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THE INFLUENCE OF FEMALE REPRODUCTIVE HORMONES ON TIME PERCEPTION

Joana Arantes¹, Nuno Fernandes¹, Sara Pereira¹ & Mavilde Arantes²

¹School of Psychology, University of Minho; ²School of Medicine, University of Porto

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Background: Research has shown that women's sensitivity to cues for reproductive fitness is enhanced in periods of high fertility. During ovulation, women are faster at recognizing faces as male, and report a greater preference for facial masculinity, height, vocal masculinity, a masculine and muscular body shape, and dominant behavior. Do changes in subjective time for females depend on reproductive hormones, with an increased sensitivity to fitness-related stimuli during ovulation?

Aims: The goal of the present study was to investigate for the first time whether females' duration estimates of brief exposures to masculine faces and voices change during different phases of the menstrual cycle. We hypothesized that during the fertile phase of the cycle, encounters with masculine men, leading to increased arousal, would result in longer perceived durations.

Method: Forty-seven female participants completed the experiment during both ovulation and menstruation. The peak fertility was assessed through ovulation kits. The experiment consisted of 3 blocks: visual attractiveness, visual sexually dimorphic, and auditory sexually dimorphic. In each block, participants performed either a visual or an auditory oddball task. During each trial, participants were presented with a series of five stimuli, all of equal duration. Their task was to reproduce the duration of the last stimulus. The first four stimuli in each trial were either circular sine-wave gratings (visual oddball) or 600 Hz sine waves (auditory oddball), and the last stimulus could be either an identical stimulus, an attractive/unattractive male photo, a masculinized/feminized male facial picture or a masculinized/feminized male voice.

Results: Results confirmed our prediction, but only in the auditory modality. Duration ovulation, duration estimates for masculinized male voices were significantly longer than those for feminized male voices, while no significant differences were observed during menses. Although we replicated previous findings regarding the influence of facial attractiveness on time perception, our data suggests that these effects are not influenced by the hormonal cycle. No differences were found for the visual sexually dimorphic block.

Conclusions: Our findings are consistent with the literature on an adaptive mechanism of our "internal clock" related to reproductive fitness.

Keywords: Time perception, Ovulation, Menstrual cycle, Attractiveness, Sexually dimorphic

Publications:

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E-mail contact: joana.arantes@psi.uminho.pt