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Kola, Susanna

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Women's psychological reactions to colposcopy

Susanna Kola



NUI Galway
OÉ Gaillimh

School of Psychology

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).



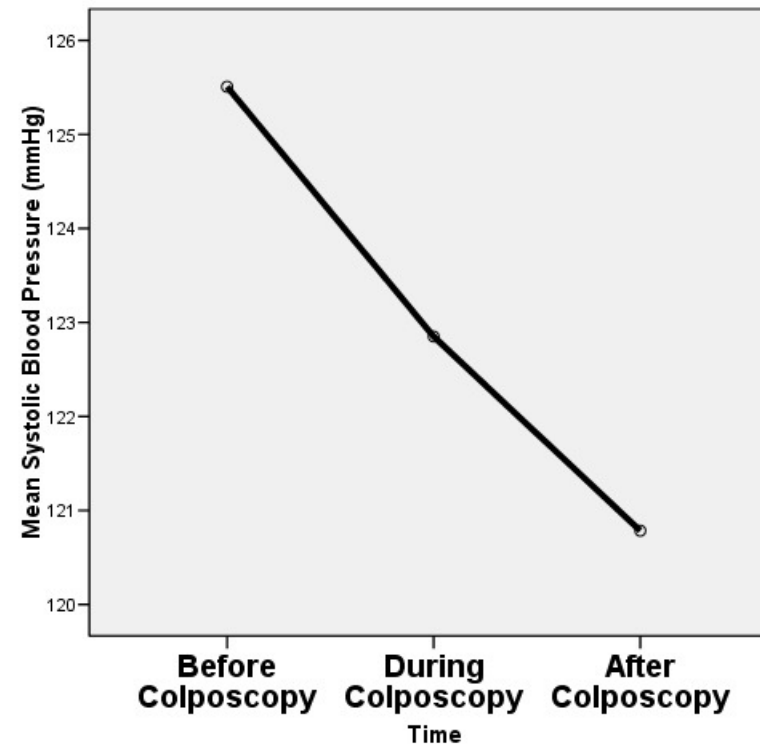
Present study: Methods

- 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)



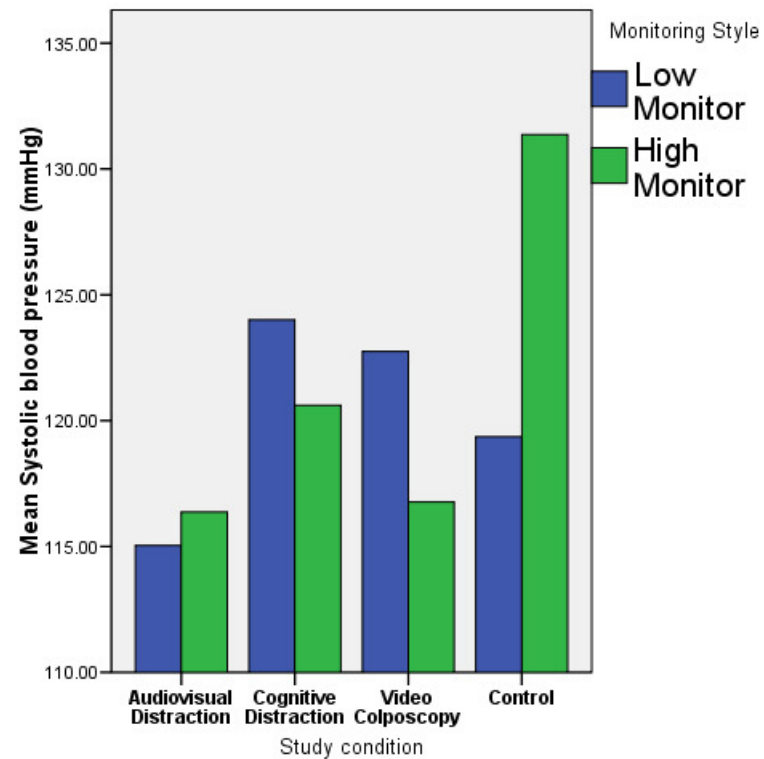
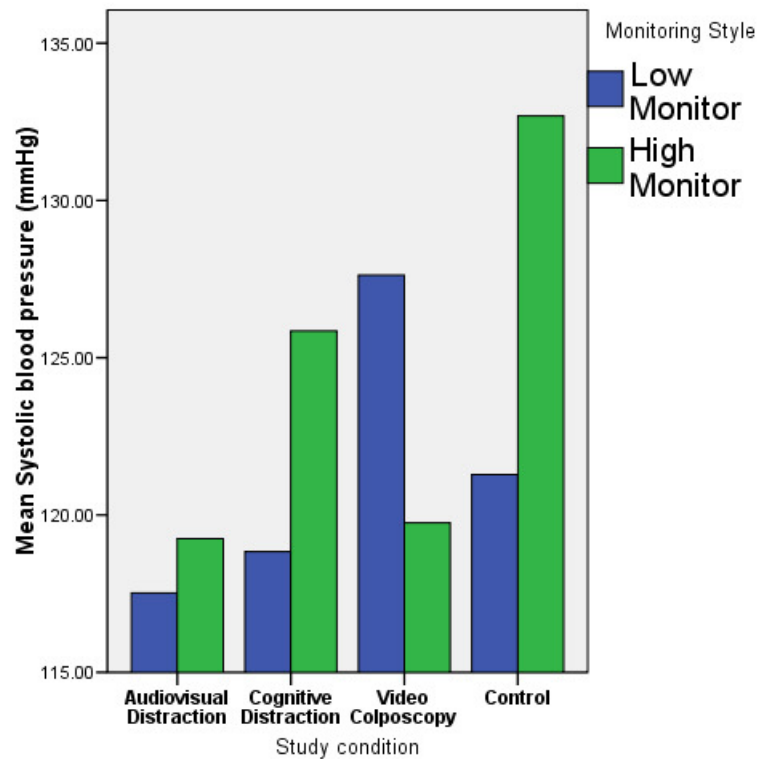
SBP Main Effect for Time

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

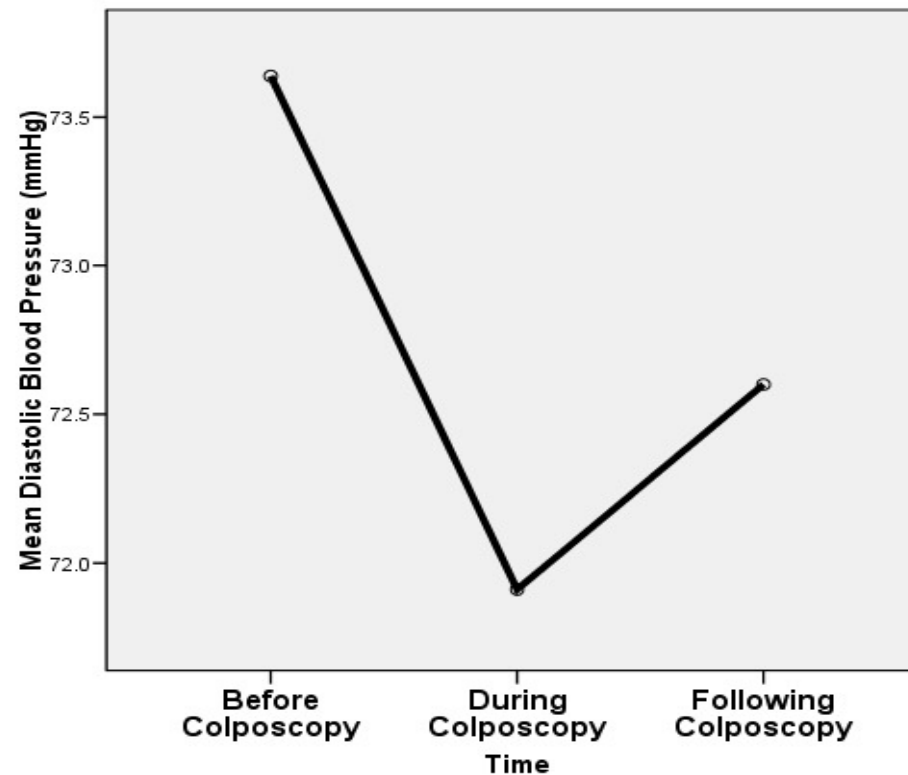


Monitoring status × Condition × Time

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

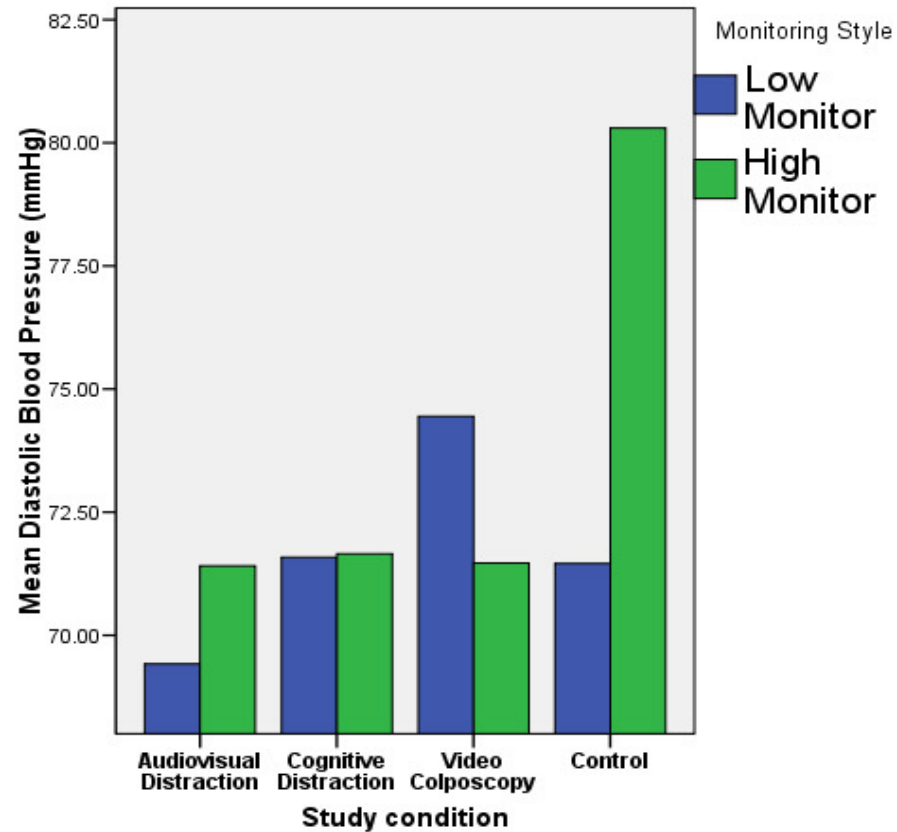


DBP Main Effect for Time
 $F(2, 294) = 3.14, p = .045$

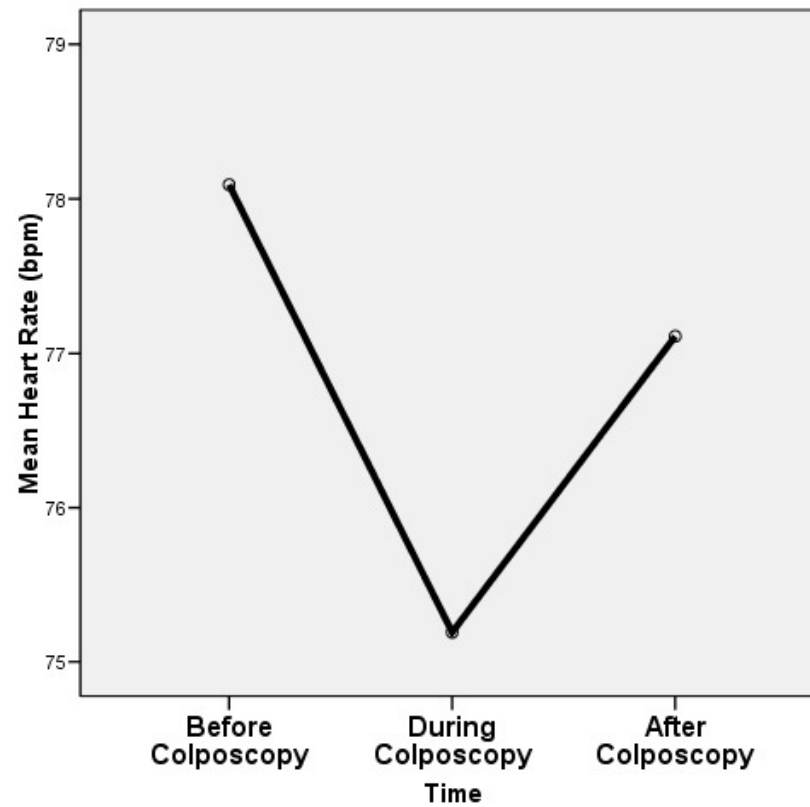


DBP Monitoring status × Condition

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

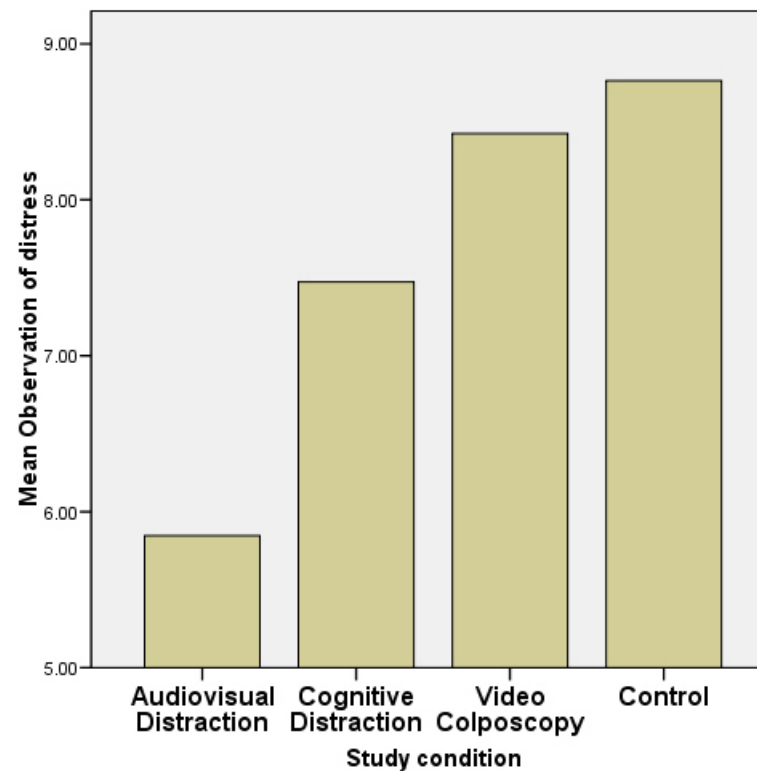


HR Main Effect for Time
 $F(2, 294) = 8.32, p < .001$



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

Thank you!

