Cardiac patient-spouse dissimilarities in illness perception: Associations with patient self-rated health and coping strategies

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Cardiac patient–spouse dissimilarities in illness perception: Associations with patient self-rated health and coping strategies

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The study examined the illness perception dissimilarities between chronic cardiac patients and their spouses, as well as the associations of perception dissimilarities with patients' overall self-rated health (SRH) and illness-related coping strategies. Seventy-three patients (65 males, 8 females) with an old myocardial infarction and subsequent cardiovascular problems, and their spouses completed the Revised Illness Perceptions Questionnaire. Patients also completed a coping measure (the Coping with Health Injuries and Problems Scale) and a question regarding SRH. Significant differences, with spouses scoring higher than patients, were found in perceptions regarding illness chronicity, personal control and the emotional impact of the illness. The correlations of dissimilarity scores to SRH and coping were sporadic and weak. Additionally, after controlling for patients' own perceptions, the effects of dissimilarity scores almost disappeared. However, when three different groups were constructed reflecting whether both partners scored high, low, or in an opposing way on each IPQ-R subscale, the overall matching in several illness perceptions was associated with certain coping strategies, even after controlling for the effects of the patients' own perceptions. With respect to SRH, no significant effects were found.

Keywords: cardiac patients; illness perceptions; illness perception dissimilarities; self-rated health; coping

The emergence of a chronic health problem, like a cardiovascular disease, affects not only patients but also partners, whose reactions may in turn enhance or impede a patient's adjustment to illness (Elliott & Shewchuk, 2005). Factors, such as partner's psychological health, better communication with the partner and more support received by her/him have been linked to better recovery and adaptation to the cardiac problem (Franks et al., 2006; Molloy, Perkins-Porras, Strike, & Steptoe, 2008; Ruiz, Matthews, Scheier, & Schulz, 2006; Sher & Baucon, 2001; Waltz, Badura, Pfaff, & Schott, 1998). Furthermore, the perceptions that spouses hold about the health problem are related to patients' well-being (Elliott & Shewchuk, 2005).

In general, illness perceptions are closely related to several important factors, including coping with illness, decision-making, adherence to medical advice and illness-related behaviours (Martin & Leventhal, 2004). On the other hand, partners' reactions can affect...
patients’ responses to the disease and their well-being (e.g. Franks et al., 2006; Ruiz et al., 2006). Thus, it is also possible for similarity or dissimilarity in illness perceptions between patients and partners to have an impact on significant health-related variables. Indeed, the congruence/incongruence between spouses’ and patients’ illness perceptions appears to be a significant predictor of the patient’s adjustment to illness (e.g. Figueiras & Weinman, 2003).

The dissimilarity of patients’ and carers’ illness perceptions has only recently been examined. In most cases, perception dissimilarities are computed by subtracting carers’ scores from patients’ scores (or the opposite). Heijmans, deRidder, and Bensing (1999) were the first to show that there is some degree of incongruence in certain illness perceptions between patients with Chronic Fatigue Syndrome or Addison’s disease and their spouses. Couples in general disagreed on timeline, control and illness consequences. The incongruence had a weak impact on patients’ coping with illness, but a strong impact on adaptive outcomes. Almost at the same period, Weinman, Petrie, Sharpe, and Walker (2000) assessed causal attributions in first-time myocardial infarction patients and their spouses. The attributions of the couples were broadly similar, and associated with changes in health behaviours over a 6-month period. Moreover, Figueiras and Weinman (2003) in a prospective study examined the degree of congruence in illness perceptions between patients recovering from an infarction and their spouses. The researchers used a different way to assess illness perceptions congruence. A simple classification system was created that was based on the median scores and reflected whether both partners had scored high, low or in a divergent way in each illness perception dimension. According to the findings, when couples had similar positive perceptions regarding the infarction (e.g. low consequences, high control), or when at least one of the couple (either the patient or the spouse) reported such perceptions, then patients showed a better physical and psychological adjustment. The authors also reported that the most prevalent conflicting perceptions in cardiac patients and their spouses were in illness identity, consequences and personal control.

The dissimilarity of illness perceptions was further examined in two studies regarding diabetes. Law (2002) and Olsen, Berg, and Wiebe (2008) explored mother–adolescents perceptions dissimilarity in type 1 diabetes. Both studies showed that mother–adolescent mean differences were not associated with adolescents’ psychological well-being. In the second study, however, a different measure of dissimilarity based on the sum of squared differences was associated with adolescent adjustment, even when controlling for their own perceptions. Significant dissimilarities were found between adolescents’ and their mothers’ perceptions in chronicity, mother’s control and emotional representations. Finally, Sterba et al. (2008) examined similarities and dissimilarities in women with rheumatoid arthritis and their husbands. In general, patients and husbands shared similar views on the illness. Better psychological adjustment was found in patients from couples reporting similar ‘optimistic’ beliefs about personal control, illness coherence and consequences.

All aforementioned studies employed the Common Sense Model (CSM; Leventhal, Diefenbach, & Leventhal, 1992; Leventhal, Meyer, & Nerenz, 1980), as it provides the appropriate rationale and context for assessing illness perceptions and examining their relation to health outcomes. The CSM argues that patients create certain cognitive perceptions (i.e. regarding the identity of the disease, causes, consequences, timeline and possibility of cure/control), as well as emotional representations of their condition in order to make sense of and manage the problem. Furthermore, it proposes a causal association between illness perceptions, illness-related coping strategies and health outcomes (Leventhal et al., 1992; Martin & Leventhal, 2004).
The present study examined the degree of congruence in the illness perceptions, as defined by the CSM, of chronic cardiac patients (patients who had suffered a myocardial infarction in the past and reported relevant problems since after) and their spouses. Although there is a significant body of research demonstrating the important role of illness perceptions in cardiac patients' health and functioning (e.g. French, Cooper, & Weinman, 2006; Grace et al., 2005; Petrie, Weinman, & Sharpe, 1996), only two studies have examined illness perception congruence in this population (Figueiras & Weinman, 2003; Weinman et al., 2000). Both referred to patients with a rather recent myocardial infarction (MI). To our knowledge, this is the first study examining perception dissimilarities in chronic cardiac patients.

This study also examined the relation of perception dissimilarities to patient’s self-rated health (SRH) and illness-related coping. Overall SRH was used as a comprehensive indicator of current health. Despite its simplicity, SRH has been proved a major predictor of mortality and health service use (Hansen, Fink, Frydenberg, & Oxhøj, 2002). It has also been related to morbidity, behavioural risk factors and psychological well-being (Benyamini, Idler, Leventhal, & Leventhal, 2000; Ferraro & Yu, 1995). Self-rated health appears to represent a useful summary of the ways a person evaluates overall personal health (Fayers & Sprangers, 2002). Also, coping represents a major determinant of adjustment to illness, as well as an important mediator between illness perceptions and health outcomes (Hagger & Orbell, 2003). In fact, there is evidence that several coping strategies (including behavioural disengagement or avoidance, self-blame and denial) predict quality of life, well-being and illness progression in cardiac patients (Murberg, Furze, & Bru, 2004; Shen, Myers, & McCready, 2006; van Elderen, Maes, & Dusseldorp, 1999).

In sum, the purpose of the study was to examine three research questions: (i) are there any similarities or dissimilarities in the illness perceptions of chronic cardiac patients and their spouses? (ii) are these (dis)similarities associated with SRH? (iii) are (dis)similarities associated with illness-related coping strategies?

Method

Participants and procedure
Seventy-three cardiac patients (65 males, 8 females) and their spouses participated in our study. All patients had suffered a severe myocardial infarction (MI) in the past (i.e. they had to take a pension due to their health condition) and were reporting a history of significant cardiovascular problems (e.g. arrhythmias, severe angina pectoris, repeated hospitalisations) since the MI. Thirty-one (42.47%) had also undergone a coronary artery bypass surgery after the initial MI. The mean age of the patients was 58.82 years (SD = 8.79; range = 42–69). The mean age of their spouses was 55.86 years (SD = 9.29; range = 34–71). The mean time elapsed since the initial MI was 6.34 years (SD = 3.17; range = 2–12). The study took place in two public hospitals. The patients were recruited during their visit to the cardiology outpatient facilities of the hospitals for a scheduled appointment with their physician. Before entering the physician’s office each patient was invited by a research assistant to participate in the study and was informed about its details. Participants fulfilled the following inclusion criteria: had suffered a MI in the past and had a history of relevant difficulties since after; were married; agreed to have their spouse involved in the study; age below 70 years; not facing severe communication difficulties (i.e. difficulties in communication with researchers, or unable to complete the...
questionnaires due to their health condition). All patients who agreed to participate were invited to another appointment with their spouses in order to take part in the study. Patients and spouses signed an informed consent form and completed the measures of the study at the same time, but in different rooms within the hospital facilities. The study was approved by the hospitals’ Ethics Committees.

**Measures**

*Illness perceptions*

Illness perceptions were assessed with the Revised Illness Perception Questionnaire (IPQ-R; Moss-Morris, Weinman, Petrie, Horne, & Cameron, 2002). The Greek version of the IPQ-R was obtained from the Illness Perception Questionnaire Website (http://www.uib.no/ipq/index.html). The items were amended so as to refer to a cardiac problem. The Greek version shares the same structure and items on each dimension with the original scale. Both patients and spouses completed the questionnaire. A slightly re-worded version was used for the spouse’s perceptions of the patient’s health problem. We assessed seven dimensions of the illness perception included in the IPQ-R: timeline acute/chronic (chronicity), which includes beliefs that illness will last a long time; consequences, which refers to the possible consequences of the health condition; personal control that refers to evaluations about the degree to which there is personal control over the illness; treatment control that refers to evaluations about the efficacy of the treatment to manage illness; illness coherence, which reflects the patient’s ability to make sense of the illness; timeline–cyclical that consists of beliefs regarding illness predictability and variability; and, emotional representations, which assesses the degree of the emotional impact of the disease. The IPQ-R also assesses perceptions about the illness symptoms (illness identity), as well as about the causes of the disease. However, we did not include these subscales in this study in order to decrease respondents’ burden, as only one short meeting took place and their health condition was complicated. To answer the questionnaire, respondents used a five-point Likert type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Reliabilities ranged from 0.59 to 0.85 for patients, and from 0.66 to 0.77 for spouses. Mean scores were computed separately for each IPQ-R subscale.

*Coping with illness*

Illness-related coping strategies were measured with the Coping with Health Injuries and Problems Scale (CHIP; Endler, Parker, & Summerfeldt, 1998), as adapted in Greek (Karademas, Zarogiannos, Stravodimos, Gyftopoulos, & Constadinides, in press). CHIP is a multidimensional scale for the assessment of coping with a variety of health problems (Endler et al., 1998). The Greek version of the questionnaire consists of five factors: instrumental coping, which corresponds to problem solving coping and includes strategies, such as information seeking or looking for medical help (eight items; e.g. find out more information; Cronbach $a = 0.67$); adherence to medical advice (four items; e.g. comply with advice; Cronbach $a = 0.70$); palliative coping, which refers to soothing strategies aiming in reducing the unpleasantness of the health problem (four items; e.g. stay in bed; rest when tired; Cronbach $a = 0.66$); wishful thinking and daydreaming (five items; e.g. wished it had not happened; fantasise about being healthy; Cronbach $a = 0.68$); emotional reactions that refer to the emotional consequences of the illness (four items; e.g. feel angry; worry about my health; Cronbach $a = 0.80$). Participants were asked to respond in relation
to their own health problem by using a five-point frequency Likert-type scale ranging from 1 (not at all) to 5 (very much). The emotional reactions subscale was not used in this study to avoid confounding with the emotional representations subscale of the IPQ-R.

**Self-rated health**

A single item measured overall self-rated health (SRH). Participants were asked to rate their personal health on a Likert-type scale ranging from 1 (worst possible health) to 100 (best possible health).

**Statistical analysis**

Paired *t*-tests were conducted to identify possible dissimilarities between patients’ and their spouses’ illness perception scores. Furthermore, dissimilarity scores for the seven IPQ-R subscales were computed for each couple by subtracting patients’ scores from spouses’ scores. The association between dissimilarity scores, and patients’ SRH and coping strategies were tested using Pearson’s *r* correlations. We also examined whether dissimilarity scores were related to SRH and coping, independently of the patients’ own illness perceptions. For this reason, a series of hierarchical regression analyses were performed with patients’ own perceptions entering first in the equations (on step 1), and dissimilarity scores following (on step 2). However, besides the differences between spouse and patient mean scores, we also employed Figueiras and Weinman’s (2003) method of identifying perception congruence. According to this method, patients’ and spouses’ responses on each IPQ-R subscale were divided in high and low scores (based on the median). Then, a combined patient–spouse score was created: scores that fell below the corresponding median for both the patient and the spouse in each IPQ-R subscale were coded as ‘similarly low;’ scores that were above the median were coded as ‘similarly high;’ in the cases that one of the couple scored above the median and the other below, the combined score was coded as ‘conflicting.’ Next, differences in patients’ SRH and coping strategies for the three groups, with patients’ illness perceptions serving as covariates, were examined using ANCOVAs. The purpose of this manipulation was to examine the associations not only with the degree of perceptions dissimilarity (dissimilarity scores) but also with the overall (mis)matching between patients’ and spouses’ perceptions, after controlling for the possible effects of the patients’ own perceptions. All data were checked for assumptions of normality and homogeneity of variance before parametric analyses.

**Results**

**Comparison of illness perceptions**

As shown in Table 1, the differences between patients’ and spouses’ illness perceptions were significant in the cases of chronicity, personal control and emotional representations. Spouses perceived illness as more chronic than patients did; believed that patients could exert more control over their condition; viewed illness as causing more emotional reactions. In all other cases, patients’ perceptions were broadly similar to their spouses’. With respect to chronicity, 74% of the spouses scored higher than patients (maximised), whereas only 21.9% scored lower than patients (minimised); with respect to illness consequences, 45.2% of the spouses maximised, whereas 41.1% minimised; regarding personal control, 53.4% maximised, and 37% minimised; in treatment control, 43.8% maximised, and 45.2% minimised; in illness coherence, 37% maximised, whereas 42.5%
In timeline–cyclical, 45.2% maximised, and 52.1% minimised; finally, regarding emotional representations, 66.8% of the spouses maximised, whereas almost 25% minimised. The overall congruence between patients’ and spouses’ illness perception, in terms of ‘similarly high,’ ‘similarly low’ and ‘conflicting’ perceptions, is presented in Table 2. Higher percentages of ‘similarly low’ or ‘similarly high’ perceptions were found in consequences, treatment control and timeline–cyclical; higher percentages of ‘conflicting’ perceptions were identified in the remainder IPQ-R subscales.

The relation of dissimilarity scores to patients’ SRH and coping strategies

Pearson’s $r$ correlations were computed to explore the relation of dissimilarity scores to patients’ SRH and coping strategies (Table 3). Significant, yet rather weak, correlations were found between instrumental coping and patient–spouse dissimilarity in emotional representations ($r = -0.33, p < 0.01$); between adherence to medical advice and dissimilarity in treatment control and timeline–cyclical ($r = -0.26, p < 0.05$, and $r = -0.24, p < 0.05$, respectively); between palliative coping and dissimilarity in emotional representations ($r = -0.23, p < 0.05$); and between wishful thinking and dissimilarity in consequences ($r = -0.25, p < 0.05$), personal control ($r = -0.24, p < 0.05$) and emotional representations ($r = -0.33, p < 0.01$). In other words, patients reported more use of instrumental coping, as well as more use of palliative strategies and wishful thinking, when they perceived illness as causing more emotional reactions than did their spouses. They also reported more adherence to medical advice when they believed that treatment can control illness more effectively, as well as that illness is more unpredictable. Finally, higher
wishful thinking was reported when patients perceived illness as causing more problems and being under more personal control in comparison to their spouses. Patients’ SRH was unrelated to dissimilarity scores.1

Hierarchical regression analyses were then conducted to examine whether dissimilarity scores predicted patients’ SRH and coping, after controlling for patients’ own perceptions. The β-coefficients from each of the five regressions (one for SRH, and four for coping strategies) are presented in Table 4. According to the results, just in the cases of palliative coping and wishful thinking, dissimilarity in chronicity was the only significant predictor, over and above patients’ own perceptions.2

Combined patient–spouse scores and patients’ SRH and coping strategies

A series of ANCOVAs was performed to examine the relation between the combined patient–spouse scores (i.e. ‘similarly high,’ ‘similarly low’ and ‘conflicting’ perceptions in each of the IPQ-R subscales), as the independent variables, and patients’ SRH and coping strategies, as the dependent variables, and patients’ perceptions serving as covariates (Table 5). The differences between groups were assessed through post-hoc analyses, using the Scheffé test.

Table 3. Correlations of dissimilarity scores to SRH and coping strategies.

<table>
<thead>
<tr>
<th>IPQ-R subscale–dissimilarity scores</th>
<th>SRH</th>
<th>Instrumental coping</th>
<th>Adherence to medical advice</th>
<th>Palliative coping</th>
<th>Wishful thinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeline acute/chronic</td>
<td>0.18</td>
<td>0.02</td>
<td>−0.18</td>
<td>0.14</td>
<td>0.09</td>
</tr>
<tr>
<td>Consequences</td>
<td>0.05</td>
<td>−0.08</td>
<td>−0.06</td>
<td>−0.12</td>
<td>−0.25*</td>
</tr>
<tr>
<td>Personal control</td>
<td>0.04</td>
<td>−0.15</td>
<td>−0.16</td>
<td>0.15</td>
<td>−0.24</td>
</tr>
<tr>
<td>Treatment control</td>
<td>0.12</td>
<td>0.11</td>
<td>−0.26*</td>
<td>0.16</td>
<td>0.16</td>
</tr>
<tr>
<td>Illness coherence</td>
<td>0.05</td>
<td>−0.06</td>
<td>−0.21</td>
<td>−0.01</td>
<td>−0.09</td>
</tr>
<tr>
<td>Timeline–cyclical</td>
<td>0.12</td>
<td>−0.14</td>
<td>−0.24*</td>
<td>−0.11</td>
<td>−0.07</td>
</tr>
<tr>
<td>Emotional representations</td>
<td>0.06</td>
<td>−0.33**</td>
<td>−0.03</td>
<td>−0.23*</td>
<td>−0.33**</td>
</tr>
</tbody>
</table>

Note: SRH = self-rated health. *p < 0.05, **p < 0.01.

Table 4. The β’s from multiple regression analyses for patients’ SRH and coping strategies.

<table>
<thead>
<tr>
<th>IPQ-R subscale–dissimilarity scores</th>
<th>Step 1 – Patients’ own perceptions</th>
<th>Step 2 – Dissimilarity scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeline acute/chronic</td>
<td>−0.08</td>
<td>−0.01</td>
</tr>
<tr>
<td>Consequences</td>
<td>−0.10</td>
<td>0.05</td>
</tr>
<tr>
<td>Personal control</td>
<td>−0.45**</td>
<td>−0.22</td>
</tr>
<tr>
<td>Treatment control</td>
<td>0.17</td>
<td>−0.08</td>
</tr>
<tr>
<td>Illness coherence</td>
<td>−0.10</td>
<td>0.09</td>
</tr>
<tr>
<td>Timeline–cyclical</td>
<td>−0.08</td>
<td>0.15</td>
</tr>
<tr>
<td>Emotional representations</td>
<td>−0.03</td>
<td>0.45**</td>
</tr>
</tbody>
</table>

Note: SRH = self-rated health; Instr. = instrumental coping; Adher. = adherence to medical advice; Palliat. = palliative coping; Wish/t. = wishful thinking. *p < 0.05, **p < 0.01.

wishful thinking was reported when patients perceived illness as causing more problems and being under more personal control in comparison to their spouses. Patients’ SRH was unrelated to dissimilarity scores.1

Hierarchical regression analyses were then conducted to examine whether dissimilarity scores predicted patients’ SRH and coping, after controlling for patients’ own perceptions. The β-coefficients from each of the five regressions (one for SRH, and four for coping strategies) are presented in Table 4. According to the results, just in the cases of palliative coping and wishful thinking, dissimilarity in chronicity was the only significant predictor, over and above patients’ own perceptions.2
Table 5. Combined patient–spouse scores (means and standard errors in parentheses) and patients’ instrumental coping, palliative coping and wishful thinking.

<table>
<thead>
<tr>
<th>IPQ-R subscale</th>
<th>Instrumental coping</th>
<th>Palliative coping</th>
<th>Wishful thinking</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Similarly low</td>
<td>Similarly high</td>
<td>Conflicting perceptions</td>
</tr>
<tr>
<td>Personal control</td>
<td>3.21 (0.17)</td>
<td>4.42 (0.13)</td>
<td>3.71 (0.12)*</td>
</tr>
<tr>
<td>Treatment control</td>
<td>3.06 (0.18)</td>
<td>2.13 (0.26)</td>
<td>2.70 (0.15)*</td>
</tr>
<tr>
<td>Illness coherence</td>
<td>3.78 (0.15)</td>
<td>2.93 (0.21)</td>
<td>3.51 (0.11)*</td>
</tr>
<tr>
<td>Timeline–cyclical</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: *p < 0.05, **p < 0.01.
With respect to SRH, no significant effects were found \( [F(2,63) < 2.80, ps > 0.05] \). Regarding instrumental coping, significant effects were identified for the perceptions of treatment control \( [F(2,63) = 3.21, p < 0.05] \), and timeline–cyclical \( [F(2,63) = 4.14, p < 0.05] \). Post-hoc analyses showed that higher instrumental coping was reported by patients when couples reported similar perceptions of high treatment control and low timeline–cyclical, in comparison to couples with perceptions in the opposite direction. Scores in couples with conflicting perceptions lay between the two other groups of couples and did not differ from those. Regarding palliative coping, significant effects were identified for perceptions of personal control \( [F(2,63) = 3.19, p < 0.05] \), and illness coherence \( [F(2,63) = 3.38, p < 0.05] \). Higher palliative coping was found when couples reported similar perceptions of high personal control and low illness coherence, in comparison with perceptions in the opposite direction. Scores in couples with conflicting perceptions also lay between the two other groups of couples. With respect to wishful thinking, significant effects were found for personal control \( [F(2,63) = 5.70, p < 0.01] \), illness coherence \( [F(2,63) = 5.13, p < 0.01] \), and timeline–cyclical \( [F(2,63) = 3.19, p < 0.05] \). According to the post hoc tests, higher levels of wishful thinking were linked to similar perceptions of high, as well as conflicting, perceptions of personal control; similar low and conflicting perceptions of illness coherence; similarly low perceptions of timeline–cyclical (in comparison with couples with perceptions similarly high). No significant effects were identified for couples’ perceptions of chronicity, consequences and emotional representations; also no effects were found with respect to adherence to medical advice. Significant effects are presented in Table 5.

Discussion

The focus of this study was on illness perception dissimilarities between patients with an old MI and subsequent cardiovascular problems and their spouses. The findings can be arranged around two main topics: similarities and dissimilarities in illness perceptions, and their association with patients’ SRH and coping. With respect to the first, we found that patients and their spouses reported dissimilar perceptions regarding illness chronicity (timeline acute/chronic), personal control and the emotional impact of the disease. In all three cases, spouses scored higher than patients.

Such differences in these illness perceptions have also been reported by other studies (e.g. Figueiras & Weinman, 2003; Olsen et al., 2008). Indeed, a pattern seems to emerge. According to this pattern, carers perceive illness severity in a more pessimistic way, and the ability for personal control over the illness in a more optimistic way than patients do. Heijmans et al. (1999) suggested that illness perception dissimilarities reflect spouses’ concern about the way patients view and deal with illness, as well as their effort to keep a balance in patients’ functioning. For these authors, spouses are probably urging patients to confront the reality of the disease and, thus, cope more effectively. On the other hand, it is also possible that patients, in their effort to withstand the burden of a chronic and threatening condition, are accommodating their perceptions in such a way as to view illness as less severe. In this regard, it is a question whether spouses try to balance perceptions or just maintain a more realistic perspective of the whole situation. In any case, the perception similarities and dissimilarities found in this study are rather a ‘snapshot’ of simply one moment in a dynamic process. Both patients and spouses construct and reconstruct their illness perceptions through a constant and mutual ‘exchange’ of thoughts, emotions and reactions and within the continuous interaction...
between personal and illness-related factors. Therefore, further research is needed to clarify these issues and test the above noted assumptions.

A further purpose of our study was to explore the association between perception dissimilarities and cardiac patients’ SRH and coping strategies. No significant correlations between the mean differences in partners’ perception scores and patients’ SRH were noticed. Certain significant correlations were found with coping strategies but they were sporadic and rather weak. Moreover, after controlling for patients’ own perceptions, the association between dissimilarity scores and coping almost disappeared (just two statistically significant β-coefficients out of 35). As Olsen et al. (2008) underlined, the significant associations noticed between outcome variables and dissimilarity scores might probably be the result of the strong correlations between the latter and patients’ own perceptions. Therefore, those relations faded when hierarchical regression analyses were used.

However, as far as coping is concerned, that picture changed when three different groups were constructed showing whether both partners scored high, low or in an opposing way on each IPQ-R subscale. In summary, the results of this analysis showed that (even after controlling for the effects of patients’ illness perceptions), when the couple shared the same perspective of a coherent, predictable and manageable illness, then patients reported less use of palliative coping and wishful thinking, which have been related to lower levels of well-being, as well as more use of instrumental coping, which has been related to higher levels of well-being (e.g. Bucker, Evon, Losielle, Finkel, & Mill, 2005; McCabe, McKern, & McDonald, 2004). On the other hand, results also showed that similarly high scores in personal control were associated with more use of palliative coping and wishful thinking. This finding was surprising and difficult to clarify. A possible explanation might be that control may not always be a desirable or beneficial feature, especially when a situation is assessed as quite complicated or unpredictable (Lazarus, 1999). Thus, perceptions of low personal control may sometimes function in a relieving way that helps the couple bear the burden of the disease. Of course, further research is needed to test this assumption.

A stimulating aspect of our findings was that illness perception congruence was not associated with SRH, after removing the effects of patients’ own perceptions. SRH is an important, comprehensive indicator of personal evaluations about current health (e.g. Fayers & Sprangers, 2002; Hansen et al., 2002). Given that it reflects personal evaluations and it is closely related to own representations about health and illness (Fayers & Sprangers, 2002; see also Note 1), any possible association with dissimilarity scores possibly weakens when the effects of personal perceptions are removed, as in this study (see also Note 3). Yet, one should be cautious with this finding as it refers only to a single health indicator. The results might be different in case that other measures were also used.

Another interesting aspect of our findings was that in several cases couples with conflicting perceptions did not differ from couples with perceptions more ‘beneficial’ regarding coping. This finding is not unprecedented, as Figueiras and Weinman (2003) reported similar results. They suggested that it may be needed at least one member of the couple with a ‘positive’ perception to influence adjustment to illness. The idea that the couple can moderate the ‘extreme’ perception of each member and facilitate adjustment to illness is really attractive. Unfortunately, the relatively small number of couples participated in this study did not allow for the examination of which combination (patient scoring higher than spouse, or vice-versa) is associated with outcomes.

The overall findings seem to suggest that mean differences in partners’ perception scores may not be a precise way for assessing the connection of illness perceptions
congruence with health-related variables. A simple comparative score appeared to be more informative, at least as far as cardiac patients’ coping is concerned. This raises questions about the extent to which the results of relevant studies depend on the congruence–identifying procedure used. Although different procedures and analyses reflect different ways of understanding data, this is a major issue that future research should address. According to our point of view, it is critical to control for the possible effects of personal perceptions when examining the impact of illness perception (dis)similarities on health and well-being.

Our findings should be considered in relation to certain limitations. The more important one refers to the cross-sectional nature of the study. As a result, no assumptions regarding the direction of causality between perception dissimilarities, and SRH and coping strategies could be tested. Second, the use of analyses that were based on median splits, in order to create a patient–spouse combined score, resulted in a significant loss of variance. Third, the number of couples participated in the study was small. That imposed some limitations in the analyses (e.g. interfered with further investigating the role of conflicting perceptions). Also, the majority of patients were males. Fourth, only a short list of variables was included in the study, due to patients’ rather complicated health condition that permitted only one time-limited session with them. Finally, we measured only those coping strategies tapped in the CHIP scale. Consequently, other ways of coping with illness, like benefit-finding or avoidance, were not assessed.

Nevertheless, we believe that our findings have significant implications for research and practice. They showed that chronic cardiac patients and their spouses shared the same view on several dimensions of the illness experience, but disagreed on others, even years after the onset of the disease. It seems that time may not blunt the differences in the ways couples perceive illness revealing, thus, a process of a distinct dyadic response to illness. The findings also provided some evidence that certain illness perception (dis)similarities are involved with patients’ ways of coping with illness, even after controlling for their own perceptions. Therefore, it is probably important for practitioners to assess the illness perceptions of both patients and partners, and consider their combined impact on patients’ response to illness, in order to enhance the effectiveness of their interventions.

In the future, there is need for studies that will employ a longitudinal perspective in the examination of illness perceptions (dis)similarity. Future studies should also examine the role of several personal, family and illness-related factors (e.g. self-efficacy, optimism, communication, type and progress of the illness) that may impact the association between illness perception congruence and health outcomes. Moreover, it would be interesting to examine (dis)similarities in other illness-related variables, such as meaning-making, illness acceptance, health values and goals, which are also linked to health outcomes and well-being.

Notes
1. Correlations coefficients (Pearson r) between dissimilarity scores and patients’ perceptions were ranging between −0.44 and −0.72; between dissimilarities scores and spouses’ perception scores ranged between 0.42 and 0.81. Also, correlations coefficients between patients’ illness perceptions and SRH were ranging between 0.03 (for illness coherence) and −0.27 (for emotional representations) (four out of seven correlations were significant at p < 0.05); between patients’ illness perceptions and coping strategies coefficients were ranging between 0.01 (between chronicity and instrumental coping) and 0.55 (between emotional representations and wishful thinking) (12 out of 28 correlations were significant at p < 0.05).
2. Additionally, multiple regression analyses were performed with patients’ own representations and dissimilarity scores entered on step 1, and the sum of squared differences between patients and spouses on each item of the IPQ-R subscales entered on step 2. This type of analysis was proposed by Olsen et al. (2008), as a more sensitive measure of illness perception dissimilarity. Lower scores indicate greater similarity, whereas higher scores indicate greater dissimilarity, irrespective of the direction of the difference. According to the analyses, palliative coping was predicted by chronicity and illness coherence \((p < 0.05)\). These findings are not really different from those coming from our original regressions: in both types of analyses, very few dissimilarity scores predicted SRH or coping strategies. Although Olsen et al. proposed this procedure as more sensitive for the study of illness perception congruence, our data did not provide support to this.

3. However, when one-way ANOVAs were performed (i.e. without patients’ perceptions serving as covariates), SRH was associated with perceptions about personal control \((p < 0.01)\) and treatment control \((p < 0.05)\), as well as marginally with perceptions about consequences \((p = 0.07)\). These associations disappeared in the ANCOVAs. With respect to coping strategies, the results from the ANOVAs and the ANCOVAs were broadly similar.

References


