



COGNITIVE FACTORS IN FIBROMYALGIA: THE ROLE OF SELF-CONCEPT AND IDENTITY RELATED CONFLICTS

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Fibromyalgia is a syndrome characterized by the presence of diffuse and chronic musculoskeletal pain of unknown etiology. Clinical diagnosis and the merely palliative treatments considerably affect the patient's experience and the chronic course of the disease. Therefore, several authors have emphasized the need to explore issues related to self in these patients. The repertory grid technique (RGT), derived from personal construct theory, is a method designed to assess the patient's construction of self and others. A group of women with fibromyalgia (n = 30) and a control group (n = 30) were assessed using RGT. Women with fibromyalgia also completed the Fibromyalgia Impact Questionnaire and a visual-analogue scale for pain, and painful tender points were explored. Results suggest that these women had a higher present self-ideal self discrepancy and a lower perceived adequacy of others, and it was more likely to find implicative dilemmas among them compared to controls. These dilemmas are a type of cognitive conflict in which the symptom is construed as "enmeshed" with positive characteristics of the self. Finally, implications of these results for the psychological treatment of fibromyalgia are suggested to give a more central role to self-identity issues and to the related cognitive conflicts.

Fibromyalgia is a syndrome characterized by the presence of diffuse and chronic musculoskeletal pain as well as low pain thresholds at 11 or more of 18 anatomic sites, termed *tender points* (Wolfe et al., 1990). The prevalence of this syndrome in different countries varies approximately between 1.5% and 4%

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(Lindell, Bergman, Petersson, Jacobsson, & Herrström, 2000; Withe, Speechley, Harth, & Ostbye, 1999; Wolf, Ross, Anderson, Russell, & Hebert, 1995). These data show the personal and social relevance of this problem, especially considering the suffering of patients with fibromyalgia.

The etiology of fibromyalgia is unknown and its diagnosis is made only on clinical bases. Moreover, so far treatments focus exclusively on reducing the symptoms. All of these aspects, which are common also in other chronic pain conditions, have a decisive influence on the experience these patients have about the disease and determine the process of search for meaning (Radley, 1994; Viney, 1989) that occurs in any disease, especially in situations of chronic course.

Several authors have emphasized the need to take into account aspects of identity to understand the complex phenomenon of chronic pain (e.g., Morley & Eccleston, 2004). In fact, we could say that the concept of self or identity is essential to the process of finding meaning in the pain or the illness, and it is particularly useful for exploring the connections between a person, her body, her interpersonal relationships, and her attitude toward treatment and the health system in general.

Most studies that explore the relation between pain and identity apply a qualitative methodology, focused on semistructured interviews with a small number of patients (e.g., Asbring, 2001; Hellström, 2001; Osborn & Smith, 2006; Smith & Osborn, 2007).

Smith and Osborn (2007) interviewed six patients with chronic lower back pain, and described how the experience of pain implied a threat to the identity of these persons. Specifically, they explained that pain became a new experience that was rejected and attributed to a new self, or to a self with pain that contains aspects that are incompatible with their preferred self or "real me."

Likewise, Morley, Davies, and Barton (2005), in a study derived from self-discrepancy theory (Higgins, 1987), developed a quantitative method for assessing the degree of enmeshment between self and pain. They considered enmeshment as a measure of identity and related it to the degree of psychological distress. They asked the 89 participants with chronic pain to develop lists of 10 adjectives to describe their actual self, their hoped-for self, and their feared-for self. Subsequently, they had to make judgments

about the degree to which their future selves (hoped-for and feared-for) were dependent on the absence or presence of pain, what they called conditional self, or self–pain enmeshment. According to the results obtained, the higher the degree of self–pain enmeshment of the participants, the higher their depressive symptoms and the lower their acceptance of pain.

The present research is based on Kelly's (1955; Walker & Winter, 2007) personal construct psychology (PCP), a constructivist theory that considers human activity as a meaning-making process. According to PCP, individuals create informal theories about the self, other people, their health, and so on. Moreover, their response to events (bodily sensations, interpersonal experiences, professional interventions, etc.) is mediated by this interpretation. The construct system would be formed by a number of bipolar personal constructs that are distinctions drawn from the perception of similarities and differences in their experience (ranging from, e.g., with pain–without pain to more trait-like constructs such as generous–selfish), and then incorporated into the construct system to anticipate future events. In this construct system, there are so-called low-level or peripheral constructs that are more specific (e.g., punctual–unpunctual) or sensorial (cold–hot), and superordinate or core constructs that would constitute the identity of the person (e.g., good person–bad person). All of these constructs are organized into an interdependent, complex, and hierarchical network of meanings, so that the constructs of a lower hierarchical level, or peripheral, can be directly related to other superordinate constructs—that is, related to personal identity. The perspective of a change in these core constructs could be resisted by the person, as it would imply an overall change of the system and a possible threat to her or his sense of personal identity.

The main assessment instrument used by personal construct researchers is the repertory grid technique (RGT; e.g., Feixas & Cornejo, 2002; Fransella, Bell, & Bannister, 2004). In it the person evaluates significant others on a set of personal constructs that have been previously elicited with the aid of a therapist or evaluator. Idiosyncratic meanings of the individual, as well as a number of general indices and measures of self construction (self–ideal discrepancy, perceived social isolation, and perceived adequacy of others), can be obtained from the data matrix generated with this technique for each subject. Moreover, certain implicit relations

between the constructs (e.g., characteristics associated with people with and without pain) can be identified. Of special interest here is the concept of *implicative dilemma* (Feixas & Saul, 2004; Feixas, Saul, & Avila, 2009). An implicative dilemma is a type of cognitive conflict in which the construct representing the symptom is associated with one or more core constructs, usually positive characteristics that define the identity of the person (the type of person I am and want to remain in future). Given this cognitive conflict, the desired change in the symptom construct could imply an undesired change in characteristics that are central for the individual. For example, a person who considered himself a person with pain would like to change in the direction of being a person without pain. However, in his construct system, this construct is associated with generous–selfish, so that persons with pain are usually also generous, whereas people without pain are more likely to be selfish. To this person, to become someone without pain could threaten his sense of identity because of the implication of a change in the direction of being more selfish.

The RGT is a particularly useful tool for studying a phenomenon as complex as the relationship between identity and pain because it is a form of evaluation that combines an idiographic approach, focusing on the constructs relevant to each particular person, with nomothetic measures that allow for comparison among individuals.

RGT has been used to explore the construct system and sense of identity of individuals in different health-related conditions (see Walker & Winter, 2007, for a review). In the case of persons with chronic pain, several studies have used different versions of the RGT to study the construction of pain in patients with acute and chronic lower back pain (Drysdale, 1989), coping strategies (Large & Strong, 1997), attitudes toward disease (Large, 1985a), and the relationship between attitude toward pain and treatment outcome (Large, 1985b; O'Farrell, Tate, & Aitken, 1993). However, these studies did not use the subjects' idiosyncratic, personal constructs and did not identify cognitive conflicts.

In this article, the role of cognitive factors in fibromyalgia is studied using the patients' personal constructs with the RGT. The main hypothesis is that these patients will present with more cognitive conflicts and higher self–ideal discrepancy than those in a control group. Certainly, although a moderate discrepancy

between present self and ideal self may be entirely functional, higher distances accompanied by cognitive conflicts may be more predictive of distress. Other cognitive factors assessed through the RGT will also be explored, and a content analysis of personal constructs involved in the conflicts found will be performed.

Method

Participants

The clinical sample was composed of 30 women with a diagnosis of fibromyalgia who were taking part in support groups of a fibromyalgic patients' association. Their average age was 49.60 years ($SD = 9.16$; range = 27–61).

The control group consisted of 30 women for whom fibromyalgia had been ruled out. Their average age was 46.47 years ($SD = 7.62$; range = 27–60), with no significant differences with respect to the clinical group ($t[58] = 1.44$; $p = 0.16$). They were drawn from a sample of 452 women assessed by psychology students trained in use of RGT, and matched by age (as approximately as possible). The diagnosis of fibromyalgia in the participants of this group was discarded either by checking their "pain drawings" (no pain in four quadrants) or by their scoring on the item "presence of muscular pain" ("absolutely nothing" or "only a little") of the Symptom Checklist 90–Revised (SCL-90-R; see below).

Instruments and Measures

REPERTORY GRID TECHNIQUE (RGT)

The administration of RGT (e.g., Feixas & Cornejo, 2002; Fransella, Bell, & Bannister, 2004) involved three stages in the context of a structured interview. First, subjects provided names for a set of 10 to 20 elements representing themselves and significant others (typically, mother, father, siblings, partner, and friends). Also, a *non grata* person ("someone whom you know but do not like") and the ideal self ("how I would like to be") were included. Frequently, in research studies the same elements are used for each participant. However, we consider that by allowing for differences in the number or type of elements (e.g., friends,

relatives), we have more chances to obtain a better representation of the subjects' interpersonal worlds. Participants in the clinical sample provided a few more elements ($\bar{X} = 15.07$; $SD = 2.59$) than the control group ($\bar{X} = 13.63$; $SD = 2.97$), but the difference did not reach significance. For construct elicitation, a dyad of elements (e.g., self and mother) was selected and the participant had to compare them in terms of their similarities and differences according to her view. For example, both parents can be seen as sincere, and then the person is asked to provide the opposite for sincere. Additionally, one or more perceived differences between the two elements are explored, so that the father can be seen as reserved, for example, whereas the mother is described as talkative. The person is asked for more differences or similarities until she cannot come up with any others. This elicitation process is repeated in consecutive pairs until all elements appear at least once in the comparisons (except for the ideal self). If the construct labels provided by the participant are the same as others previously elicited, they are not included again. In the clinical group the construct with pain–without pain was provided for further exploration of the meaning of pain—that is, of the relationship of pain as a construct to other constructs. This individualized elicitation process yielded a different number of constructs for each grid. This fact makes more complex the aggregation of grid data for group comparison, but, again, it allows for a better representation of each woman's construct system. Participants in the clinical sample yielded a mean of 24.20 constructs ($SD = 7.48$), whereas those in the control group a mean of 20.20 ($SD = 6.74$), a significant difference ($t[58] = 2.17$; $p = 0.03$). Therefore, this between-groups difference was taken into account during the statistical analysis. In sum, the labels provided by participants are meant to represent their personal constructs (at least their verbal ones)—that is, they reflect their subjective views of themselves and others (in contrast to previously set and standardized items, like those of questionnaires).

Finally, the person rates each element in terms of all the elicited constructs, employing a 7-point Likert-type scale. For example, a score of 1 is given to the element "father" for the construct "reserved vs. talkative," meaning that he is viewed as very reserved, and a score of 6 for the mother (quite talkative), and thus a grid data matrix is created. We analyzed each grid data

matrix with the GRIDCOR 4.0 (Feixas & Cornejo, 2002) computer program, which provides a number of cognitive measures and indices, as follows (only those included in the study).

Self-Ideal Discrepancy. This index is estimated by the correlation between the scores given to the elements present self and ideal self, so that a lower correlation is usually associated with poorer self-esteem.

Perceived Social Isolation. This index is calculated using the product-moment correlation between the scores of the present self and the mean scores for the other elements included in the grid. It shows the degree to which the subject perceives herself as similar to (or different from) others.

Perceived Adequacy of Others. This index is estimated by the correlation between the ideal self and the mean scores for the other elements. A negative correlation may indicate that the subject is dissatisfied with the people that surround her, and a high positive correlation might suggest a positive (or even an idealized, if extreme) image of others.

Presence of Implicative Dilemma(s). As mentioned above, this form of cognitive conflict (Feixas, Saúl, & Avila, 2009) represents a cognitive structure in which the symptom, represented by the nondesirable pole of one construct, is associated with positive characteristics of the self-identity system in which change is not desired. The GRIDCOR 4.0 (Feixas & Cornejo, 2002) program identifies implicative dilemmas by using the correlation between the scores given to a discrepant construct (present self and ideal self scored at opposite poles of the construct) and those given to a congruent construct (present self and ideal self scored at the same pole of the construct). When a high correlation ($r > 0.35$) is found, in the sense of associating the desired pole of the discrepant construct with the undesired pole of the congruent construct, an implicative dilemma is counted for that subject. For individuals with this cognitive structure, a symptomatic condition that they wish to change is linked, through their construct system, to other characteristics for which change is not desirable and would involve considerable threat. In short, a wanted

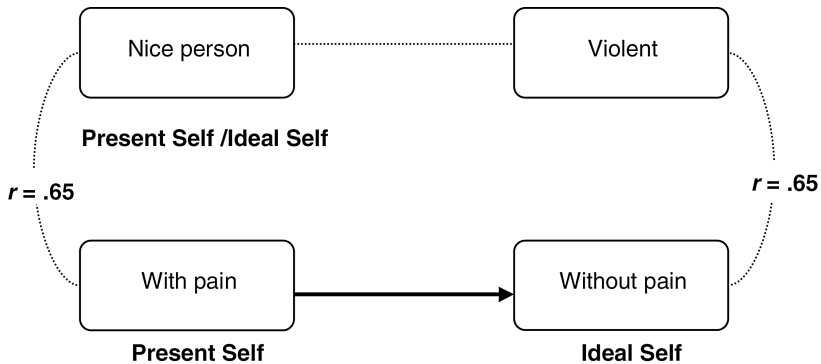


FIGURE 1 Example of an implicative dilemma taken from a participant's repertory grid.

change in the symptom area would involve a nonwanted change on an identity-related positive characteristic. In the case of one of the participants (see Figure 1), the discrepant symptom construct "with pain–without pain" was correlated with the congruent construct "nice person–violent" ($r = .65$). This correlation suggested that this particular patient associated the pole "without pain" with the undesirable characteristic of being violent.

CLASSIFICATION SYSTEM FOR PERSONAL CONSTRUCTS (CSPC)

The CSPC (Feixas, Geldschläger, & Neimeyer, 2002) consists of six areas subdivided into 45 exclusive and exhaustive categories. These areas are hierarchically organized in order to avoid an overlap among them. That is, if one construct might be included in two areas, it is allocated to the one of higher order following this order: moral, emotional, relational, personal, intellectual, and values or interests. The authors reported a high reliability index (Cohen's kappa = 0.93) for the CSPC. This time we included an additional content area for physical health. In this study, the CSCP was used to portray the content of the constructs that form implicative dilemmas.

SYMPTOM CHECKLIST 90-REVISED (SCL-90-R)

The SCL-90-R (Derogatis, 1994; González de Rivera, de las Cuevas, Rodríguez, & Rodríguez, 2002) is a self-administered questionnaire composed of 90 items that assesses psychological distress across nine dimensions: somatization, obsession–comp-

ulsion, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. Also, a Global Severity Index (GSI) can be calculated. This instrument was used to gather general information about the level of psychological distress on both samples and, particularly, to rule out fibromyalgia among the participants of the control sample.

Fibromyalgic symptoms were assessed with the following instruments (clinical sample only).

Visual Analogue Scale (VAS). This consists of a 10-cm line for the assessment of pain intensity. The 0 mark, is labeled “No pain at all,” and the 10 mark is “Pain as bad as it could be.” Participants mark the point along this line that best represents their pain in the past week.

Tender Points (Wolfe et al., 1990). This is simply the number of tender points used for diagnosis of fibromyalgia that each participant identifies as painful.

Fibromyalgia Impact Questionnaire (FIQ). The FIQ (Burkhardt, Clark, & Bennett, 1991; Rivera & González, 2004) was developed to evaluate the current health status in patients with fibromyalgia, and it is one of the most commonly used assessment instruments in clinical and research contexts. FIQ measures physical function, work, and wellbeing, and contains VASs for pain, sleep, fatigue, stiffness, anxiety, and depression. A total score is calculated so that higher scores indicate a greater negative impact.

Procedure

Participation in this study was offered to the members of various support groups of a Spanish association of fibromyalgic patients in the area of Barcelona. Those who volunteered to participate were interviewed on two occasions. At the initial interview, participants were given the informed consent sheet, and all doubts about it (if any) were discussed. If they signed it, basic personal data (age, marital status, etc.) were gathered, together with the information related to the illness process (date of diagnosis, medication,

etc.). Next, they were asked to complete a pain drawing and to indicate the intensity of their pain during the previous week through the VAS. This pain drawing consists of a human figure (front and back) in which the participant was asked to mark painful parts of her body. Tender points were explored by the interviewer (Victoria Compañ), who had been trained for this task by a senior rheumatologist. Finally, instructions for the home completion of the FIQ and SCL-90-R questionnaires were given, and the second interview was set for the following week.

In the second interview, the questionnaires were collected and revised to check for doubts or mistakes. Then, the RGT was administered so that elicitation and rating phases were carried out conjointly by the participant and the interviewer. This process could be quite long in some cases (up to 2 hr), with frequent episodes of emotional activation. Thus, given the concentration difficulties associated with the diagnosis of fibromyalgia, pauses were made whenever it was judged necessary.

Participants in the control group were volunteers recruited and assessed by psychology undergraduate or master students trained in the application of RGT. In addition, these volunteers completed a pain drawing, and those without pain in the four quadrants of the figure were included in the study, because the diagnosis of fibromyalgia was thus discarded. For some participants for whom the pain drawing was not available, the absence of substantial muscular pain as scored in the pain item of the SCL-90-R was used as a criterion for inclusion.

RGT data were analyzed using the GRIDCOR Version 4.0 (Feixas & Cornejo, 2002) computer program and then entered into SPSS 12.0, along with the rest of the data, to perform statistical analysis. In view of the results obtained—high prevalence of implicative dilemmas in the clinical sample—a content analysis of the personal constructs involved in those dilemmas was carried out. Four independent raters were trained in CSPC by rating 100 constructs from a sample used in another study (Feixas, Saúl, & Avila, 2009) and then categorized the content of congruent and discrepant constructs forming the dilemmas appearing in the participants of both samples. Both agreements and disagreements were entered in a data base and analyzed using SPSS 12.0 for interrater agreement, which was excellent (Cohen's kappa = 0.98; $p < .001$), mainly because raters disagreed on only four

constructs out of the total 200 that were categorized. These constructs were excluded from further analysis.

Results

Women with fibromyalgia showed relatively high levels of pain intensity (as measured using VAS), a high number of tender points, and a high impact of the disease on their quality of life (according to FIQ scores; see Table 1 for group statistics).

Concerning the level of psychological distress, as assessed by SCL-90-R, we found GSI scores of 1.86 ($SD = .78$) and .61 ($SD = .45$) in clinical and control samples, respectively.

To estimate the effect of the different number of constructs elicited for each participant, a series of statistical contrasts were performed. A comparison was made between those presenting with implicative dilemmas ($\bar{X} = 22.19$) in their grids and those who did not ($\bar{X} = 22.22$), which yielded an imperceptible, non-significant difference ($t[40] = 0.014$; $p = 0.99$). Also, correlations were computed to assess the relationship between number of constructs and self-ideal discrepancy ($r = 0.05$), perceived adequacy of others ($r = -0.19$) and perceived social isolation ($r = -0.14$), and none was either significant or big enough to be taken into consideration. The measures of self-ideal discrepancy, perceived adequacy of others, and perceived social isolation (present self-ideal self, others-ideal self, and present self-others correlations, respectively) were transformed into Fisher's Z values to allow for data aggregation across subjects.

In order to determine whether the proportion of participants having implicative dilemmas was different across samples, a chi-square test was performed. Yates' correction for continuity was used to compensate for the overestimate of chi-square value

TABLE 1 Clinical Descriptive Data for the Sample with Fibromyalgia ($n = 30$)

Measure	M (Range)	SD
VAS	64.97 (38.00–100.00)	17.58
Tender points	15.30 (11.00–18.00)	1.84
FIQ	72.47 (49.95–94.77)	13.20

VAS = Visual Analogue Scale for Pain; FIQ = Fibromyalgia Impact Questionnaire.

for a 2×2 table. We found that the clinical sample presented with more implicative dilemmas than the control group: 76.7% of the women in the clinical group had at least one implicative dilemma in their grids, compared to the 46.7% in the control group ($X^2[1] = 4.5; p = .03$).

To explore the differences between control and clinical groups in measures of construction of self and others (self-ideal discrepancy, perceived social isolation, and perceived adequacy of others), we carried out a multivariate analysis of variance (MANOVA). Results are displayed in Table 2 (Wilks' lambda = 0.86; $F[3, 56] = 2.96; p = .04$). Self-ideal discrepancy was significantly higher in the clinical sample. Likewise, a significantly higher discrepancy was found in this group between the ideal self and others—that is, a lower perceived adequacy of others. However, we did not find differences between the groups in perceived social isolation. Self-ideal discrepancy and perceived adequacy of others yielded moderate to large effect sizes, according to (Cohen's (1988) guidelines.

Taking group (clinical vs. control) as the dependent variable, a logistic regression with a forward variable selection method (Wald) was performed in order to examine the predictive power of those variables that showed significant differences between groups in the former analysis. According to regression parameters (see Table 3), the odds ratio for presence of implicative dilemmas

TABLE 2 Means, Standard Deviations, and Significance on Three Grid Measures on Construction of Self and Others

	Groups		<i>F</i>	<i>p</i> -value	Partial eta squared
	Control (<i>n</i> = 30)	Clinical (<i>n</i> = 30)			
Self-ideal discrepancy ^a	0.52 (0.42)	0.31 (0.39)	4.08	.04	.066
Perceived social isolation ^b	0.40 (0.32)	0.38 (0.32)	0.04	.84	.001
Perceived adequacy of others ^c	0.47 (0.47)	0.24 (0.24)	5.49	.02	.086

^aA higher present self-ideal self correlation is associated to higher self-esteem.

^bA higher present self-others correlation coefficient means lower perceived social isolation.

^cA higher others-ideal self correlation coefficient means higher perceived adequacy of others.

TABLE 3 Summary of the Model of Logistic Regression

	<i>B</i>	<i>SE</i>	Wald	<i>df</i>	<i>P</i>	Exp(<i>B</i>)	95% CI Exp(<i>B</i>)
Step 1 ^a							
Presence/Absence of implicative dilemmas	1.32	.57	5.47	1	.019	3.76	1.24–11.38
Constant	−0.83	.45	3.33	1	.068	0.44	
Step 2 ^b							
Perceived adequacy of others	−1.93	.95	4.11	1	.043	0.15	0.02–0.94
Presence/Absence of implicative dilemmas	1.32	.59	5.01	1	.025	3.75	1.18–11.89
Constant	−0.17	.55	0.09	1	.765	0.85	

^aVariable introduced in step 1: presence/absence of implicative dilemmas.

^bVariable introduced in step 2: perceived adequacy of others.

is 3.76, which implies that fibromyalgia is almost 3.76 times more likely when implicative dilemmas exist. The odds ratio for perceived adequacy of others is 0.15, which means that this syndrome is 0.15 times less likely for each point of perceived adequacy on the Fisher-Z correlation score. In other words, given that this odds ratio is less than 1 and the negative sign on the *B* coefficient, we can invert it (in this case, 1 divided by 0.15); therefore, we can say that fibromyalgia is 6.67 times more likely for each point of perceived adequacy on the Fisher-Z correlation score. Together, these two variables allow correct classification of 70% cases (Nagelkerke's pseudo $R^2 = 0.23$).

Because these results indicate that implicative dilemmas might be a prevalent cognitive structure in patients with fibromyalgia, we performed a content analysis of these dilemmas. Table 4 shows these results for the congruent and discrepant constructs forming implicative dilemmas in the clinical sample. To determine whether there were significant differences between both construct types, a chi-squared test was performed. Considering the low expected frequency (less than 5) of the intellectual and values areas, they were combined for this statistical analysis. Specifically, the intellectual area had a frequency of 1 for discrepant constructs and 4 for congruent constructs; and the values area had frequencies of 2 and 3, respectively. Results show that both

TABLE 4 Content Analysis of Congruent ($n = 84$) and Discrepant ($n = 61$) Constructs Forming Implicative Dilemmas in Clinical Sample

	Areas						Total
	Moral	Emotional	Relational	Personal	Intellectual and values	Physical health	
Congruent constructs							
Frequency	27.0	6.0	25.0	20.0	7.0	0.0	85
Expected frequency	17.5	9.3	22.7	18.6	5.8	11.1	85
Corrected residuals	4.0	-1.8	0.9	0.6	0.8	-5.5	
Discrepant constructs							
Frequency	3.0	10.0	14.0	12.0	3.0	19.0	61
Expected frequency	12.5	6.7	16.3	13.4	4.2	7.9	61
Corrected residuals	-4.0	1.8	-0.9	-0.6	-0.8	5.5	
Total							
Frequency	30.0	16.0	39.0	32.0	10.0	19.0	146
Expected frequency	30.0	16.0	39.0	32.0	10.0	19.0	146

types of constructs differ in content ($\chi^2[5] = 43.12; p < .001$). Corrected residuals show that significant differences occur in the moral and physical health areas. Thus, moral constructs tend to be congruent, whereas physical health constructs tend to be discrepant. Among patients with implicative dilemmas, the construct “with pain vs. without pain” was the discrepant construct of the dilemmas in 73.9% of the cases. Moreover, the dilemmatic association between with “pain vs. without pain” and a congruent moral construct (e.g., “altruistic vs. selfish” or “responsible vs. irresponsible”) was found in 43.5% of patients with these conflicts. Also frequent among congruent constructs forming dilemmas was the category “hardworking vs. lazy,” included in the personal area.

The same content analysis was performed for the constructs of the participants in the control group. However, the statistical analysis was not possible because of the low number of constructs in some of the cells (content areas). As indicated, there were fewer participants with dilemmas in the control group ($n = 14$), and even when having dilemmas they had fewer than those of the clinical group (a total of 26). An indication of the pattern of the categories of the control group is that moral and emotional categories present with the same frequency for the congruent constructs, which suggests that moral constructs have a less relevant role for congruency in this control sample.

Discussion

Descriptive data of fibromyalgic symptom measures in this study are similar to those in other studies. For example, one epidemiological study carried out in Spain with 138 patients (Gamero, Gabriel, Carbonell, Tornero & Sánchez, 2005) found a VAS of 66 ($SD = 19.3$); it was 64.97 ($SD = 17.58$) in our study. Likewise, the study of Rivera and González (2004) with 102 patients found an average of 15.1 ($SD = 2.5$) tender points; our average was 15.3 ($SD = 1.84$). With regard to functional capacity (FIQ), these authors obtained an average score (after adapting the score on a scale from 0 to 100) of 65 ($SD = 14.38$), which is slightly lower than the one in our study (72.47; $SD = 13.20$). This might be due to the fact that in the study by Rivera and González (2004), women in litigation or compensation processes were excluded.

Globally, we may conclude that the levels of fibromyalgic symptoms of the patients in our study are similar to ones found in other studies with larger Spanish samples. Concerning psychological symptoms, our clinical sample presents with higher levels of distress with respect to previous studies (Dobkin, De Civita, Bernatsky, Kang, & Baron, 2003; Landis, Lentz, Tsuji, Buchwald & Shaver, 2004). However, the fact that our clinical sample is equivalent to others with respect to symptoms does not preclude the existence of unique features in our patients by the fact of being recruited within the range of a fibromyalgic association. Further studies should consider the role of these and other conditions in the construction of self and others in fibromyalgia.

With respect to cognitive measures derived from RGT, in our study women with fibromyalgia had a higher present self-ideal self discrepancy, and a lower perceived adequacy of others (ideal self-others discrepancy), as compared to the control group. These results might reflect high standards in these women when evaluating themselves and significant others. This tendency has been emphasized frequently by clinicians working with this population, and even by patients themselves (Hallberg & Carlsson, 1998). However, these issues have scarcely been systematically studied in women with fibromyalgia. In one of the few studies on this subject, Ayats, Martín, and Soler (2006), using the Milon Clinical Multiaxial Inventory-III, concluded that women with fibromyalgia have some specific but nonpathological characteristics, including a tendency toward perfectionism.

In another study with chronic lower back pain patients, Waters, Keefe, and Strauman (2004) discussed the relationship between certain self-discrepancies (actual self-ideal self, actual self-ought self, actual self-ideal other self, and actual self-ought other self) and the intensity of pain, depression, and psychological distress. These measures focus only on the discrepancies related to the self, but there is no measure of how they would like others to be. According to our results, demands toward significant others (measured as the discrepancy between ideal self and others) seem to be significant in discriminating between women with fibromyalgia and controls. In fact, in our study the perceived adequacy of others entered into the model for predicting subject allocation to clinical or control group, whereas the self-ideal discrepancy did not.

Women in our study did not perceive others as dissimilar to them, in comparison to the control group. However, this might be explained by the fact of them belonging to an association of fibromyalgic women. Other studies (Alexander, Neimeyer, Follete, Moore, & Harter, 1989; Botella & Feixas, 1992) show that participating in group activities reduces the sense of being rare or dissimilar to others.

On the other hand, at least one implicative dilemma was found in about three of every four patients with fibromyalgia, a significantly higher proportion than in the control group. The presence of these dilemmas was the most predictive variable (over self-ideal discrepancy and perceived adequacy of others) for classifying participants into clinical or control groups. The fact that both presence of dilemmas and self-ideal discrepancy were entered in the binary logistic regression is relevant because both measures may not be independent. Certainly, a portion of implicative dilemmas are discrepant constructs for which there is a difference between self and ideal self (an aspect related to self-ideal discrepancy). But the fact that only the presence of dilemmas appeared in the final equation suggests that, despite the possible association, self-ideal discrepancy is not significant in predicting group allocation of participants.

Morley, Davies, and Barton (2005) proposed the concept of "self-pain enmeshment" as a key to understand the suffering of these patients. Also, they argued for the use of other methodologies for capturing implicit relationships between self and pain. Precisely, the identification of implicative dilemmas explores another type of enmeshment because this measure is based on implicit relationships between self and pain (e.g., for some patients having pain was associated in their construct system to being generous in contrast to not having pain, which was related to being selfish) of which the subject might not be aware of or talk about.

Implicative dilemmas can also help to understand a blockage to change in the direction of getting rid of pain. Although the person wishes to change in the discrepant construct (the most frequent one among the women with fibromyalgia in our sample was with pain vs. without pain), moving in this direction would imply an undesired change in another congruent construct of a moral quality (e.g., altruistic vs. selfish, responsible vs. irresponsible, or

hardworking vs. lazy). That is, for the prototypical woman with an implicative dilemma in our clinical sample, to get rid of the pain would involve becoming more selfish, irresponsible, or lazy—an integral change in her identity. Please note that these terms are chosen here only because they have been found more frequently in their grids, but they can vary from one person to another.

In sum, an improvement in these patients' physical health status could be construed by a substantial proportion of women with fibromyalgia as an undesirable change in their current morally appropriate self-image. Similarly, they would tend to view people in their lives who do not have pain as being selfish or with any other undesired moral trait. Thus, not having pain involves, in their system of meanings, becoming another type of person characterized by undesirable moral attributes. Conversely, those who suffer from pain are viewed as good people (e.g., altruistic, responsible, or hardworking).

Our results coincide with those of Drysdale (1989) with lower back chronic pain patients. In many of his grids, an association was found between having pain and being sensitive toward others. However, in Drysdale's study, constructs were provided by the researcher and not, as in our study, elicited by the patients themselves, which allows for a broader manifestation of their personal meanings.

The chronicity of this syndrome may contribute to make patients view pain as part of their lives and, progressively, to integrate the experience of pain into their sense of identity, an issue that was captured in our study through the constructs elicited with the RGT. Consequently, to persons with these dilemmas pain may imply a threat to their identity, as claimed by Smith and Osborn (2007), but the disappearance of pain may also imply a threat, as they could construe it as a loss of positive characteristics of their identity.

In this sense, we coincide with Asbring (2001), when he said that the onset of fibromyalgia means a disruption in the biography involving changes in personal identity, and these changes include positive and negative aspects. This fact might help explain the difficulties therapists frequently encounter in fully engaging these patients in treatment compliance (usually involving areas such as exercise, diet, and sleep habits) and change (e.g., little progress in the treatment). Remarkably, Dobkin, Sita, and Sewitch (2006)

noted that 52.9% of a sample of 121 women with fibromyalgia reported at least one form of nonadherent behavior.

From a clinical point of view, these findings, if confirmed by further large-scale studies, would be valuable, because implicative dilemmas can be the focus of therapeutic work (Feixas & Saúl, 2005; Fernandes, Senra, & Feixas, 2009; Senra, Feixas, & Fernandes, 2006) and, therefore, amenable to intervention. In fact, a case study in which the work with dilemmas was used (along with other techniques) has already been published detailing the therapeutic process of a patient with fibromyalgia and other comorbidities (Feixas, Hermosilla, Compañ & Dada, 2009).

Future studies might explore the usefulness of including a module directed to work on the psychological resolution of dilemmas in multicomponent treatment packages. This would mean a step toward individualizing the treatment design to fit patient characteristics, a need suggested by many authors (van Koulil et al., 2007; Williams, 2003).

In sum, the study of the construct systems of a sample of patients with fibromyalgia with respect to a comparable control group has provided results that might have implications for their understanding and treatment. The analysis of the way they construe themselves and others using RGT tells us that these patients are demanding with respect to others and to themselves. Also, they have cognitive conflicts that might block their change process. That is, a change in their pain condition is associated with other undesired changes in their way of being, as depicted by their construct system. All of these cognitive variables deserve further examination, with the goal of developing specific treatment modules that guide therapeutic work with these factors. Thus, when certain cognitive factors (e.g., implicative dilemmas) are found to be relevant for a given patient, the module addressing these factors could then be integrated into an individualized treatment package for that patient.

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