life satisfaction on the more specific coping strategies deployed by the patient to deal with illness and, in turn, the effect of such strategies on the emotional symptoms ultimately reported by the patients. Moreover, within this exploratory goal, we also wished to determine whether there are differences in the use of strategies to adjust to illness as a function of the level of life satisfaction reported by the patients.

Method

Participants

We initially interviewed 70 men who had just been admitted to hospital after suffering a first cardiopathic ischemic episode (acute myocardial infarct or angina pectoris). Of these 70 patients, 18 were excluded, 2 because of a prior psychiatric history, 3 because of other severe diseases, and 13 because they did not send back the completed questionnaires within the requested time limit. Thus, the final sample was made up of 52 patients, mean age 53.8 years ($SD = 10.95$) and age range between 31 and 69 years. Of them, 80.8% were married, 7.7% single, 1.9% widowers, 9.6% divorced or separated. With regard to the educational level, 46.1% had primary studies, 28.8% secondary studies, 11.5% had studied professional training, 9.6% held a university diploma, and 3.8% held a higher university degree. With regard to work situation, 57.7% were working, 3.8% were unemployed, and 38.5% were retired.

Procedure

The recruitment and prior assessment process was carried out in various hospitals of the regions of Madrid and Castilla-La Mancha. Male patients who had suffered an acute myocardial infarct or angina pectoris and who were admitted to the Cardiology Service ward were requested to collaborate voluntarily in the investigation. The patients who decided to participate were interviewed and sociodemographic data were collected, ruling out patients with any psychiatric pathology or who had other diseases. All the participants spent between 4 and 7 days in hospital and, before leaving the hospital, they were handed two envelopes, one with the questionnaires, and the other with the postal address to which they should send the completed questionnaires. They were requested to complete the questionnaires upon arriving at home and to send them back no later than 15 days. The maximum interval between the diagnosis and completing the questionnaires was between 2-3 weeks.

All the patients participated voluntarily and they agreed for their data to be used for the investigation.

Instruments

The following variables were measured:

Symptoms of anxiety and depression. We used the Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983; Spanish version by Rueda, 2004). This scale has 14 items, 7 of which measure anxiety and 7 that measure depression. Items are rated on a 4-point Likert-type scale ranging from 0 (*never/not at all/as always*) to 3 (*always/completely/very much*). The global score in each subscale was calculated by dividing the sum of the scores given to each one of the items by the number of items of the subscale. In the present sample, Cronbach's alpha coefficient for the Anxiety subscale was .8 and for the Depression subscale, .77.

This scale has been employed very frequently in patients with ischemic cardiopathy, both for research and to detect symptoms with a view to intervention, as it is a short scale, but with excellent psychometric properties (Martin, Thompson, & Barth, 2008).

Strategies of adjustment to illness. To measure adjustment to illness, we used the *Mental Adjustment to Cancer Scale* (MAC-) created by Watson's team (Watson et al., 1988) in the Spanish version (Ferrero, Barreto, & Toledo, 1994). This measure has recently been identified as the *Positive and Negative Adjustment Scales* (Watson & Homwood, 2008). The test includes 33 items, grouped into two subscales: (a) Positive adjustment (PA), made up of 17 items mainly related to positive attitudes towards the illness and coping actions to deal with it (active coping, positive reappraisal, and sense of humor) and (b) Negative adjustment (NA), whose 16 items mainly assess the perception of lack of control over the illness, passive delegation of control to others, denial, and focusing on negative feelings about the illness. The 33 items are rated on a 4-point Likert-type scale, ranging from 1 (*not at all*) to 4 (*very much*).

Although the positive and negative adjustment scales were drafted to measure coping responses to cancer, the Spanish version substituted the word "cancer" with "illness" in order to use it for other health problems such as the CVDs analyzed in the present work. The Cronbach alpha coefficients obtained in this sample for the positive and negative adjustment subscales were, respectively, .75 and .81.

The global score in each subscale was calculated by dividing the sum of the scores given to each one of the items by the number of items of the subscale.

Life satisfaction. We used the *Life Satisfaction* subscale of the *Quality of Life Questionnaire* (Ruiz & Baca, 1993), which includes 10 items to measure the degree of perceived satisfaction with various aspects of life (work, economy, the

way one is, lifestyle, goals achieved, expectations of self-efficacy, etc.). The degree of agreement or disagreement with each item is rated on a 5-point Likert-type scale, ranging from 1 (*not at all*) to 5 (*very much*). The global score in each subscale was calculated by dividing the sum of the scores of each one of the items by the number of items of the subscale. Cronbach's alpha coefficient in this sample of patients was .82.

Results

Descriptive statistics and correlations of all the variables of the study are shown in Table 1.

To analyze the possible mediator effect of the adjustment strategies on the relation between life satisfaction and emotional distress, we followed the procedure proposed by Baron and Kenny (1986). The first step for testing mediation is to determine whether there is a statistically significant association between the predictor variable and the criterion variables. In this study, the correlations between the predictor variable (life satisfaction) and the two criterion variables (symptoms of anxiety and depression) were statistically significant (see Table 1), so we could test the mediational effect.

The next step for testing the mediator effect is to determine whether there is a statistically significant association between the predictor variable (life satisfaction) and each one of the mediators (positive and negative adjustment). As seen in Table 1, life satisfaction had a statistically significant correlation with positive adjustment, whereas the correlation with negative adjustment was only marginally significant. As this correlation approached significance (.07), we decided to test the mediator effect.

Lastly, it is necessary to determine whether the inclusion of the mediator variable (positive or negative adjustment) reduces the relations between the predictor variable (life satisfaction) and the criterion variables (symptoms of anxiety and depression). For this purpose, we performed four regression analyses, one for each criterion variable (symptoms of anxiety and depression) and each mediator

variable (positive and negative adjustment), introducing the predictor variable (life satisfaction) in the first step and the mediator variable (positive or negative adjustment) in the second step. The mediator role of adjustment would be revealed if, in the second step of the analysis, the beta corresponding to adjustment was statistically significant and the beta corresponding to life satisfaction was lower than that obtained in the first step, before introducing the mediator variable. The results of the regression analyses are shown in Tables 2 and 3.

The results show that the association between life satisfaction and distress was reduced when positive or negative adjustment were included in the model, as shown by the decreases in the nonstandardized coefficients (B) of the predictor variable (life satisfaction) in each corresponding regression analysis. For this purpose, we followed the procedure proposed by Holmbeck (2002) to determine the percentage of reduction of a bivariate relation when a mediator is included, an analysis that allows an easier and more intuitive interpretation of the data. Thus, in the case of anxiety, 25.93% of the variance of this association is explained by positive adjustment and 14.82% by the more negative adjustment. In the case of depression, however, coping plays a lesser role, and positive adjustment only explains 12.2% of the variance, and negative adjustment explains 7.32%.

The contribution of adjustment to the satisfaction–distress relation would, in any event, be partial because satisfaction continues to be significant after its inclusion in the diverse models. Adjustment would only partially meet the statistical criteria in the case of negative adjustment and anxiety, where the former is significant in the analysis of the two predictors (see Table 2, step 2b), although the *Z* obtained with Sobel's (1988) test did not reach significance ($Z = -1.32$). Therefore, the reduction observed in the relation between satisfaction and anxiety when introducing negative adjustment does not confirm the latter as a statistically significant mediator.

These mediation analyses explore the role of positive and negative adjustment separately, in the relations

Table 1
Descriptive Statistics (Means and Standard Deviations) and Intercorrelations among the Variables of the Study

	1	2	3	4	5
1. Life satisfaction	-				
2. Symptoms of anxiety	-.42**	-			
3. Symptoms of depression	-.66**	.64**	-		
4. Positive adjustment	.49**	-.37**	-.46**	-	
5. Negative adjustment	-.25°	.34**	.35**	-.23	-
<i>M</i>	3.76	1	.74	2.8	2.1
<i>SD</i>	.89	.59	.55	.37	.5

° $p < .07$. ** $p < .01$.

Table 2

Analysis of Positive (Step 2a) and Negative (Step 2b) Adjustment to Illness as Mediator Variables of the Relation between Life Satisfaction and Symptoms of Anxiety

Predictor	B	SE B	β	t	F (df)	R ²
<i>Step 1</i>						
Life satisfaction	-.27	.09	-.42	-3.22**	10.4(1, 50) **	.17
<i>Step 2a</i>						
Life satisfaction	-.20	.10	-.31	-2.09*	6.52(2, 49) **	.21
Positive adjustment	-.36	.23	-.22	-1.53		
<i>Step 2b</i>						
Life satisfaction	-.23	.09	-.35	-2.73**	7.42(2, 49) **	.23
Negative adjustment	.29	.15	.25	1.96*		

* $p < .05$. ** $p < .01$.

Table 3

Analysis of Positive (Step 2a) and Negative (Step 2b) Adjustment to Illness as Mediator Variables of the Relation between Life Satisfaction and Symptoms of Depression

Predictor	B	SE B	β	t	F(df)	R ²
<i>Step 1</i>						
Life satisfaction	-.41	.07	-.66	-6.19***	38.31(1, 50) ***	.43
<i>Step 2a</i>						
Life satisfaction	-.36	.08	-.57	-4.74***	20.6(2, 49) ***	.46
Positive adjustment	-.26	.18	-.17	-1.44		
<i>Step 2b</i>						
Life satisfaction	-.38	.07	-.61	-5.69***	21.8(2, 49)***	.47
Negative adjustment	.22	.12	.20	1.85°		

° $p < .07$. *** $p < .001$.

between life satisfaction and emotional distress, the latter operationalized in terms of the levels of anxiety and depression as measured with the HADS. But, due to their clinical utility, we also analyzed the relations between life satisfaction and the type of positive and negative adjustment to illness used by patients recently diagnosed with ischemic cardiopathy, considering both coping styles conjointly. For this purpose, two groups of 26 patients each were formed as a function of the score in life satisfaction ($Mdn = 3.85$), and analysis of variance was applied (general multivariate linear model) with two factors, a between-group factor (life satisfaction with two levels: high or low) and a within-group or repeated measures factor (type of adjustment to illness: positive or negative), after having confirmed that the covariance matrixes of the dependent variables were the same in both groups (Box test). The results showed a

significant main effect type of adjustment, $F(1,50) = 62.06$, $p < .001$, $\eta^2_p = .55$, observed power = 1, indicating that all the participants, independently of their level of satisfaction, used positive adjustment strategies more than negative ones ($M = 2.8$, $SD = 0.37$ and $M = 2.1$, $SD = 0.51$, respectively). The significant interaction between life satisfaction and type of adjustment, represented in Figure 1, is particularly interesting: $F(1,50) = 9.11$, $p < .01$, $\eta^2_p = .15$, observed power = 0.84, indicating that people who score high in satisfaction use significantly more positive adjustment than those who score low [High: $M = 2.94$, $SD = 0.39$; Low: $M = 2.66$, $SD = 0.29$; $F(1,52) = 8.36$, $p < .01$, $\eta^2_p = .14$, observed power = 0.81], and they tend to use negative adjustment less than the low scorers [High: $M = 1.97$, $SD = 0.51$; Low: $M = 2.23$, $SD = 0.48$; $F(1,52) = 3.62$, $p < .06$, $\eta^2_p = .07$, observed power = 0.46].

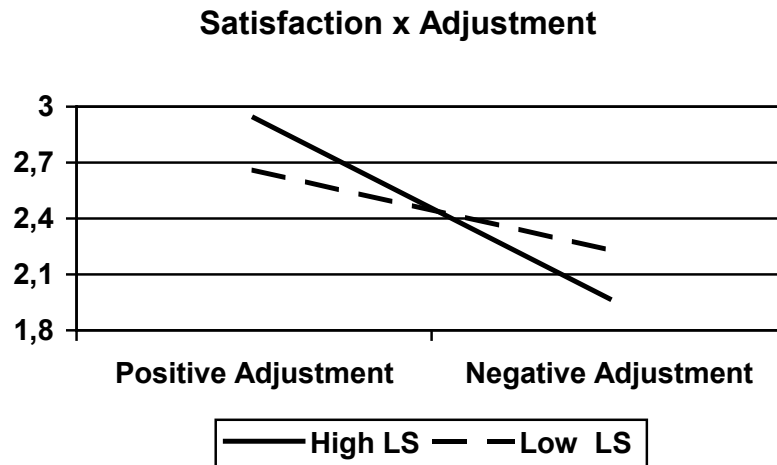


Figure 1. Graphic representation of the interaction between level (high and low) of life satisfaction (LS) and type of adjustment to illness (positive and negative), $F(1,50) = 9.11, p < .01$.

Discussion

The main goal of this study was to analyze the relations between life satisfaction, adjustment to illness and emotional distress in a sample of men who had just suffered an episode of ischemic cardiopathy. As expected, the results showed that the use of negative adjustment strategies correlates positively with the report of symptoms of anxiety and depression, whereas the use of positive adjustment strategies correlates negatively with the report of such symptoms. As mentioned, the presence of these symptoms worsens the prognosis of the illness (Gallo et al., 2004; Rozanski & Kubzansky, 2005) and it is therefore of utmost importance to intervene in these patients to reduce such symptoms.

We also found that life satisfaction correlates positively with the use of positive adjustment strategies and negatively with the use of negative adjustment strategies and the report of anxiety and depression symptoms. With regard to adjustment, the analysis of the two groups of patients formed according to their level of life satisfaction shows that the patients who are more satisfied with their life and the goals achieved use positive strategies to deal with illness more than those who are less satisfied and they also tend to use less negative adjustment strategies.

The studies of emotional distress occurring as a result of the experience of an illness have mainly focused on negative aspects but, when coping with a severe illness that may be a clear life threat, both positive and negative strategies are used. Therefore, as both strategies are necessarily present, when considering the emotional impact of illness, they must both be taken into account.

With a view to intervention, treatment should not only aim to reduce negative symptoms (negative adjustment

strategies, symptoms of anxiety or depression) but also to promote positive aspects (positive emotions, positive adjustment) (Keyes, 2002; Keyes & Lopez, 2002). In this sense, some studies have shown that positive emotions can buffer the negative impact of negative emotions on the organism (Fredrickson, 2002).

The regression analyses and subsequent contrasts do not allow us to state, with statistical guarantees, that the adjustment strategies employed can be considered mediator variables in the relations between life satisfaction and the symptoms. However, the explained variance of distress increased when considering both predictors, although their influence was direct instead of mediated, and coping with illness explained between 15 and 26% of anxiety, and between 7 and 12% of depression.

In the analysis of depressive symptoms, the weight of life satisfaction, the more stable predictor, was higher ($R^2 = 0.43$), perhaps because, in view of the initial diagnosis, the best predictors of depressive mood are not the strategies to deal with the illness, but the fulfillment of and satisfaction with one's goals and general projects prior to the negative life event. As the illness takes its course and pharmacological treatment and/or possible changes in lifestyle are initiated, it can be expected that more specific variables or determinants that are more closely related to illness—type of coping, available social support, and satisfaction with support, or the perception of competence with regard to treatment—may become more important. These are only a few of the possible determinants of psychological well-being during the development and course of chronic diseases that have been received the most attention from researchers (see, for example, Everson-Rose & Lewis, 2005; Pérez-García & Sanjuán, 2003; Rueda & Pérez-García, 2006; or Smith & MacKenzie, 2006).

The moment we assessed life satisfaction was immediately after having suffered a first episode of ischemic cardiopathy. Taking into account the characteristics of the scale employed, which focuses on satisfaction with diverse areas, it could be argued that the time interval was insufficient for substantial changes in lifestyle due to the illness to have taken place, or for satisfaction with the diverse areas to have changed. However, future studies should confirm this. In addition, future studies should also determine whether the life satisfaction of people with a chronic illness changes as their illness prevents them from achieving important goals, or as it affects life areas rated as important, an aspect that should be assessed from a longitudinal perspective

Likewise, future investigations should determine whether the results obtained in this study are confirmed when measuring life satisfaction by means of scales that assess it globally (for example, Diener, Emmons, Larsen, & Griffin, 1985), and in which people decide subjectively on which life areas to base their judgment. In this sense, it is difficult to foresee the potential changes or their valence, because it has been confirmed that many people who undergo an illness report important positive changes in their life after the experience, expressing more appreciation for the truly important things in life and for interpersonal relations (Cordova, Cunningham, Carlson, & Andrykowski, 2001). In these cases, life satisfaction does not only not decrease but it actually increases.

However, as mentioned previously, although the mediation results were not statistically significant with the habitual contrasts, the data show that the role of coping is important in the prediction of emotional distress, especially anxiety, which was more affected by the recent diagnosis. Anxiety could be considered an aversive state that leads the person to see himself as incapable of predicting, controlling, or obtaining the desired results (Suls & Bunde, 2005), but, when analyzing it, other factors closer to the situation should be considered. This would allow us to explain a higher amount of variance with life satisfaction ($R^2 = .17$) or with positive or negative adjustment ($R^2 = .21$ and $R^2 = .23$, respectively). It is also interesting to note that, at least in males and at the onset of the illness, higher use of maladaptive strategies seems to be more important to explain emotional distress than lower use of positive strategies.

Summing up, the present study makes relevant contributions for clinical practice, derived from the fact that it uses a sample of men with recently diagnosed cardiopathies (myocardial infarction or angina pectoris), it combines more stable factors such as life satisfaction with more specific ones such as strategies of adjustment to illness, and it indicates the role played by the more or less adaptive coping in these first moments after the diagnosis, or the emotional distress that can be experienced after such an event. But it also has some limitations, mainly derived from its cross-sectional nature. In this sense, it would be

interesting to have longitudinal data to corroborate the conclusions of our data, as well as to put into practice some of the suggestions made. And, lastly, we recommend analyzing these same variables in a sample of women, contrasting the results with those found in men.

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Received July 27, 2009

Revision received May 3, 2010

Accepted May 26, 2010