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Role of Pain Catastrophizing on Functional Outcomes, Pain and Quality of Life after Total Hip Arthroplasty

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Faculty Disclosure Information

- Nothing to disclose



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BACKGROUND

- 7 – 20% of Total Hip Arthroplasty (THA) patients are dissatisfied after surgery¹⁻⁴
- Despite well-functioning prostheses: low revision rate and good clinical outcomes⁵⁻⁷
- Prior literature shows: high dissatisfaction rate not due to features of prostheses or surgical techniques^{1,8}
- Prior literature shows: high dissatisfaction rate possibly attributable to pain catastrophizing (PC), yet lacking sufficient prospective evidence⁹⁻¹²

Aim: Assess the role of PC on the outcomes of THA in a prospective large cohort of patients with a minimum of 2-year follow-up

Hypothesis: Preoperative PC is associated with inferior preoperative and postoperative pain, subjective function and quality of life (QoL), and higher aseptic revision rates after THA



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METHODS



Single-center, prospective comparative cohort study, with a minimum follow-up of 2 years



531 patients, fulfilling inclusion criteria (table 1), of which 57 patients (11%) classified as PC (figure 1)

PC assessment: preoperatively, based on the Pain Catastrophizing Scale (PCS), with score ≥ 30 (scale 0 – 52) considered PC



Primary outcomes: subjective function, pain and QoL PROMs: HOOS-PS, OHS, NRS-pain, EQ-5D-5L, including MCID and PASS

Secondary outcomes: aseptic revision surgery and length of hospital stay

Follow-up: preoperatively and 3 months, 1 year and 2 years postoperatively



Statistical differences in primary and secondary outcomes between PC-patients and non-PC patients at all follow-up time points



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Figure 1. Flowchart of study population

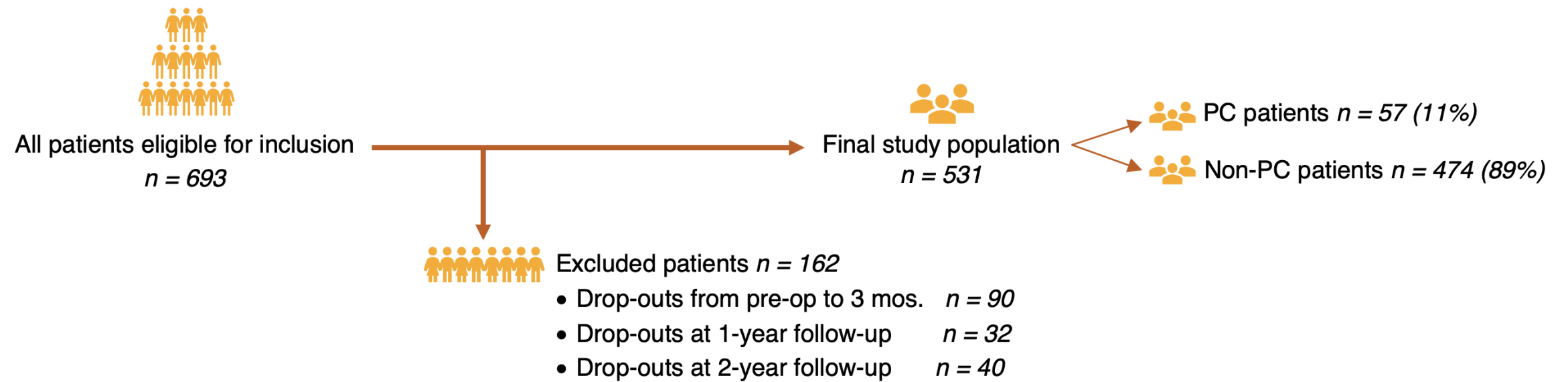


Table 1. Inclusion criteria for eligibility

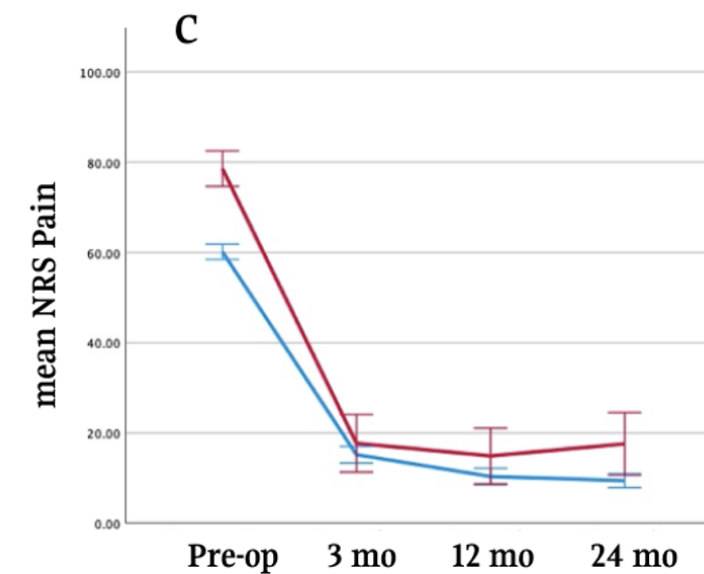
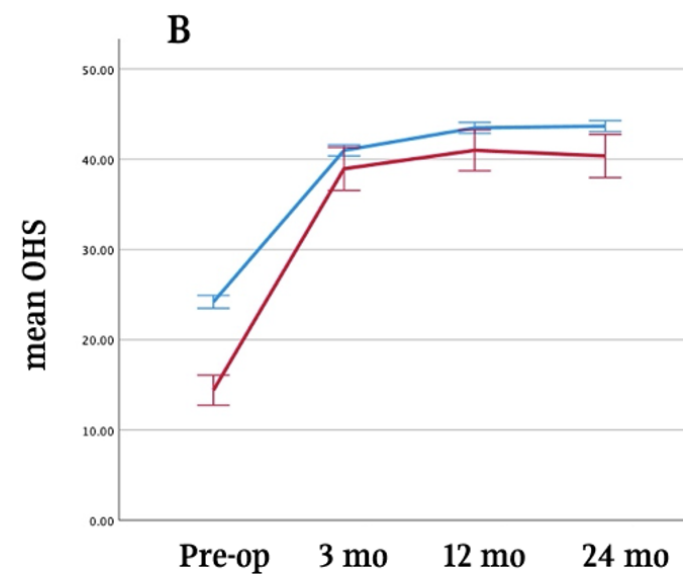
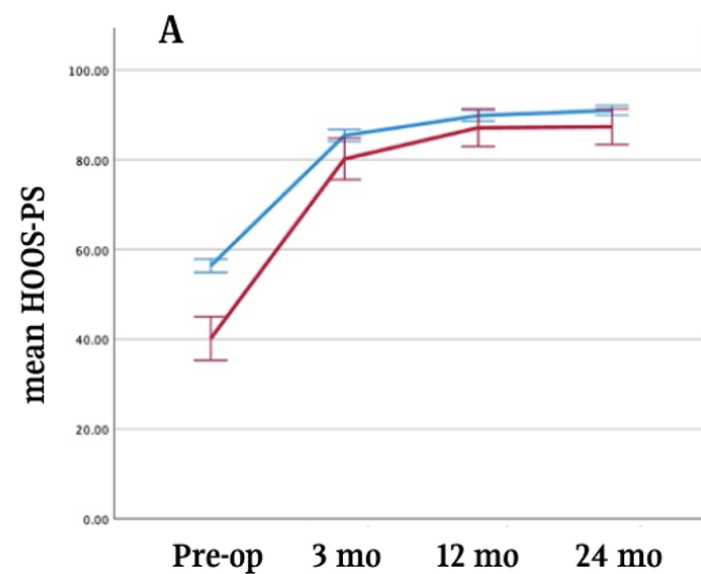
Primary unilateral THA for symptomatic end-stage osteoarthritis (KL 3-4)
Mastered the Dutch language
Completed all preoperative questionnaires
Provided informed consent to participate in the study

RESULTS

- PC-patients:
 - ↓ preoperative scores for all PROMs
 - ↓ OHS and EQ-5D, ↑ pain at 2-y follow-up
 - ↓ % reached the PASS for OHS and EQ-5D at 2-years
- But, PC-patients:
 - ↑ improvement in all PROMs
 - ↑ % reached MCID for HOOS-PS and EQ-5D at all time points
- PC-patients had longer hospital stay
- No difference in aseptic revisions were found



Figure 2. Mean and 95%- CI of the HOOS-PS (A), OHS (B), NRS Pain (C) for **PC-patients** and **non-PC-patients**



MCID sign Δ

✓ ✓ ✓

PASS sign Δ

✓ ✓ ✓



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CONCLUSION

- PC-patients had worse preoperative subjective function and more pain
- Although PC-patients showed more improvement than non-PC patients at all outcomes, less patients reached PASS for OHS and EQ-5D at 2-year follow-up
- Thus: preoperative PC-symptoms have a negative influence on THA outcomes and length of hospital stay



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