

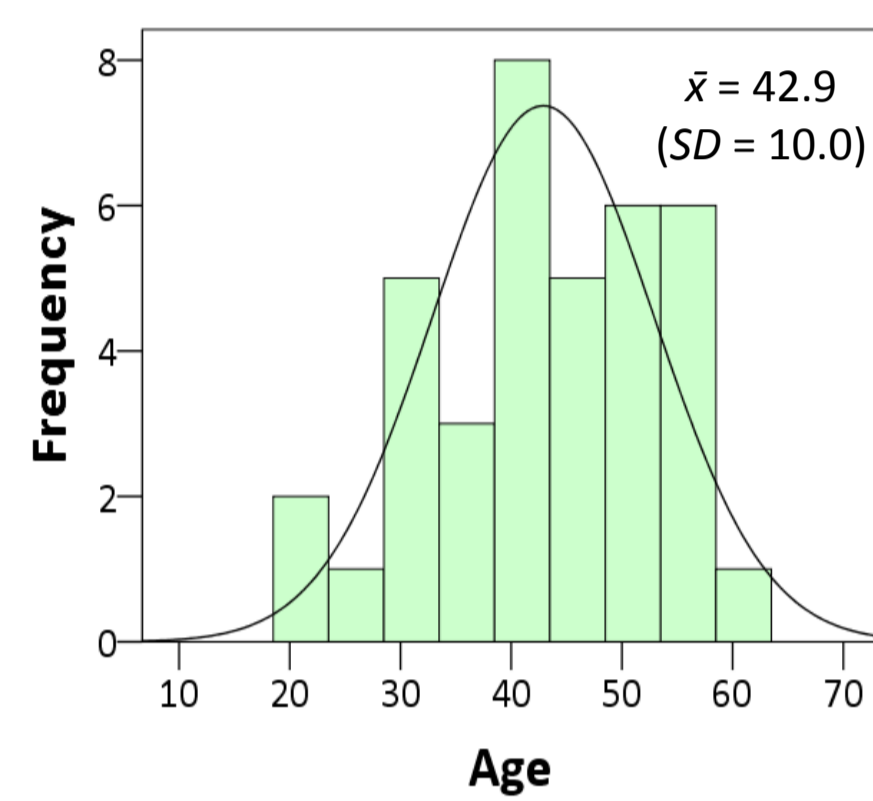
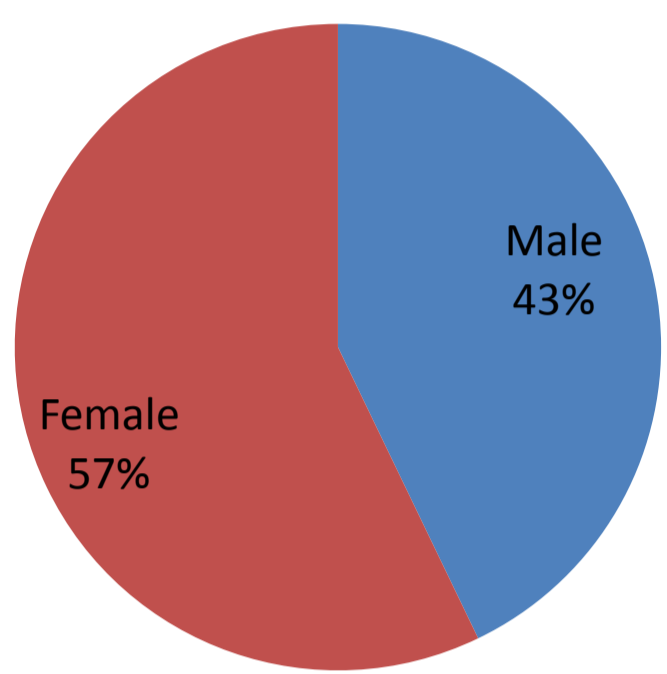
# Are changes in pain intensity associated with changes in pain acceptance and willingness?

## Background

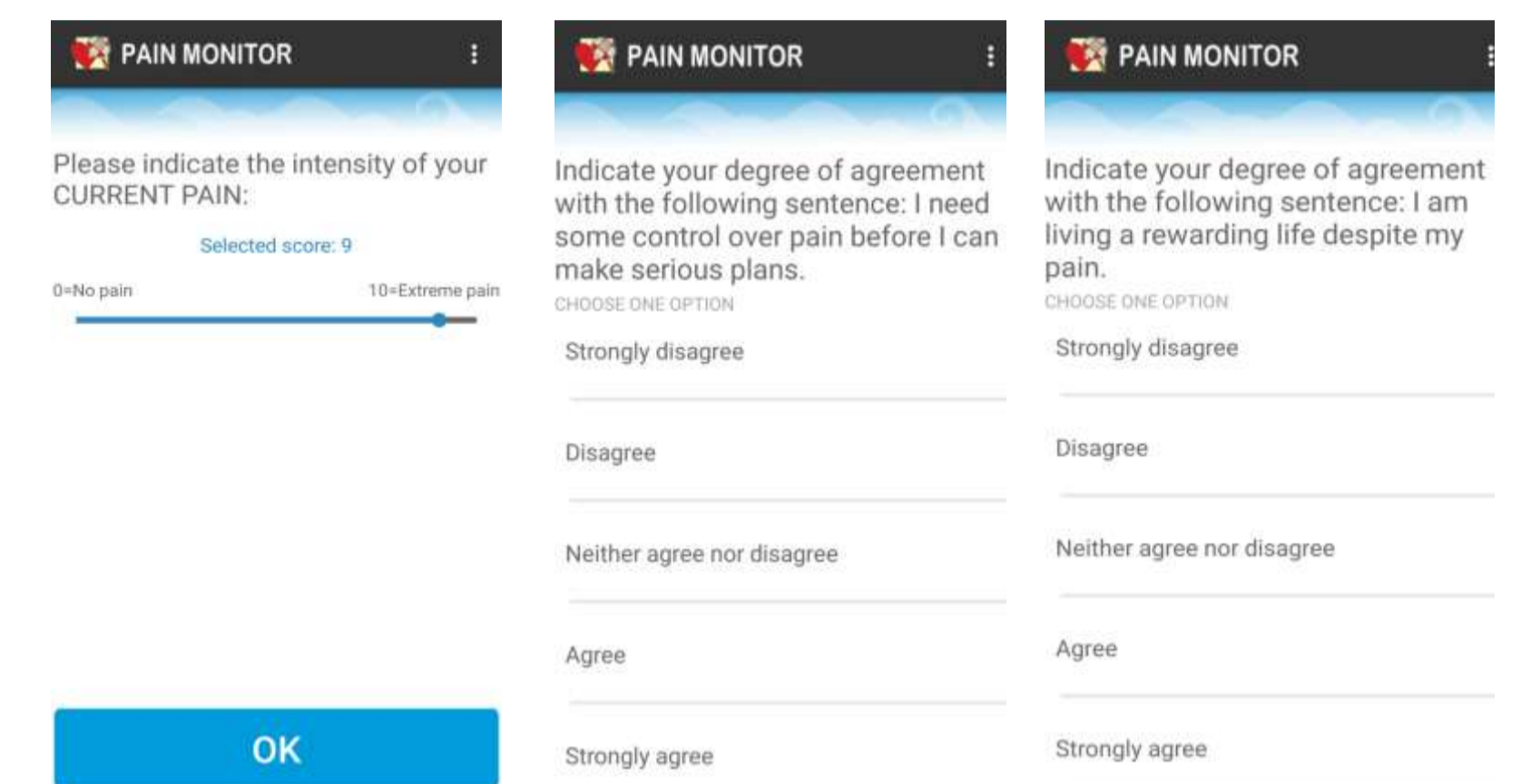
Pain acceptance and willingness are important predictors of physical functioning and psychological well-being in persons with chronic pain<sup>1,2</sup>. Pain acceptance and willingness are also associated with the intensity of pain ratings<sup>3</sup>. Does this mean that acceptance of pain and pain willingness depend on pain intensity and, hence, they are states that change as pain intensity decreases? Or, on the contrary, are they stable psychological constructs that remain unchanged even when pain is significantly reduced? The present study aimed at testing both hypotheses.

## Method and Sample

### Distribution of sex

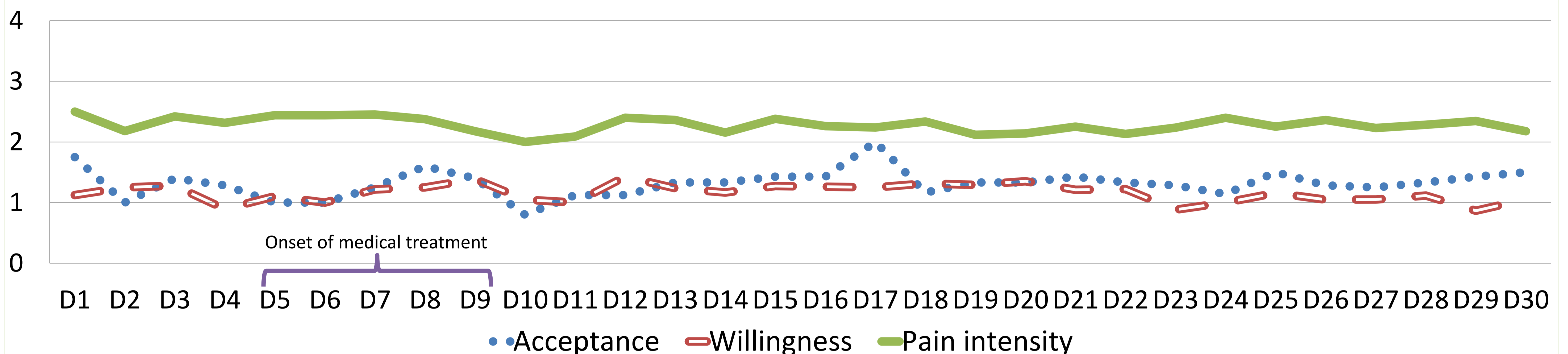


Thirty-four chronic pain patients provided daily reports of pain intensity, acceptance, and willingness during 30 days using the "Pain Monitor" app, developed by our team. We compared acceptance and willingness prior to medical treatment (days 1-5) and 3 weeks after (days 26-30) with a Wilcoxon test. We converted response scales to a 0-4 range to facilitate the interpretation of figures.

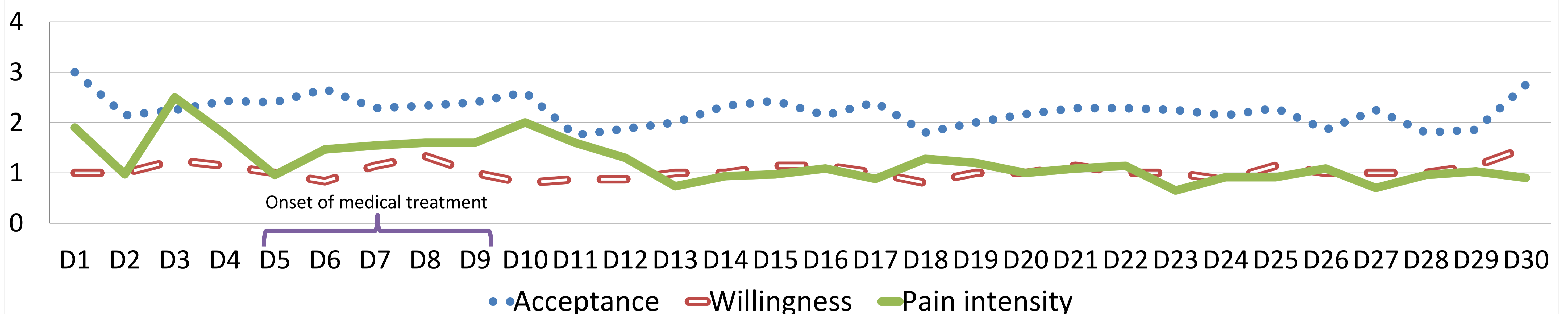


## Results

### Evolution of acceptance and willingness in patients with no pain intensity reduction



### Evolution of acceptance and willingness in patients with a clinically significant reduction in pain intensity



- Pain acceptance and willingness remained stable even when pain intensity decreased ( $Z_{acceptance} = -0.53, p = .599$ ;  $Z_{willingness} = -1.07, p = .258$ ).
- We found a non-significant trend for baseline acceptance to be higher in patients who responded to medical treatment ( $Z_{acceptance} = -1.70, p = .090$ ).

## Discussion

- Pain acceptance and willingness appear to be enduring psychological characteristics rather than pain-dependent states.
- Pain acceptance may act as a moderator of the effectiveness of medical interventions for pain.
- Treatment of chronic pain should include specific efforts to promote pain acceptance and willingness, as a reduction in pain intensity alone does not appear to enhance acceptance and willingness. Also, increased acceptance may help maximize the effects of medical treatment on pain intensity.

## References

- <sup>1</sup> McCracken, L. M., & Gutiérrez-Martínez, O. (2011). Processes of change in psychological flexibility in an interdisciplinary group-based treatment for chronic pain based on Acceptance and Commitment Therapy. *Behaviour Research and Therapy*, 49(4), 267–74.
- <sup>2</sup> Wicksell, R. K., Olsson, G. L., & Melin, L. (2009). The Chronic Pain Acceptance Questionnaire (CPAQ)-further validation including a confirmatory factor analysis and a comparison with the Tampa Scale of Kinesiophobia. *European Journal of Pain*, 13(7), 760–8.
- <sup>3</sup> Elander, J., Robinson, G., Mitchell, K., & Morris, J. (2009). An assessment of the relative influence of pain coping, negative thoughts about pain, and pain acceptance on health-related quality of life among people with hemophilia. *Pain*, 145(1–2), 169–75.