

Study of the influence of positive affect, self-efficacy and optimism on chronic pain.

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1. INTRODUCTION

Chronic pain is a major public health problem; fibromyalgia is one of the most prevalent syndromes in this sense (Andreu, Mira, Nebot, Ibañez and Garcia-Palacios, 2016). Because their etiology is yet to be understood, the psychological aspects of fibromyalgia are particularly important as maintainers and exacerbators of pain and its consequences. Historically, studies on these psychological factors and pain have focused on emotions and negative factors such as anxiety, depression and anger (Truyols, Perez, Medinas, Palmer and Sesé, 2008). In recent years, however, there has been growing interest in research into more positive psychological aspects (Park and Sonty, 2010), such as positive affect, optimism and self-efficacy. The evidence points to a protective role for them in different aspects of pain, such as pain intensity, interference in patients' lives and quality of life, either directly or indirectly, either by reducing the catastrophism of pain and thus its intensity or by promoting more active coping styles (Hood et al 2012; Finan and Garland, 2015; Goodin and Bulls, 2013; Hood, Pulvers, Carrillo, Merchant and Thomas, 2012; Turk and Okifuji, 2002). On the other hand, recent findings suggest that the relationship between positive affect and pain may not be constant among different syndromes or pathologies (Finan and Garland, 2015). Of particular relevance to the case in hand is the existing evidence that indicates less positive affect in the fibromyalgia population than in patients with other rheumatologic diseases (Zautra et al. , 2005), and it appears that these deficits may explain differences in pain intensity better than negative affect, especially during peak pain seasons (Zautra et al. , 2005).

The aim of this paper is to study the relationship between positive affect (measured through PANAS), optimism (LOT-R) and self-efficacy (EGA) with the intensity and interference caused by chronic pain. We hypothesize according to the evidence found in this regard that we will find negative correlations between positive affect, optimism and self-efficacy with the intensity and interference of pain. On the other hand, another of the objectives of our study is to analyze the differences in the three variables mentioned above (and negative affect) between the fibromyalgia population and the general population without pathology. In this case we expect to obtain significant differences, especially in terms of positive affection.

2. METHODOLOGY***Participants***

The participants of our research correspond to two different samples which were obtained through a non-probabilistic sampling. First of all, a clinical sample of women with a diagnosis of fibromyalgia (n=25) selected from the patients who attended the Rheumatology Service of the General Hospital of Castellón. The second sample used is made up of women belonging to the staff of the Dr. Peset University Hospital in Valencia (n=25). This sample was collected specifically for the development of this work. The following inclusion criteria were established: Not having been diagnosed with fibromyalgia or any other syndrome or condition involving chronic pain; Not having been diagnosed with any type of serious mental disorder.

Evaluation tools

- BRIEF PAIN INVENTORY (BPI)
- POSITIVE AND NEGATIVE AFFECT SCALE (PANAS)
- GENERAL SCALE OF SELF-EFFICACY (EGA)
- LIFE ORIENTATION TEST (LOT-R)

Procedure

First of all, the data of the clinical sample were obtained through the database of the Psychological Assistance Service of the University Jaume I, then the sampling and administration of the evaluation instruments was carried out in the general sample without pathology. The next step was to apply the statistical tests and the analysis and reflection of the results obtained. SPSS 25.0 was used to perform the statistical analyses. The statistical test used for the intra-group analysis was the Pearson Correlation Coefficient. For intergroup analysis, t-test for independent samples and Cohen's d-test for effect size were applied.

3. RESULTS

Inter-sample analysis

In the analysis of the data through the application of the t-test for independent samples, we obtain significant differences between both samples in Positive Affect and Negative Affect; in relation to the subscales of the General Self-Efficacy Scale, we only obtain significant differences between both samples in the Initiative variable. There are also significant differences in Optimism (LOT-R). In the calculation of the effect size through the Cohen statistical test d, the results obtained are of a large effect size (>0.8) in all variables where significant differences are obtained between samples, i. e. in Positive and Negative Affection, Initiative and Optimism.

Intra-sample analysis.

Only positive affect is significantly correlated with pain intensity, resulting in a negative correlation. With respect to interference in activities, significant correlations are obtained with positive affect, effort and persistence (both subscales of the General Self-Efficacy Questionnaire), all of which are negative correlations.

4. DISCUSSION

With respect to intra-group correctional analysis, the results obtained reinforce the growing evidence on the protective role of positive affect in the intensity and interference caused by chronic pain. This relationship is not so obvious for optimism or for self-efficacy, which are only significantly related to interference caused by pain, is likely to be more indirect, as some authors suggest, through the promotion of more active and adaptive pain management strategies (Turk and Okufuji, 2002) or through the ability to gain social support (Park and Sontyy, 2010).

With regard to intergroup analysis, the results obtained support what has recently been suggested in some studies that patients with fibromyalgia mainly have a deficit of positive affection (Zautra et al. , 2005) that would explain more precisely the variance in pain intensity. In our case it is interesting to see that, although significant differences in both positive and negative affect are obtained, the magnitude of the effect on the latter is smaller. On the other hand, significant differences in optimism are also obtained, which could be explained by the relationship that this dispositional variable has with the positive affection and the greater number of positive emotions generated by optimistic individuals.

Another possible explanation would be that the differences observed are due to a greater or lesser extent to the impact of the negative consequences of pain on the personality of the patients. Finally, in terms of self-efficacy, only significant differences are obtained in the initiative subscale, not in the effort and persistence subscales. This could be explained by the fact that the initial willingness to face problems (initiative) may be more influenced by the impact of the disease than the person's capacity for effort and persistence, which may be more associated with personality traits with greater resistance to change.

The results obtained in this study support what the evidence on the subject suggests, and that is the need to focus the psychological interventions of chronic pain on positive variables or factors. However, in spite of the promising results obtained so far, the protective function of these factors is still a field that is beginning to be understood since up to now the ways in which these factors act on the experience of pain are not well understood. In this sense, the evidence is often contradictory, slowing down the progress in the understanding of the problem as well as the generation of validated treatments and evaluation instruments for its adequate clinical approach.