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# **The effect of experienced pain on intra- and post-operative adjustment in women undergoing a diagnostic medical procedure**

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# Pain

- An unpleasant sensory or emotional experience, associated with actual or potential tissue damage or described in terms of such damage (IASP, 1979)
- Is often feared and experienced by surgical patients (e.g., Sjöling et al., 2003)

# Cervical Screening and Colposcopy

- Large percentage of women report fear and anxiety following abnormal smear results
- Many women also report anticipatory anxiety prior to colposcopy
- Heightened anxiety can lower pain threshold and lead to pain and discomfort



# Study to Reduce Anxiety During Colposcopy

- Interested in reducing the impact of the colposcopy procedure itself
- 164 first-time patients assigned to one of four conditions
  - Relaxation
  - Distraction
  - Sensory Focus
  - Control
- Outcomes: physiological measures, observation of distress, anxiety, mood, pain

# Results – Intraoperational adjustment

- Observation of distress  $F(2, 152) = 5.59, p = .005$ 
  - Low pain have less distress-behaviours than high pain
- Also main effect for attention  $F(3, 152) = 3.13, p = .028$ 
  - Relaxation less distress-behaviour than Control

# Intra-operative adjustment

**Table 1.** Summary of one-way ANOVA of physiological measures during colposcopy (N = 164)

Source	d.f.	SBP F	DBP F	HR F
Attention <sup>a</sup>	3, 151	2.14	<1	1.31
Level of Pain <sup>b</sup>	2, 151	3.31*	<1	3.50*
Attention x Level of Pain	6, 151	<1	1.18	<1

<sup>a</sup> Attention – relaxation (RELAX), cognitive distraction (DISTR), sensory focus (FOCUS) and control (CTRL)

<sup>b</sup> Level of pain – Low Pain, Medium Pain, and High Pain

\*p<.05, \*\*p<.01, \*\*\*<.001



# Post-colposcopy adjustment

**Table 2.** Summary of one-way ANOVA of anxiety and mood measures following colposcopy (N = 164)

Source	d.f.	State Anxiety F	PA F	NA F
Attention <sup>a</sup>	3, 152	<1	<1	<1
Level of Pain <sup>b</sup>	2, 152	5.78**	9.827***	2.01
Attention x Level of Pain	6, 152	<1	<1	1.35

<sup>a</sup> Attention – relaxation (RELAX), cognitive distraction (DISTR), sensory focus (FOCUS) and control (CTRL)

<sup>b</sup> Level of pain – Low Pain, Medium Pain, and High Pain

\*p<.05, \*\*p<.01, \*\*\*<.001



# Discussion

- Those that report the highest amount of pain are observed during the procedure to engage in more distress-related behaviours, including verbalisations, body movements, moaning and groaning and also have higher physiological reactions
- Following the procedure they report higher state anxiety and lower positive affect

## Discussion

- The distraction intervention failed to affect self-report measures, although differences in distress-related behaviour were observed
- Pain experienced during colposcopy was found to impact negatively on adjustment both during the colposcopy and in the postoperative period