

# CATASTROPHIZING: A STRONG PREDICTOR OF PAIN AND TREATMENT OUTCOMES AMONG WOMEN WITH CHRONIC PELVIC PAIN



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## Background

Chronic pelvic pain (CPP) in women causes significant disability and distress. Like other chronic pain conditions, psychosocial variables likely play as key a role in the development and maintenance of CPP as physiological ones. The purposes of this study were to determine the predictors of pain and to specifically examine to effect of catastrophizing on pain reports.

## Objective

The objective of this study was to determine the predictors of pain improvement among women with chronic pelvic pain (CPP)

## Methods

Secondary analysis of baseline (n = 285) and 12-month (n = 258) data collected from women presenting for CPP at a tertiary referral center was performed. Participants completed questionnaires assessing pain, mental health, and catastrophizing at entry and one year follow-up. The main outcome measure assessed was the interval change in pain report using the McGill Pain Questionnaire (MPQ).

## Results

Participants were predominantly middle aged ( $M = 34.85$ ,  $SD = 10.36$ ), married (67%), Caucasian (79%), and educated ( $M = 14.86$ ,  $SD = 2.50$ ). Mental health status scores ( $M=42.50$ ,  $SD=10.20$ ) were below the 50<sup>th</sup> percentile of both the general population (50.9) and patients with rheumatoid arthritis (49.17) and back pain (49.27). Women with increased baseline catastrophizing scores ( $M =2.07$ ,  $SD = 1.49$ ). were more likely to be younger ( $r^2 = -.14$ ,  $p = .02$ ), less well educated ( $r^2= -.24$ ,  $p <.0001$ ), have a longer duration of pelvic pain ( $r^2 = .19$ ,  $p = .001$ ), use narcotics or CNS medications at study entry ( $r^2 = .27$ ,  $p <.001$ ;  $r^2 = .20$ ,  $p = .001$ ) and have worse mental health ( $r^2 = -.50$ ,  $p < .001$ ).

## Results Continued

Baseline pain scores ( $M = 17.60$ ,  $SD = 10.55$ ) were similar to those reported by patients with fibromyalgia, low back pain and chronic fatigue syndrome. Interim non-surgical treatments included central nervous system medications (25.2%), physical therapy (33.7%), psychotherapy (5.1%) and narcotics (7.8%).

Greater pain at study entry was associated with, less education ( $p=0.003$ ), more previous pelvic surgeries ( $p=0.0003$ ), past physical therapy treatment ( $p=0.02$ ), and coping with pain by catastrophizing ( $p<0.001$ ) ( $R^2 = .34$ ,  $p<.0001$ ;  $\beta = .40$ ,  $p < .001$ ). Catastrophizing alone contributed 13% of the variance in pain scores.

Controlling for entry pain, women with higher pain scores at one-year were less likely to have a hysterectomy during the follow-up period ( $p<.0001$ ), more likely to have been treated with narcotics at study entry ( $p = .04$ ), and more likely to cope via catastrophizing at follow up ( $p<.0001$ ). ( $R^2 = .59$ ,  $p<.0001$ ;  $\beta = .59$ ,  $p < .001$ ). While baseline pain accounted for 30% of the variance in follow-up pain reports, catastrophizing contributed an additional 27% of the variance in pain scores.

## Conclusions

These findings contribute to the existing body of literature by confirming the complex nature of CPP and suggest that psychological processes such as catastrophizing play a vital role in predicting pain improvement in women with CPP.. Additionally, the strength of the correlations between catastrophizing and pain both within and across time points speaks to the stability of the relationship between the two variables both within and between individual participants.