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Reducing anxiety in colposcopy patients: The effect of matching level of information and preferred coping style

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Cervical Cancer

• Globally, it is the 4th most common cause of cancer mortality in women
  – 233 000 women in the world die from the disease each year (Parkin, Bray, & Devesa, 2001).

• Cervical cancer is largely preventable
  – Countries with screening programmes have documented declining incidence and mortality rates of cervical cancer (Levi et al., 2000).
Patient experiences of cervical cancer screening

- Abnormal smear tests and colposcopy associated with anxiety, psychosexual distress and fear of cancer (e.g., Bekkers et al., 2002; Kola & Walsh, *in press*; Walsh et al., 2004).

- Anxiety may influence adherence rates
  - Non-adherence between 10 – 40 % (e.g., Khanna & Phillips, 2001).
Previous efforts to reduce anxiety in women undergoing colposcopy

• **Information-based interventions**
  – Reduced anxiety (e.g., Marteau et al., 1996; Wilkinson et al., 1990)
  – Increased knowledge only (e.g., Somerset et al., 1998; Tomaino-Brunner et al., 1998)

• **Pre-colposcopy counseling**
  – Increased knowledge only (e.g., Byrom et al., 2002; Chan et al., 2004; Richardson et al., 1996)

• **Intra-procedural interventions**
  – Video colposcopy (Rickert et al., 1994; Walsh et al., 2004)
  – Music distraction (Chan et al., 2004; Danhauer et al., 2007)
Coping style

- Mixed results from previous studies due to uncontrolled patient preferences for information or distraction?
- Individuals differ in how they cognitively deal with stressful medical situations
  - Monitoring coping style characterized by information-seeking and scanning for threat cues (e.g., Miller, 1987).
- Better adjustment when amount of information received is consistent with preferred coping style (e.g., Ludwick-Rosenthal & Neufeld, 1993; Morgan et al., 1998).
Present study: Methods

- N = 155 first-time colposcopy patients (M age = 30.2, SD = 8.66), 84 low monitors and 71 high monitors
- Women randomly assigned to one of four conditions:
  - Low-information (audiovisual or active distraction)
  - High-information (video colposcopy)
  - Control (standard care)
- Dependent measures: state anxiety and affect, observational measures of distress, and physiological indices of stress and arousal (SBP, DBP and HR)
SBP Main Effect for Time

\[ F(2, 294) = 11.80, \ p < .001 \]
Monitoring status $\times$ Condition $\times$ Time
$F(6, 294) = 4.01, p = .001$
DBP Main Effect for Time

\[ F(2, 294) = 3.14, \ p = .045 \]
DBP Monitoring status × Condition

\[ F(3, 147) = 2.91, p = .037 \]
HR Main Effect for Time

$F(2, 294) = 8.32, p < .001$
Observation of distress main effect for condition
\[ F(3, 147) = 2.76, p = .044 \]
Self-report Measures

- **State anxiety** main effect for time, $F(1, 147) = 106.59$, $p < .001$
  - Lower following colposcopy ($M = 34.67$, $SD = 10.46$) than pre-colposcopy ($M = 45.17$, $SD = 12.17$)
- **Negative affect** main effect for time $F(1, 147) = 73.43$, $p < .001$
  - Lower following colposcopy ($M = 13.75$, $SD = 4.67$) than pre-colposcopy ($M = 18.04$, $SD = 6.11$)
- **Positive affect** all main and interaction effects ns
Discussion

• High monitoring patients demonstrated reduced psychophysiological arousal when undergoing colposcopy in the audiovisual distraction and video colposcopy conditions, relative to high monitors in the control condition
  – Video colposcopy high-information that is linked with increased adjustment for high monitors (e.g., Miller & Mangan, 1983)
  – Audiovisual distraction possibly inhibited scanning for threatening information
• Low monitors did not show any significant differences in distress or adjustment depending on amount of information provided
  – Low monitors may be better able to utilise a variety of coping strategies
• Anxiety and negative affect associated with colposcopy significantly reduced following the examination
• Audiovisual distraction, relative to standard care, resulted in fewer signs of distress during colposcopy
Conclusion

• High monitors benefit from either detailed information or a relaxation intervention when undergoing colposcopy

• Low monitors may display greater coping flexibility
  – Matching coping style and amount of information may not be as important for patients with a low monitoring coping style