

Circum-menopausal effects on women's judgments of facial attractiveness¹

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Previous studies showed that young women's preferences for masculine men are enhanced during the most fertile phase of the menstrual cycle²⁻³. Other research suggests that young women's preferences for attractive women are decreased at this time, potentially reflecting increased derogation of attractive competitors when fertility is high⁴⁻⁵. Although fertility decreases during menopause, no previous studies have compared the face preferences of pre- and post-menopausal women. Consequently, we compared pre- and post-menopausal women's preferences for femininity versus masculinity in men's and women's faces.

Methods

97 women participated in the study ($M = 48.8$ years, $SD = 6.52$; range = 40-64 years), none of whom reported using hormonal contraceptives or hormone replacements.

45 women (the post-menopausal group) reported that, as a consequence of menopause, they no longer experienced menses. 52 women (the pre-menopausal group) reported that they continued to experience menses.

We assessed each woman's preference for femininity in both young adult men's and young adult women's faces using established methods^{2,5}.

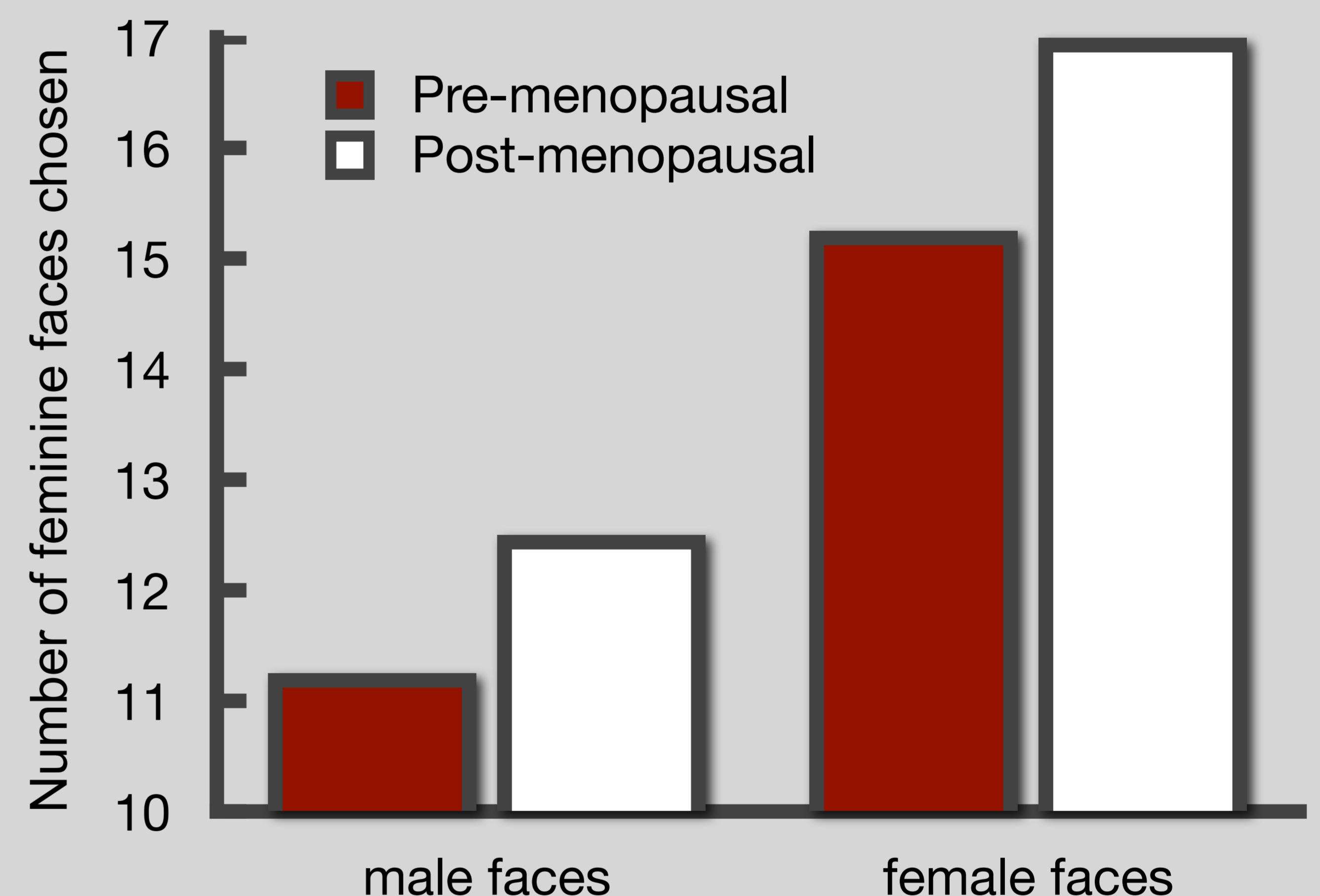


Participants viewed 20 pairs of male faces and 20 pairs of female faces. Each face pair consisted of a feminized (left) and a masculinized (right) version of an individual. Participants chose the more attractive face from each pair.

For each participant, we calculated the number of trials (out of 20) on which they preferred feminine male faces to masculine versions. Corresponding values were calculated for judgments of female faces.

Results

ANCOVA (within-subjects factor: sex of face; between-subjects factor: circum-menopausal status; covariate: participant age) revealed significant interactions between sex of face and circum-menopausal status ($F = 4.68$, $p = .033$, see graph) and between sex of face and participant age ($F = 8.18$, $p = .005$).



Separate ANCOVAs for male and female faces showed that, controlling for age, the post-menopausal group demonstrated stronger preferences for feminine women than did the pre-menopausal group ($F = 6.07$, $p = .016$), but did not reveal an equivalent effect for judgments of men's faces ($F = 0.46$, $p = .50$). These analyses also showed that women's age was negatively associated with their preferences for masculinity in men's faces ($F = 6.53$, $p = .012$), but not women's faces ($F = 0.89$, $p = .35$).

We found that post-menopausal women demonstrated stronger preferences for feminine (i.e. attractive) women than pre-menopausal women did. This effect was independent of women's age and may reflect reduced derogation of attractive young women as fertility decreases during menopause. Somewhat surprisingly, we found no effect of circum-menopausal status on judgments of men's attractiveness. It is possible that this null finding is a consequence of the age of the stimuli used; circum-menopausal women may not judge young adult men as potential mates. Indeed, women's age was negatively associated with their preferences for facial masculinity in young adult men. Further research into circum-menopausal women's preferences for male facial cues may benefit from employing a wider range of ages as face stimuli.

References: [1] Vukovic et al. (2009). *Bio Letts*, **5**, 62-64. [2] Penton-Voak et al. (1999). *Nature*, **399**, 741-742. [3] Jones et al. (2008). *Arch Sex Behav*, **37**, 78-84. [4] Fisher (2004). *Proc Roy Soc Lond B*, **271**, S283-S285. [5] Welling et al. (2007). *Horm Behav*, **52**, 156-161.

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