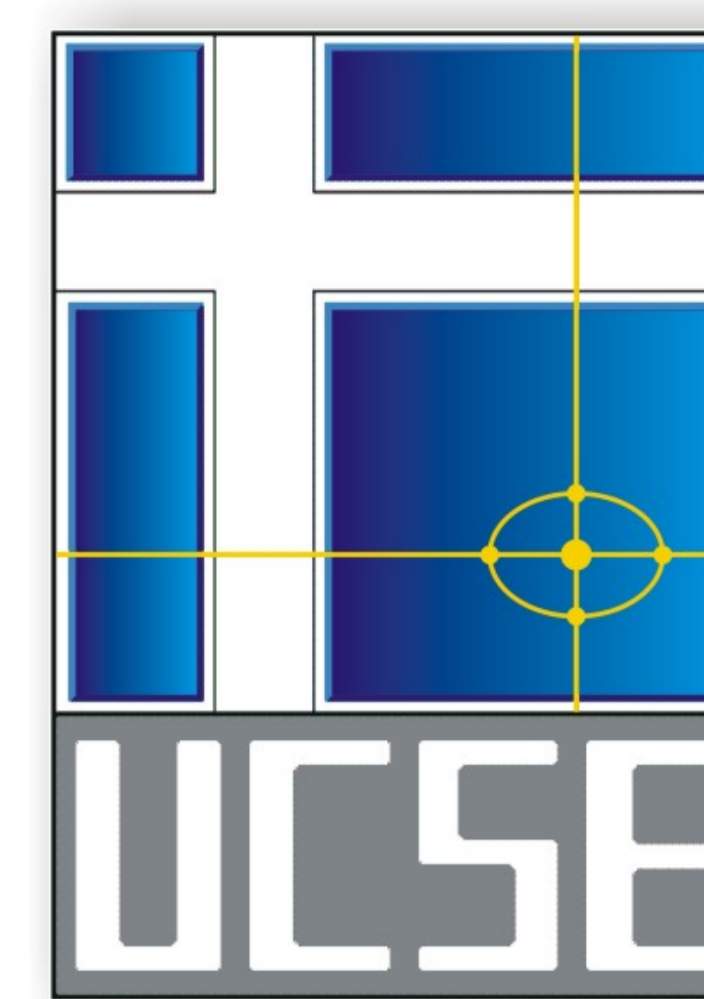


Preliminary validation of Argentinian version of the Psychological Inflexibility in Pain Scale (PIPS) in a chronic pain sample

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The Psychological Flexibility model is a useful theoretical tool to integrate knowledge in behavioural analysis and support more effective treatments for people with chronic pain (McCracken & Morley, 2014). Psychological Flexibility can be defined as the capacity to persist or to change behaviour with a willingness to make contact with every kind of thoughts and feelings including pain, an appreciation of what the situation affords, and an active orientation toward one's goals and values (Hayes, Luoma, Bond, Masuda & Lillis 2006). This construct defines practical and measurable processes of changes within Acceptance and Commitment Therapy (ACT). Along these lines Wicksell et al. (2010) have developed the Psychological Inflexibility in Pain Scale (PIPS) in order to assess this core variable. The PIPS has been translated into Spanish and validated in a fibromyalgia Spanish sample (Rodero et al., 2013). However, as far as we know there is not a study of the PIPS's psychometrics proprieties neither in Latina American, nor in Argentina. So, the aim of the present preliminary study was to analyse measurement properties of the PIPS in an Argentinian sample of people with chronic pain.

Materials and methods

Participants


Participants with chronic pain were recruited from rheumatology service of the regional hospital. Seventy four women and 3 men were evaluated in a personal interview and by self-report measures. The mean age was 52.2 (SD=11.64). The inclusion criteria were:

- i. age between 18 and 70 years;
- ii. diagnosis with a chronic pain condition (i.e. rheumatic arthritis, osteoarthritis and fibromyalgia);
- iii. absence of severe psychological/psychiatric diagnosis.

The participants gave their informed consent before were included in the study.

Measures

Background information from participants included age, gender, level of education, job status and duration of pain was collected in an interview. The self-report measures are described below.

 *Psychological inflexibility in pain scale (PIPS)*: The PIPS is a 12-item scale designed to measure psychological inflexibility in patients with chronic pain. Previous studies have supported a 2-factor solution: avoidance and cognitive fusion (Wicksell et al., 2008; Wicksell et al., 2010). The items all reflect responses to chronic pain that are avoidant and values-inconsistent and theoretically likely to lead to suffering and disability. All of the items are rated on a 7-point numerical scale that ranged from "1=never true" to "7=always true", with higher scores indicating more psychological inflexibility. We used the Spanish version of Rodero et al. (2013) went through a process of translation and adaptation from the English version.

 *Pain catastrophizing scale (PCS)*

 *Pain Vigilance and Awareness Questionnaire (PVAQ)*

 *The Chronic Pain Acceptance Questionnaire (CPAQ)*



Results

The internal consistency of the total scale calculated by Cronbach's α was **0.87** in this sample, which indicates a good value. Pearson correlations were calculated to assess the relationship between the PIPS-Spanish and other psychometric instruments (see Table 1).

Table 1. Intercorrelation between PIPS and PCS, PVAQ and CPAQ.

	PIPS – avoidance	PIPS – cognitive fusion	PIPS – total
PCS – Rumination	.70**	.55**	.74**
PCS – Magnification	.68**	.38**	.65**
PCS – Helplessness	.71**	.46**	.70**
PCS – Total	.76**	.51**	.75**
PVAQ – attention to pain	.66**	.44**	.64**
PVAQ – attention to changes in pain	.50**	.33**	.49**
PVAQ – total	.64**	.42**	.62**
CPAQ – activities engagement	-.18	.11	-.09
CPAQ – pain willingness	-.73**	-.67**	-.77**
CPAQ – Total	-.70**	-.40**	-.63**

Discussion

The **Psychological Inflexibility Scale** - Spanish in Argentinian patients with chronic pain shows a good internal consistency. Regarding concurrent validity there were significant positive correlation with associated construct as pain catastrophizing and awareness and vigilance to pain. Conversely, it shows negative significant correlation with Pain willingness, but not with Activities engagement.

Overall the version of PIPS developed here seem to be useful in this context, more psychometrics analysis need to be done not only for PIPS but for Pain Catastrophizing Scale, Pain Vigilance and Awareness Scale and for Chronic Pain Acceptance Questionnaire in Argentinian population

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