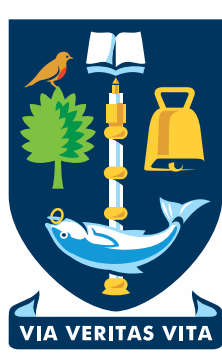


Hormonal modulation of the motivational salience of facial attractiveness



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The motivational salience of a face (i.e., the effort people will expend to view it) is correlated with both its attractiveness and neural reward value¹. Although there is evidence for hormonal modulation of women's face preferences^{2,3}, how hormone levels modulate the motivational salience of facial attractiveness has not yet been tested. Since research on hormonal modulation of face preferences has variously implicated estradiol, progesterone, and testosterone levels^{2,3}, here we investigated the effects of these hormones on the motivational salience of facial attractiveness.

50 heterosexual women with natural menstrual cycles each completed 5 weekly test sessions, where they provided saliva samples that were analyzed for estradiol, progesterone, testosterone and cortisol.

Participants also completed a standard key-press task^{1,4}, in which they controlled the viewing time for 50 male and 50 female faces by repeatedly pressing designated keys. Participant's key press score for each face (amount of effort they expended to view the face) was calculated for each test session.

These scores served as the DV in our analyses.

Analyses. The tables show results of multilevel analyses testing whether the effects of within-subject changes in estradiol, progesterone, estradiol-to-progesterone ratio, or testosterone qualified the positive effects of rated attractiveness on the key-press scores for male ($t = 8.90, p < .001$) and female ($t = 12.54, p < .001$) faces.

Male faces

hormone	<i>t</i>	<i>p</i>
estradiol	0.07	0.95
progesterone	-0.24	0.82
e-to-p ratio	-0.72	0.47
testosterone	3.31	<.001

Female faces

hormone	<i>t</i>	<i>p</i>
estradiol	-0.89	0.37
progesterone	-0.88	0.38
e-to-p ratio	2.51	0.01
testosterone	6.06	<.001

The motivational salience of male and female attractiveness was greater in sessions where women's testosterone was high. Surprisingly, the motivational salience of female, but not male attractiveness, was also greater when estradiol-to-progesterone ratio, a correlate of conception risk, was high.

References: 1 Aharon et al. (2001) *Neuron*, 32, 537-551. 2 Gangestad & Thornhill (2008) *P Roy Soc Lond B*, 275, 991-1000. 3 Jones et al. (2008) *Arch Sex Behav*, 37, 78-84. 4 Hahn et al. (2013) *QJEP*, 66, 200-208,

