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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).



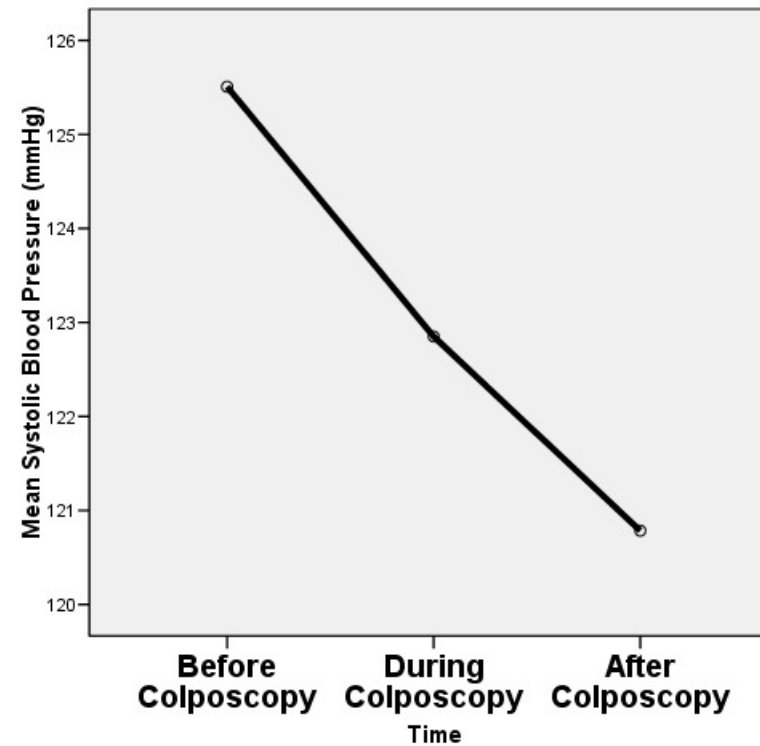
Present study: Methods

- 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)



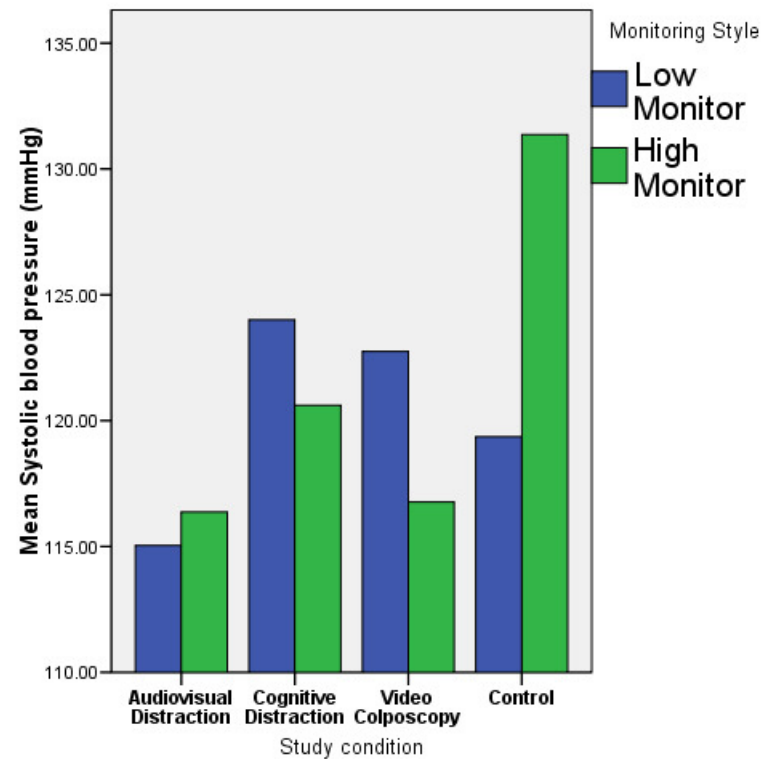
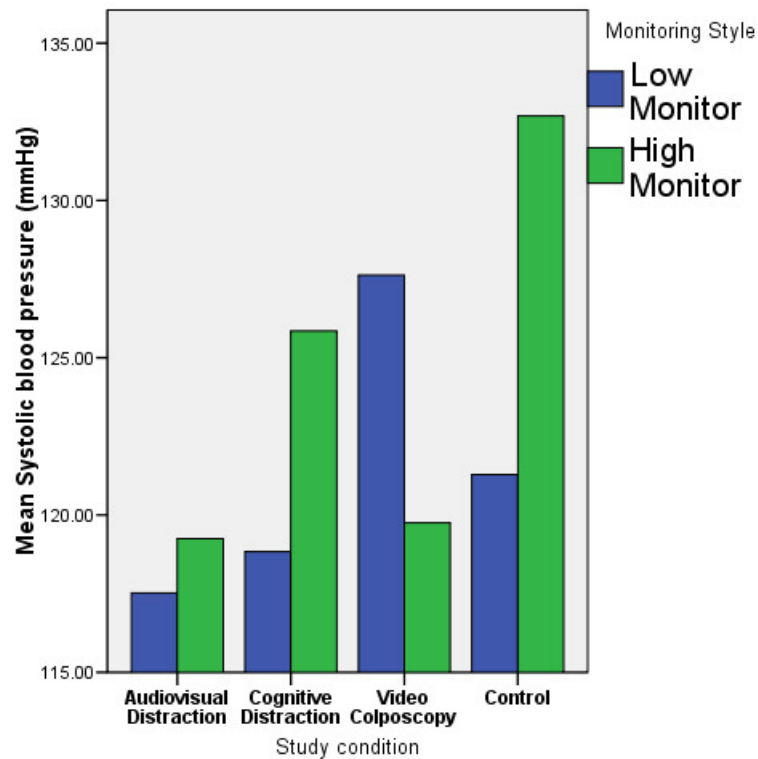
SBP Main Effect for Time

$$F(2, 294) = 11.80, p < .001$$

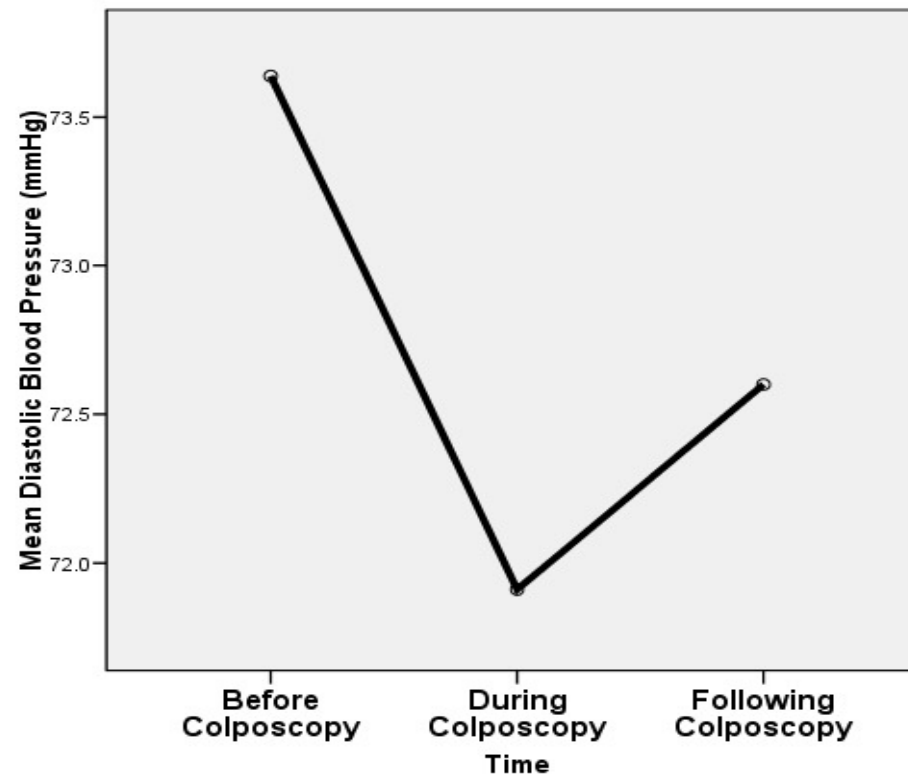


Monitoring status × Condition × Time

$F(6, 294) = 4.01, p = .001$

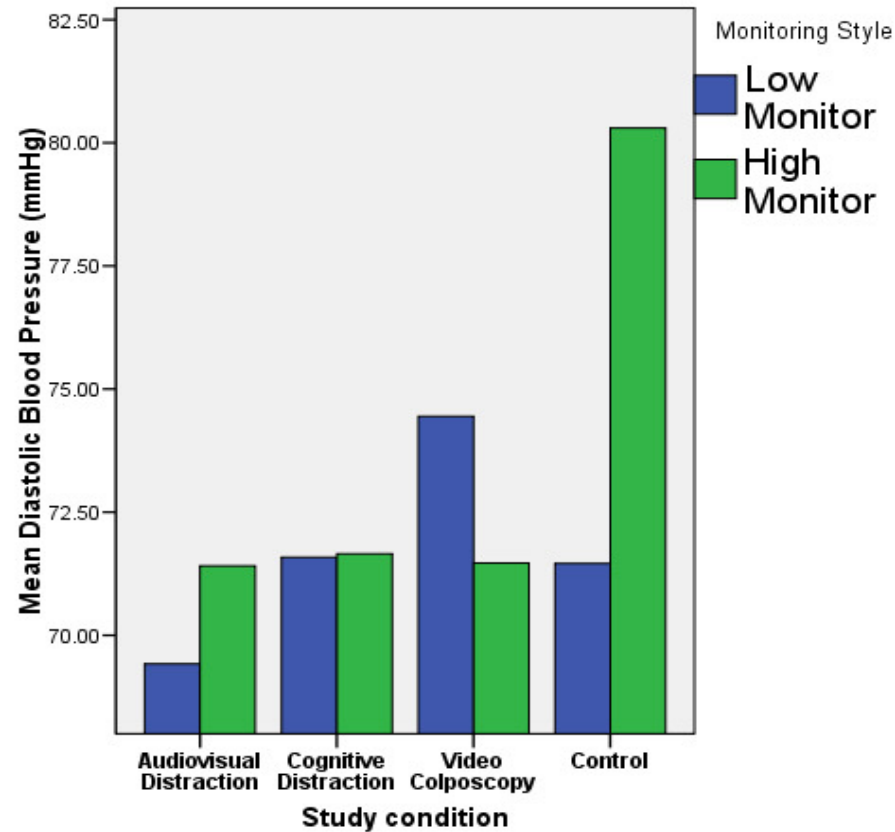


DBP Main Effect for Time
 $F(2, 294) = 3.14, p = .045$

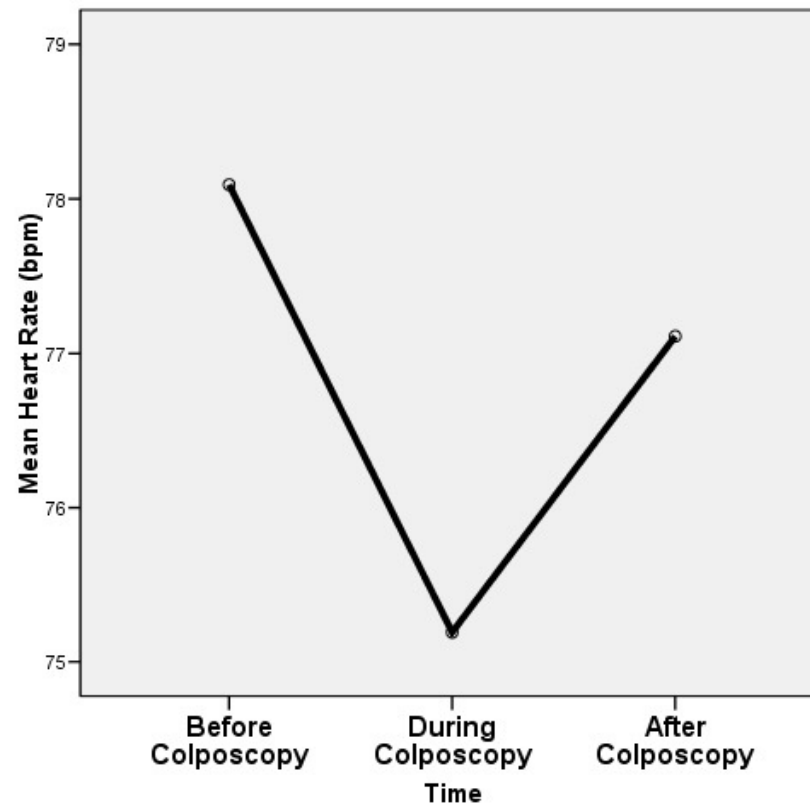


DBP Monitoring status × Condition

$$F(3, 147) = 2.91, p = .037$$

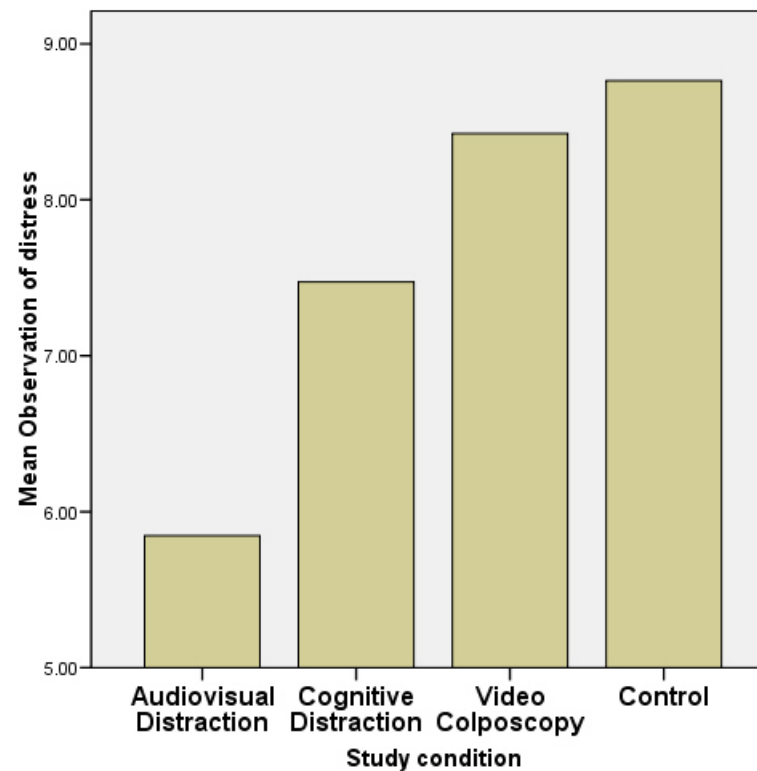


HR Main Effect for Time
 $F(2, 294) = 8.32, p < .001$



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



Discussion

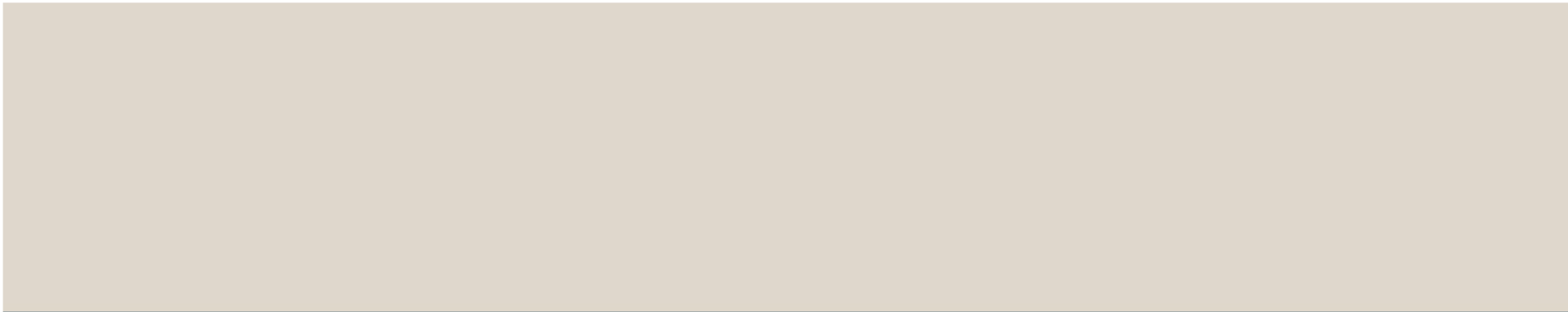
- Low monitors did not show any significant differences in distress or adjustment depending on amount of information provided
 - Low monitors may be better able to utilise a variety of coping strategies
- Anxiety and negative affect associated with colposcopy significantly reduced following the examination
- Audiovisual distraction, relative to standard care, resulted in fewer signs of distress during colposcopy



Conclusion

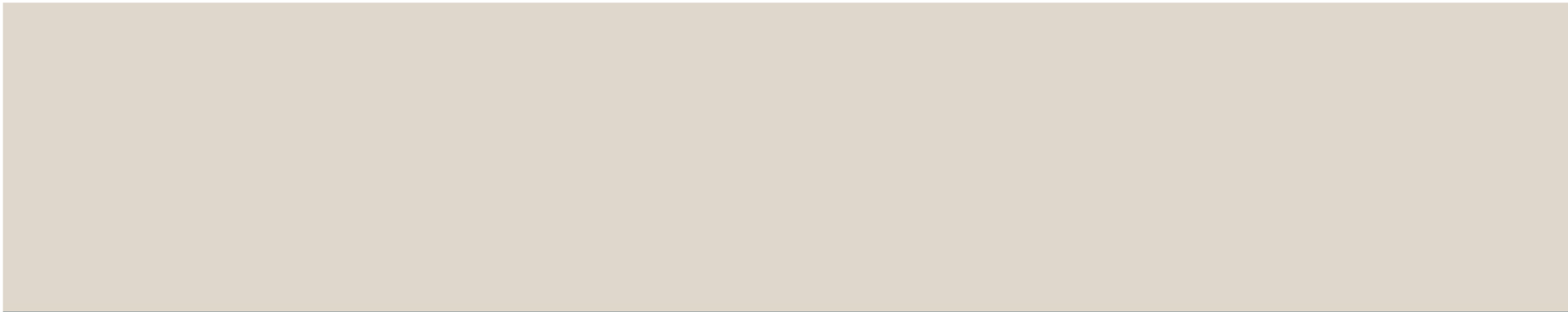
- High monitors benefit from either detailed information or a relaxation intervention when undergoing colposcopy
- Low monitors may display greater coping flexibility
 - Matching coping style and amount of information may not be as important for patients with a low monitoring coping style





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