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# Women's psychological reactions to colposcopy

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# Patient Experiences of Screening

- Abnormal test results may lead to high levels of anxiety and psychosexual distress and fear of cancer
- Anxiety may influence adherence rates
  - Nonadherence between 10-40% (e.g., Khanna & Phillips, 2001)
- Colposcopy also associated with high levels of anxiety (e.g., Bekkers et al., 2002; Walsh et al., 2004)



# Methods

- 200 women (age 20-60) previous colposcopy in previous 12-month period
  - Postal questionnaire, with cover letter and stamped addressed envelope (SAE)
  - Reminder questionnaire plus SAE sent after 2 weeks
- Questionnaire assessed colposcopy-related anxiety, distress, pain; satisfaction with information, desire for information.
  - Also assessed helpfulness of suggested interventions for use during colposcopy



# Results

- 197 women available for assessment
  - 151 questionnaires returned
  - Response rate 77%
- Demographics:
  - Mean age of respondents: 33.30 (SD = 6.89)
  - 49% married/living as married, 44% single
  - 68% Third level education, 23% Second level education
  - 49% no children, 45% between 1-3 children



# Reactions To Colposcopy

- 57% of sample reported moderate anxiety
- 28% reported extreme anxiety
- Reported concerns included
  - Colposcopy outcome (70%)
  - Fear of cancer (65%)
  - The cause of the abnormal smear test (50%)
  - Colposcopy painful (40%)
  - Colposcopy procedure itself (33%)



# Patient Concerns

- Significantly greater anxiety in women who reported
  - fear of cancer
  - concern about the colposcopy procedure
  - concern about embarrassment
  - concern about fertility

Compared to women not reporting these concerns



# Experience of Colposcopy

- Pain
  - 30% did not find it painful, 42% found it somewhat painful, and 28% found it very painful
- Discomfort
  - 52% reported great discomfort, 34% moderate discomfort, 14% reported no discomfort
- Unpleasantness
  - 43% found it very unpleasant, 36% found it moderately unpleasant, 21% did not find it unpleasant
- Embarrassment
  - 38% found it very embarrassing, 32% found it somewhat embarrassing, and 30% did not find it embarrassing





# Colposcopy Anxiety

- Anxious patients reported
    - Higher levels of pain
    - Greater discomfort
    - Greater unpleasantness
    - Higher levels of embarrassment
- Than non-anxious patients during colposcopy



# Predictors of Colposcopy-related Anxiety

- **Single marital status** - Women who are single report greater pre-colposcopy state anxiety and greater negative mood than married women
- **Parity** - Women with children report greater pre-colposcopy state anxiety
- **Trait Anxiety** - Women high in trait anxiety report greater pre-colposcopy state anxiety and negative mood
- **Expectations of pain and discomfort** also lead to elevations in state anxiety and negative mood prior to colposcopy



# Experience of Treatment (46% of overall sample)

- Pain
  - 49% found it very painful, 34% found it somewhat painful, 17% found it not painful
- Discomfort
  - 62% reported high discomfort, 27% reported moderate discomfort, 11% reported no discomfort
- Unpleasantness
  - 58% found it very unpleasant, 30% found it somewhat unpleasant, 12% did not find it unpleasant
- Embarrassment
  - 34% very embarrassing, 37% somewhat, 29% not embarrassing



# Satisfaction with Information

- 128 (85%) reported receiving the pre-colposcopy information leaflet
- 63% reported finding it very helpful, 35% found it moderately helpful
- 75% reported being very satisfied with information received on the clinic day, 23% moderately satisfied, and 2% not very satisfied



# Helpfulness of Suggested Interventions

- Patients rated on a 7-point scale how helpful they considered each of the following to be:
  - Watching a DVD, listening to music, distraction, watching the colposcopy screen, more information, nurse reassurance
- Nurse reassurance highest rated, followed by more information, distraction, watching colposcopy screen, listening to music, watching a DVD



# Discussion

- In general, women have low levels of knowledge about cervical screening
  - 65% of women thought they had cancer on receipt of abnormal smear result
  - 78% of women believe the purpose of smear test is to detect existing cancer (Walsh, 2006)
  - Consistent with results from other studies (e.g., Hellsten et al., 2007; Jones et al., 1996; Juraskova et al., 2007)



# Discussion

- It is clear from this study that patients experience high levels of colposcopy-related anxiety and worry
- In addition, certain fears are associated with greater levels of anxiety, i.e., fear of cancer, concern about the colposcopy procedure itself, embarrassment, and effect on fertility



# Discussion

- This is one of few studies to examine levels of pain and discomfort in colposcopy patients
- Pain subjective: 30% reported no pain, 28% reported high levels of pain. In addition, 52% reported high levels of discomfort
- These results indicate that women find the colposcopy examination distressing, and levels of pain and discomfort are higher than previously reported (Bennetts et al., 1995; Chan et al., 2003)





# Implications and Suggestions

- The psychological consequences of attending for colposcopy may be greater than previously thought
- Currently no agreement among researchers regarding the most suitable type of intervention to reduce anxiety in this patient group (see Galaal et al., 2007)



# 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).



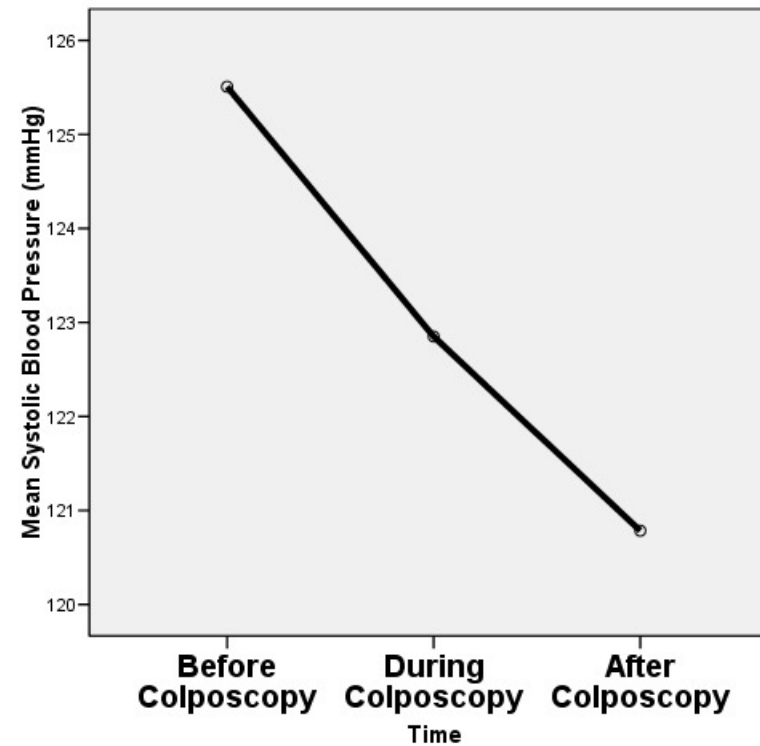
# Present study: Methods

- 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)



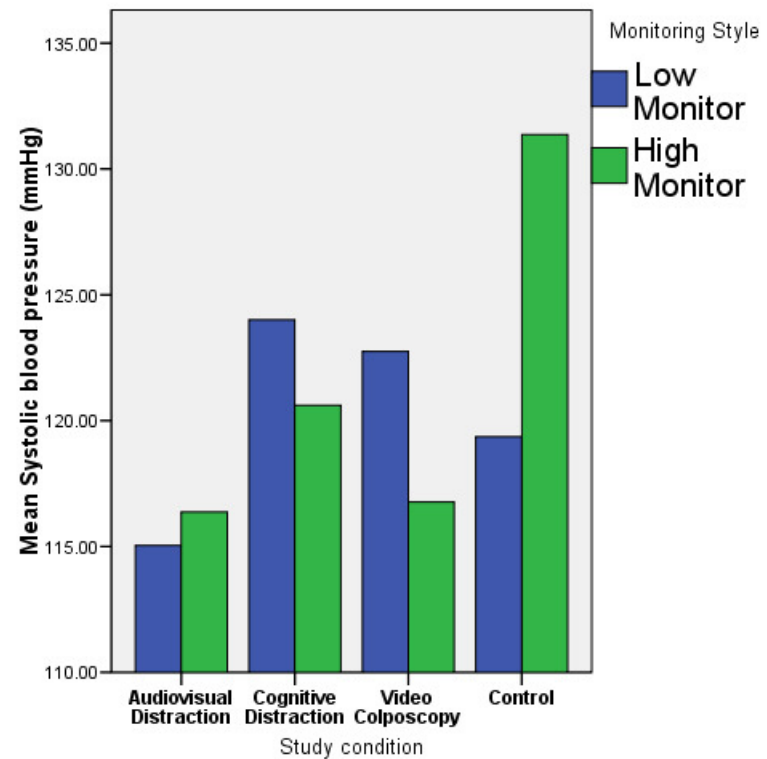
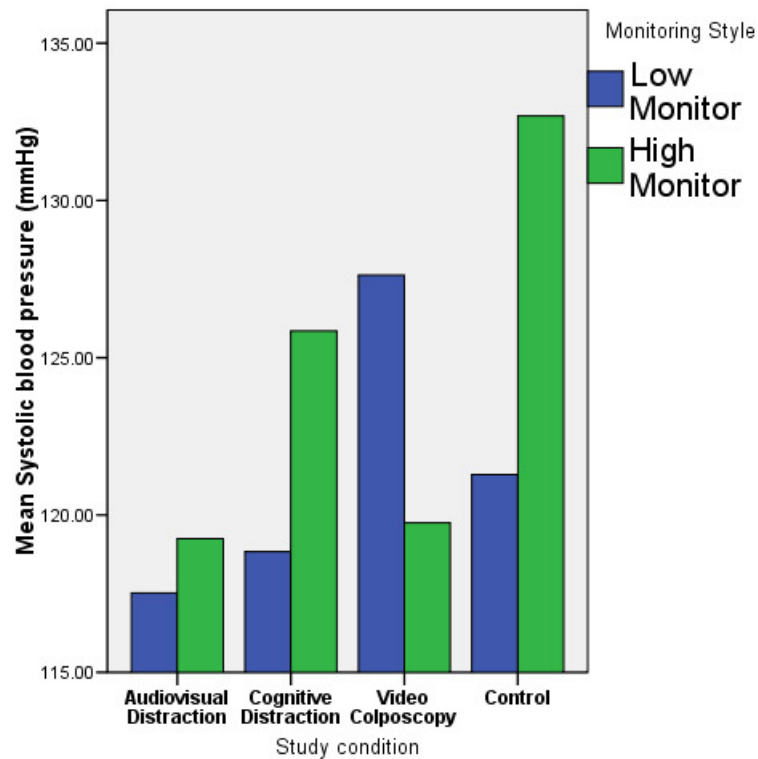
# SBP Main Effect for Time

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

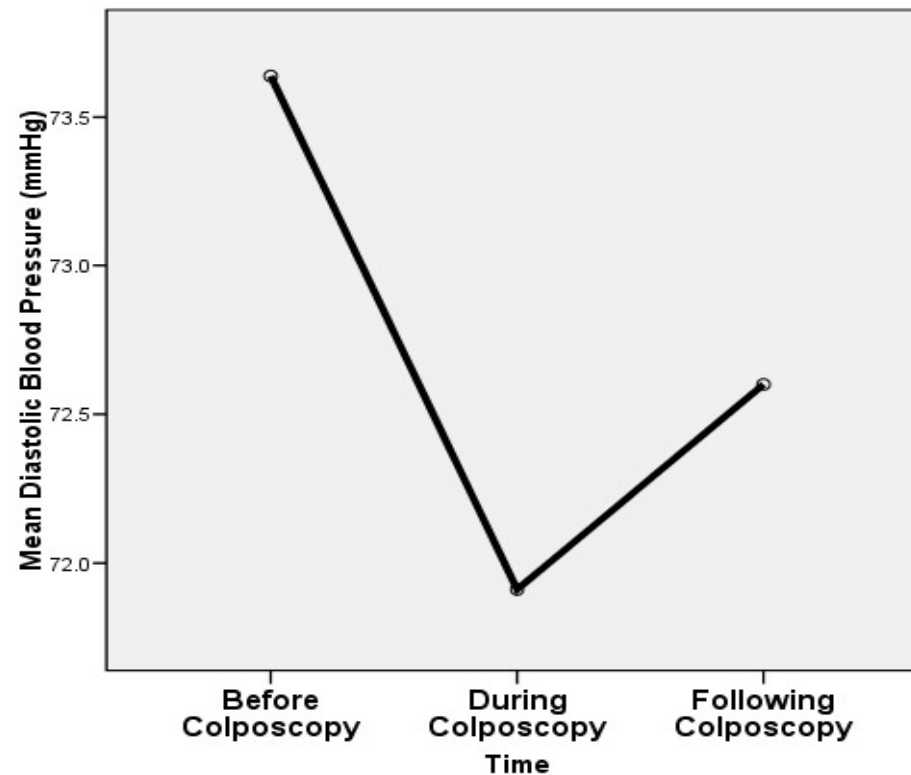


# Monitoring status × Condition × Time

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

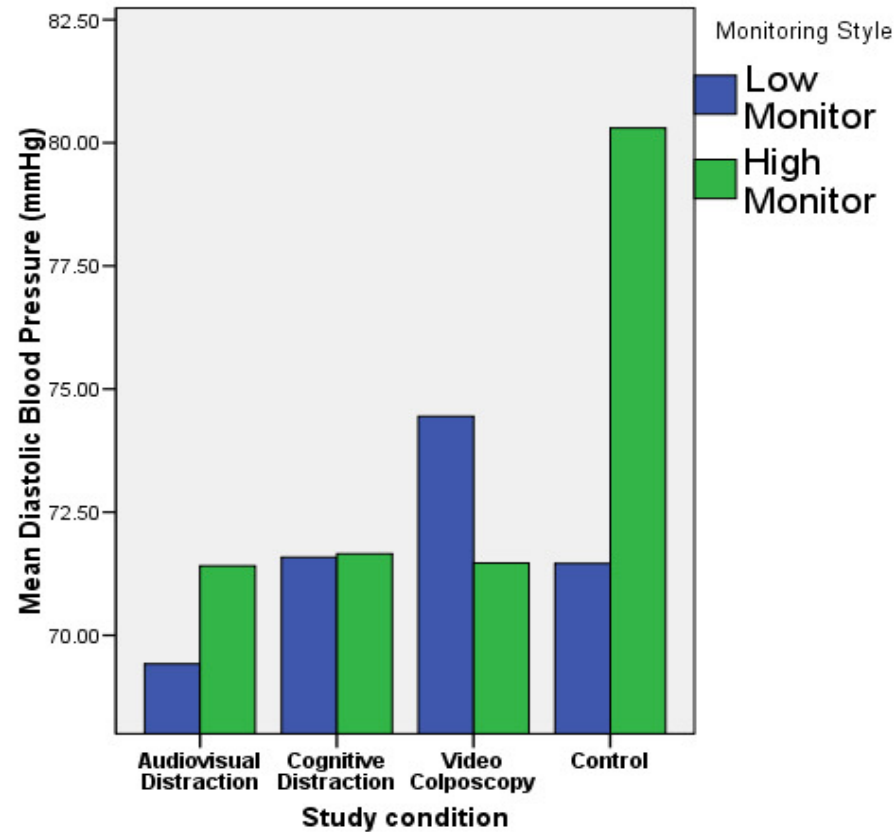


DBP Main Effect for Time  
 $F(2, 294) = 3.14, p = .045$



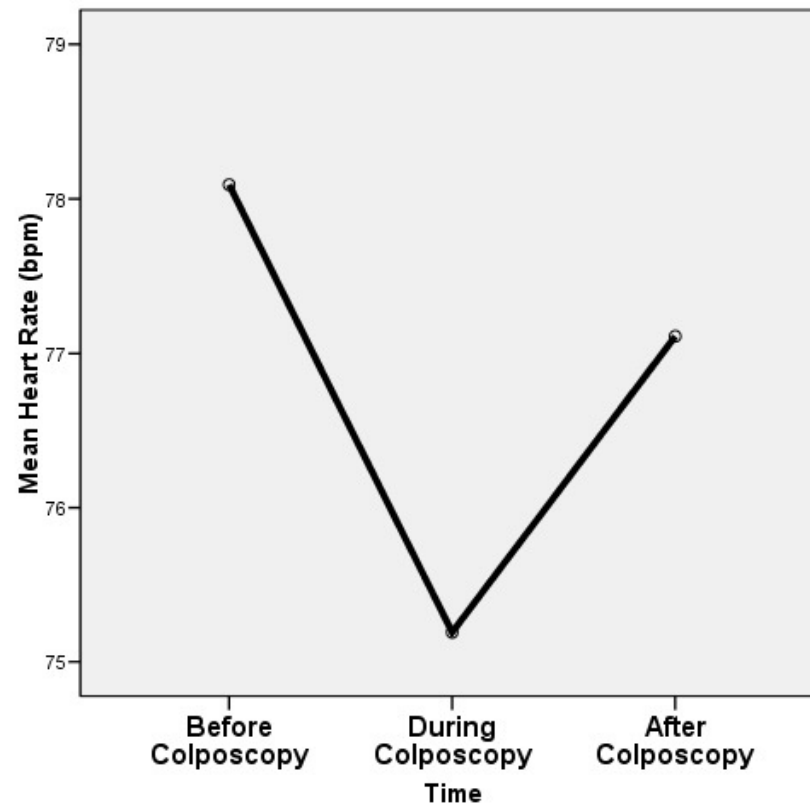
# DBP Monitoring status × Condition

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



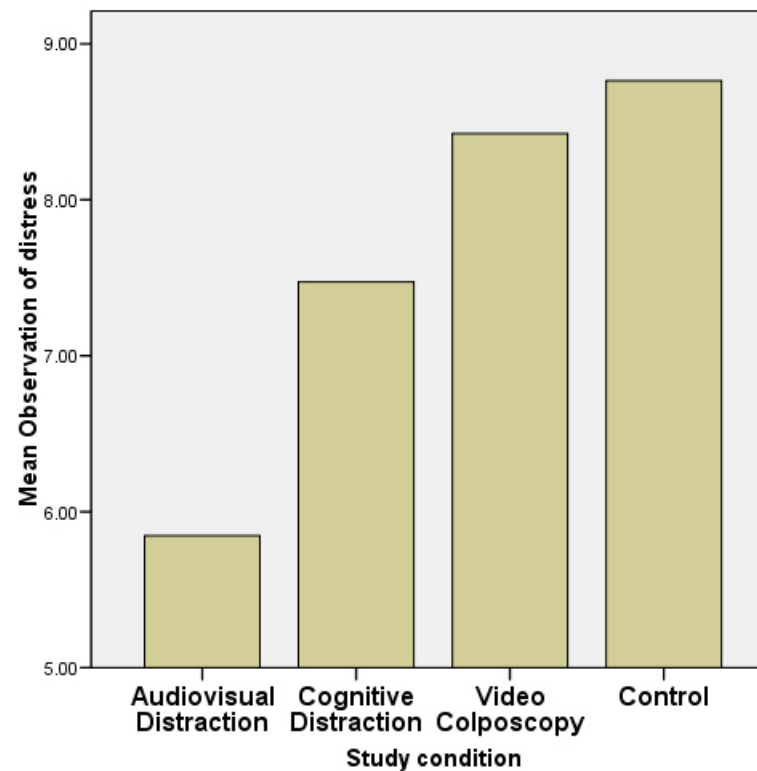


HR Main Effect for Time  
 $F(2, 294) = 8.32, p < .001$



# Observation of distress main effect for condition

$F(3, 147) = 2.76, p = .044$



# Self-report Measures

- **State anxiety** main effect for time,
  - Lower following colposcopy ( $M = 34.67$ ,  $SD = 10.46$ ) than pre-colposcopy ( $M = 45.17$ ,  $SD = 12.17$ )
- **Negative affect** main effect for time
  - 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



# Any Questions or Comments?

- Postal questionnaire data published in European Journal of Obstetrics & Gynaecology and Reproductive Biology, 2009, 146, 96-99.
- For further details email [s.kola1@nuigalway.ie](mailto:s.kola1@nuigalway.ie)

Thank you!

