University of Huddersfield Repository

Kola, Susanna, Walsh, Jane C., Hughes, Brian M. and Howard, Siobhan

Attention focus, trait anxiety and pain perception in patients undergoing colposcopy

Original Citation


This version is available at http://eprints.hud.ac.uk/9740/

The University Repository is a digital collection of the research output of the University, available on Open Access. Copyright and Moral Rights for the items on this site are retained by the individual author and/or other copyright owners. Users may access full items free of charge; copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational or not-for-profit purposes without prior permission or charge, provided:

- The authors, title and full bibliographic details is credited in any copy;
- A hyperlink and/or URL is included for the original metadata page; and
- The content is not changed in any way.

For more information, including our policy and submission procedure, please contact the Repository Team at: E.mailbox@hud.ac.uk.

http://eprints.hud.ac.uk/
Attention focus, trait anxiety and pain perception in patients undergoing colposcopy

Susanna Kola, Jane C. Walsh, Brian M. Hughes & Siobhán Howard

31st Annual STAR Conference
August 2010
Introduction

• Invasive medical procedures are considered very stressful and anxiety evoking by patients.

• Anxiety in turn affects acute pain, e.g., heightened anxiety reduces pain threshold/tolerance, increases pain intensity.

• Attention is also linked to pain perception
  – Distraction
  – Sensory focusing
Introduction

- Focus of attention a mediational role in the perception of pain - can lead to increased or decreased pain reports

- **Distraction**
  - Reduced pain perception (e.g., Devine & Spanos, 1990)
  - Increased pain tolerance (e.g. Piira et al., 2005; James & Hardardottir, 2002)

- **Sensory Focus**
  - Reduced pain perception (e.g., Ahles et al., 1983)
  - Increased pain tolerance (e.g., Keogh & Herdenfeldt, 2002)
Introduction

- Effects of anxiety due to underlying anxious trait?
  - Failure of previous studies to account for anxious disposition

- Expectations of pain correlated with pain experience
  - Particularly important in medical situations?
Methodology

• Aim: Evaluating two attention-based interventions, while assessing the effect of trait anxiety and pain expectancy on outcomes (self-reported pain, anxiety, and affect)
  – Colposcopy: diagnostic procedure aimed at detecting pre-cancerous cervical lesions

• 123 patients underwent procedure in one of 3 conditions:
  – Active distraction: engaged in cognitive task on laptop
  – Sensory Focus: focus on sensations in non-emotional way
  – Undirected control: standard care
Results

• Pain expectancy was significantly related to experienced pain intensity, sensory pain, affective pain, and peak pain
  – greater expectations of pain prior to colposcopy resulted in greater self-reported pain

• Trait anxiety was not significantly related to any of the pain measures, except the McGill Pain Questionnaire item ‘miscellaneous pain’
  – Higher trait anxiety was associated with greater miscellaneous pain
Results

- Elevated pre-colposcopy state anxiety and negative affect was associated with over-prediction of pain intensity.
- Under-prediction of pain intensity was associated with greater post-colposcopy state anxiety.
- However, if control for experienced pain intensity, this association is no longer significant.
  - Thus, heightened state anxiety following colposcopy not due to under-prediction of pain, but rather experienced pain.
Discussion

- No observed differences in self-reported pain perception between the three groups, while controlling for pain expectancy and trait anxiety
  - Active distraction and sensory focus patients reported similar pain ratings to women in the control condition
- Pain expectancy found to be associated with experienced pain
  - Pain expectancy should thus be considered in future studies
- Trait anxiety did not have an effect on pain perception
Conclusion

• Interventions aimed at producing accurate pain expectations may lead to reductions in pain

• Trait anxiety does not appear to directly influence pain perception, but indirectly through elevations in state anxiety and negative affect
  – Anxious state thus a better predictor for identifying colposcopy patients at risk for experiencing pain during the examination
Thank you!

Susanna Kola is now at the Department of Behavioural and Social Sciences at the University of Huddersfield

For further information email s.kola@hud.ac.uk