

**Conclusions:** Increased number of hours of being barefoot per day is protective of knee osteoarthritis pain flares. However, the number of hours of footwear is worn is associated with increased KOA pain flares. Physical activity in the days before flares was also associated with KOA pain flares.

**Table:** Association between knee osteoarthritis pain flares and being barefoot, physical activity and footwear worn in the period prior to flare

Flare	Odds Ratio	P]	[95% Conf. Interval]	
Duration of being barefoot day before flare	0.87	0.000	0.82	0.91
Duration of being barefoot 2 days before flare	0.86	0.000	0.82	0.91
Hours foot wear as worn 1 day prior to flare	1.17	0.000	1.10	1.24
Hours footwear was worn 2 days prior to flare	1.11	0.000	1.05	1.18
Physical Activity Performed 1 day prior*				
Any Moderate	2.20	0.000	1.55	3.19
Any Vigorous	3.73	0.036	1.09	12.71
Physical Activity Performed 2 days prior*				
Any Moderate	2.15	0.000	1.50	3.09
Any Vigorous	1.80	0.461	0.38	8.62
Physical Activity Performed 3-7 days prior*				
Any Moderate	1.69	0.005	1.17	2.45
Any Vigorous	0.70	0.661	0.15	3.36

\*Reference only mild physical activity performed

## 569 CORRELATION BETWEEN CATASTROPHIZING AND PAIN IN KNEE OSTEOARTHRITIS PATIENTS

G.C. Campos, M.S. Pietrobon, A.R. Zorzi, J.B. Miranda. *UNICAMP, Campinas, Brazil*

**Purpose:** Osteoarthritis of the knee often leads to frequent and intense pain. Psychosocial factors influence the intensity which chronic pain is expressed. Catastrophizing has been broadly conceived as an exaggerated negative "mental set" brought to bear during painful experiences. Cognitive distortions and catastrophic thoughts contribute to the increase in pain intensity. The aim of this study was to correlate catastrophizing and pain in patients with knee osteoarthritis.

**Methods:** Patients with knee osteoarthritis responded to the visual analogue scale (VAS), Western Ontario and McMaster Universities Osteoarthritis index (WOMAC), Short Form-36 (SF-36) quality of life questionnaire and Pain-Related Self-Statements Scale (PRSS). Data were analyzed with independent t-student test or the Mann-Whitney test. Then, the PRSS catastrophic scale was compared to others through Spearman Correlation, obtaining direction and strength of the correlation.

**Table 1**  
Endpoint analysis according to gender

	Gender		p-value
	Male (n = 19)	Female (n = 34)	
Visual Analogue Pain Scale (VAS) <sup>b</sup>	55 (44–81)	80 (68–84.25)	0.016 <sup>‡</sup>
WOMAC			
Pain <sup>a</sup>	8.84 ± 3.63	11.79 ± 4.32	0.015 <sup>‡</sup>
Stiffness <sup>b</sup>	5 (3–6)	6 (3.75–6)	0.402 <sup>‡</sup>
Function <sup>b</sup>	36 (31–48)	46 (37–56.25)	0.055 <sup>‡</sup>
TOTAL <sup>b</sup>	52 (45–65)	60.5 (52.75–76.25)	0.026 <sup>‡</sup>
SF-36			
Physical Functioning <sup>b</sup>	30 (20–60)	15 (5–30)	0.017 <sup>‡</sup>
Role-physical <sup>b</sup>	0 (0–0)	0 (0–25)	0.447 <sup>‡</sup>
Bodily pain <sup>b</sup>	41 (30–61)	22 (7.5–32)	0.002 <sup>‡</sup>
General health perceptions <sup>a</sup>	65.11 ± 23.49	48.59 ± 26.58	0.028 <sup>‡</sup>
Vitality <sup>a</sup>	66.84 ± 21.23	40.29 ± 20.71	0.000 <sup>‡</sup>
Social functioning <sup>b</sup>	75 (37–87)	50 (25–75)	0.053 <sup>‡</sup>
Role-emotional <sup>b</sup>	33 (0–100)	0 (0–33)	0.031 <sup>‡</sup>
Mental Health <sup>a</sup>	72.84 ± 21.48	48.71 ± 23.42	0.001 <sup>‡</sup>
PRSS			
PRSS <sup>b</sup>	16 (9–21)	32.5 (11.5–42.25)	0.012 <sup>‡</sup>
Adjusted (0-5) <sup>b</sup>	1.77 (1–2.33)	3.61 (1.28–4.69)	0.012 <sup>‡</sup>

<sup>a</sup> Values expressed as mean ± standard deviation; <sup>b</sup> Values expressed as median; <sup>‡</sup> Student-t test; <sup>†</sup> Mann-Whitney.

**Table II**  
Analysis of PRSS scale correlation to visual pain scale, Womac and SF-36

	Spearman correlation	
	Coefficient ( $\rho$ ) <sup>*</sup>	p-value
Visual Analogue Pain Scale (VAS)	0.615	0.000
WOMAC		
Pain	0.656	0.000
Stiffness	0.677	0.000
Function	0.612	0.000
TOTAL	0.682	0.000
SF-36		
Physical Functioning	–0.458	0.001
Role-physical	–0.367	0.007
Bodily pain	–0.503	0.000
General health perceptions	–0.517	0.000
Vitality	–0.560	0.000
Social functioning	–0.461	0.001
Role-emotional	–0.482	0.000
Mental Health	–0.479	0.000

\*  $\rho = rho$ .

**Results:** A total of 53 patients, (64.2% female), with a mean age of 64.3 years and a mean BMI of 30.3 responded all questionnaires. Woman presented with higher values on PRSS ( $p=0.012$ ), VAS ( $p=0.016$ ) and WOMAC score ( $p=0.026$ ) in relation to males, as well as greater SF-36 dysfunction in physical functioning ( $p=0.017$ ), bodily pain ( $p=0.002$ ), general health perceptions ( $p=0.028$ ), vitality ( $p=0.000$ ), role-emotional (0.031) and mental health ( $p=0.001$ ) domains. Age or BMI did not influence the central tendency and dispersion of pain, total Womac, SF-36 or catastrophizing scale. There was a strong positive correlation between PRSS and VAS ( $\rho=0.615$ ;  $p=0.000$ ) and between PRSS and WOMAC ( $\rho=0.682$ ;  $p=0.000$ ). The multivariate analysis resulted in a statistically significant model, in which the WOMAC scale was a predictor of the PRSS scale ( $p<0.001$ ).

**Conclusions:** Individuals with higher catastrophizing characteristics present more pain, worse function and worse quality of life according to the scales used. Female patients had higher catastrophizing, pain and worse function in relation to males.

## 570 MORPHOLOGY OF GUSHU DECOCTION IN RABBIT MODEL OF KNEE OSTEOARTHRITIS STUDY OBSERVATION AND INFLUENCE OF bFGF EXPRESSION

Z. Li<sup>1</sup>, R. Chen<sup>2</sup>. <sup>1</sup>Affiliated Hosp. of Shaanxi Univ. of Chinese Med., Xian Yang, China; <sup>2</sup>Shaanxi Univ. of Chinese Med., Xian Yang, China

**Purpose:** This topic seeks to under the guidance of TCM theory, combined with modern scientific research methods, through the rabbit knee osteoarthritis experimental and clinical research, observation of compound Chinese medicine Gushu decoction right knee osteoarthritis rabbit model of morphology and bFGF expression, and to explore the mechanism of therapeutic efficacy of KOA, and to further lay the foundation for clinical application and promotion.

**Methods:** 48 healthy adult Japanese white rabbits were randomly divided into four groups: A Blank group, B model group, C bolus group, D Gushu decoction groups of 12 rats, each weighing mark. In addition to the blank group are used outside the Hulth method modeling, cut off anterior cruciate ligament, pay attention not to damage articular cartilage. Modeling is successful, A group and B group were fed with 10ml of distilled water, without other ingredients; C group were given bolus 10ml (0.7g/ml) aqueous gavage, D group were given Gushu decoction 10ml (0.7g / ml) aqueous gavage. Continuous administration of 8 weeks, rabbits were sacrificed in each group, Take synovial, articular cartilage specimens HE staining under light microscope morphology and rickets reason score, using immunohistochemistry to detect the expression of bFGF in articular cartilage.

**Results:** The Gushu decoction can significantly increase the expression of bFGF in articular cartilage. The results showed that the apparent model group, synovitis of the knee joint changes and degenerative changes in cartilage; C group, D group significantly better than the