

The Role of Pain Cognitions in Healthcare Utilization in Patients Undergoing Surgery for Lumbar Radiculopathy: Design and Preliminary Baseline Results Of A Randomized Controlled Trial

Huysmans, Eva; Nijs, Jo; Goudman, Lisa; Coppieters, Iris; Ickmans, Kelly; Buyl, Ronald; Moens, Maarten; Putman, Koen

Publication date:
2018

[Link to publication](#)

Citation for published version (APA):

Huysmans, E., Nijs, J., Goudman, L., Coppieters, I., Ickmans, K., Buyl, R., ... Putman, K. (2018). *The Role of Pain Cognitions in Healthcare Utilization in Patients Undergoing Surgery for Lumbar Radiculopathy: Design and Preliminary Baseline Results Of A Randomized Controlled Trial*. Poster session presented at International Association for the Study of Pain: 17th World Congress on Pain, Boston, United States.

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

The Role Of Pain Cognitions In Healthcare Utilization In Patients Undergoing Surgery For Lumbar Radiculopathy

Design And Preliminary Baseline Results Of A Randomized Controlled Trial

RATIONALE

High socio-economic burden due to surgery for lumbar radiculopathy
 → Interventions targeting modifiable mediators can lead to appropriate levels of HCU
 Maladaptive pain cognitions are present in some presurgical patients with lumbar radiculopathy
 → Maladaptive pain cognitions are related to negative surgical outcome
 The link between pain cognitions and HCU has been suggested in several populations

Are **pain cognitions** mediators of **HCU** in patients undergoing surgery for lumbar radiculopathy?



1. Exploring associations between pain cognitions and HCU in patients undergoing surgery for lumbar radiculopathy
2. Investigating the treatment effects on pain cognitions and HCU
3. Examining causal interactions between pain cognitions and HCU

RCT DESIGN

1 tertiary care university-based hospital
 2 secondary care peripheral hospitals



Lumbar radiculopathy
 n = 120

Randomized

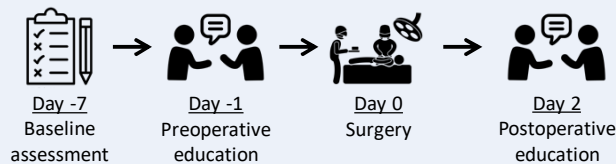
Perioperative Pain Neuroscience Education (PPNE)
 Perioperative back school (PBS)

- Neurophysiology of acute and chronic pain
 - Influence of cognitive and emotional factors on pain
 - Environmental effects on nerve sensitivity

= format
 ≠ content

- Anatomy and biomechanics of the spine
 - Ergonomic advice
 - Principles for reducing back load while maintaining an active life

TIMELINE



Postoperative follow-up assessments:

- 3 days
- 6 weeks
- 6 months
- 12 months
- 24 months

OUTCOME MEASURES

- HCU
 - Retrospective questionnaires
 - Diaries
 - Medical records
 - Pain cognitions
 - Tampa Scale for Kinesiophobia (TSK)
 - Pain Catastrophizing Scale (PCS)
 - Pain Vigilance and Awareness Questionnaire (PVAQ)

EXPLORATIVE ANALYSES ON BASELINE DATA (AIM 1)



Lumbar radiculopathy
 n = 100

BASELINE OUTCOME MEASURES

- Retrospective HCU questionnaire
 → HCU in the past 2 months
- Pain cognitions
 - TSK
 - PCS
 - PVAQ

STATISTICAL ANALYSES

- Associations between continuous variables: Spearman correlations
- Differences in HCU between patients with or without maladaptive pain cognitions: Mann-Whitney U tests
- Differences in pain cognition scores between patients with different patterns of HCU: Mann-Whitney U tests

PRELIMINARY RESULTS (AIM 1)

PRESENCE OF MALADAPTIVE PAIN COGNITIONS

	Mean ± SD	n% ≥ cut-off
TSK (.../68)	43 (± 6.1)	90% ≥ 37/68
PCS (.../52)	26 (± 10.4)	32% ≥ 30/52
PVAQ (.../80)	41 (± 12.0)	

CORRELATIONS (p<0.1)

- Weak positive correlations were found between:
- TSK & number of specialist visits
 - PCS & number of specialist visits
 - PCS & number of different types of pain medications used

MANN-WHITNEY U TESTS (p<0.1)

- PCS ≥ 30/52 → ↑ types of pain medications used
- Pain medication use → ↑ PCS Magnification subscale
 ↑ PVAQ Attention to pain subscale
- ↑↑ neurosurgeon visits → ↑ PCS
 ↑ PCS Rumination subscale
- Taking level 3 analgesics → ↑ PCS Rumination subscale

The remaining correlations and Mann-Whitney U tests were not significant