

# Changes in appearance & desire across the ovulatory cycle



Nicola F. Koyama<sup>1</sup>, Matthew Kirtley<sup>2</sup> & Sonia Tucci<sup>2</sup>



1. School of Natural Sciences & Psychology, Liverpool John Moores University, U.K. Email: [n.f.koyama@ljmu.ac.uk](mailto:n.f.koyama@ljmu.ac.uk)  
2. Institute of Psychology, Health & Society, University of Liverpool, U.K.

## Introduction

**Ovulatory Shift Hypothesis:** Women experience an increase in mating motivation near ovulation<sup>1</sup>


- Desire to attract short-term mate
- Outcompete rival women

Two decades of research have provided evidence, some mixed, of cycle shifts in women's preference for cues of mate quality<sup>1</sup>.

### Aim

Here we focus on a lesser studied aspect, the shift in women's appearance and desire. Our study is novel, taking measurements (not ratings) of daytime appearance rather than eveningwear.

**Hypothesis:** women's sexual advertisement and desire should be greater when risk of conception is high in the high fertility (HF) phase than in the low (LF) fertility phase:

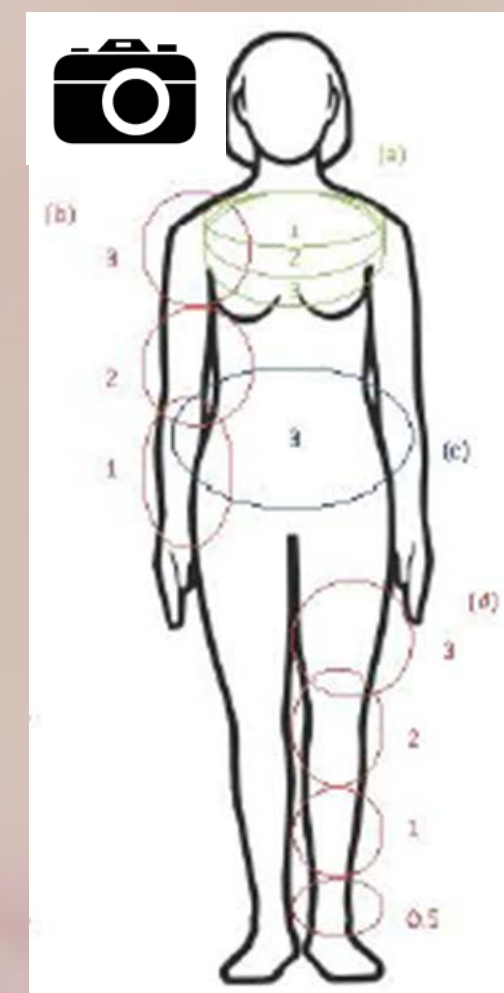
Q1. **women's appearance:** clothing and ornamentation 

Q2. **desire:** attraction to opposite sex and sexual thoughts 

## Methods

25 single and 18 partnered heterosexual women (18-30y) not on contraception were tested in each fertility phase

- **low fertility** <5d before menstruation
- **high fertility** positive LH surge from **ovulation predictor test**



**ornamentation**  
makeup/jewellery

**PHOTO SCORED**

**clothing**

cover, tight, colour, sheer

**Q1. Sexual Advertisement**  
Appearance Scoring Sheet<sup>2,3</sup>



**Q2. Desire: Attraction & Thoughts**  
Intra- & Extra-Pair Attraction Survey<sup>4</sup>



**Analysis:** Repeated measures 2X2 mixed ANOVA (fertility phase and relationship status)..

## Results

### Q1. APPEARANCE:



**Make-up:** Use of make-up was heavier at HF than LF  
( $F_{1,30}=15.6$ ,  $p<.001$ ,  $\eta^2=0.34$ , 95% C.I. 0.24 – 0.77)

**Clothing tightness:** Women wore tighter clothes at HF than LF  
( $F_{1,30}=9.11$ ,  $p=0.005$ ,  $\eta^2=0.23$ , 95% C.I. 0.30 – 1.54)

**Clothing colour:** Brighter clothing was worn at HF than LF  
( $F_{1,30}=6.2$ ,  $p=0.019$ ,  $\eta^2=0.17$ , 95% C.I. 0.07 – 0.7)

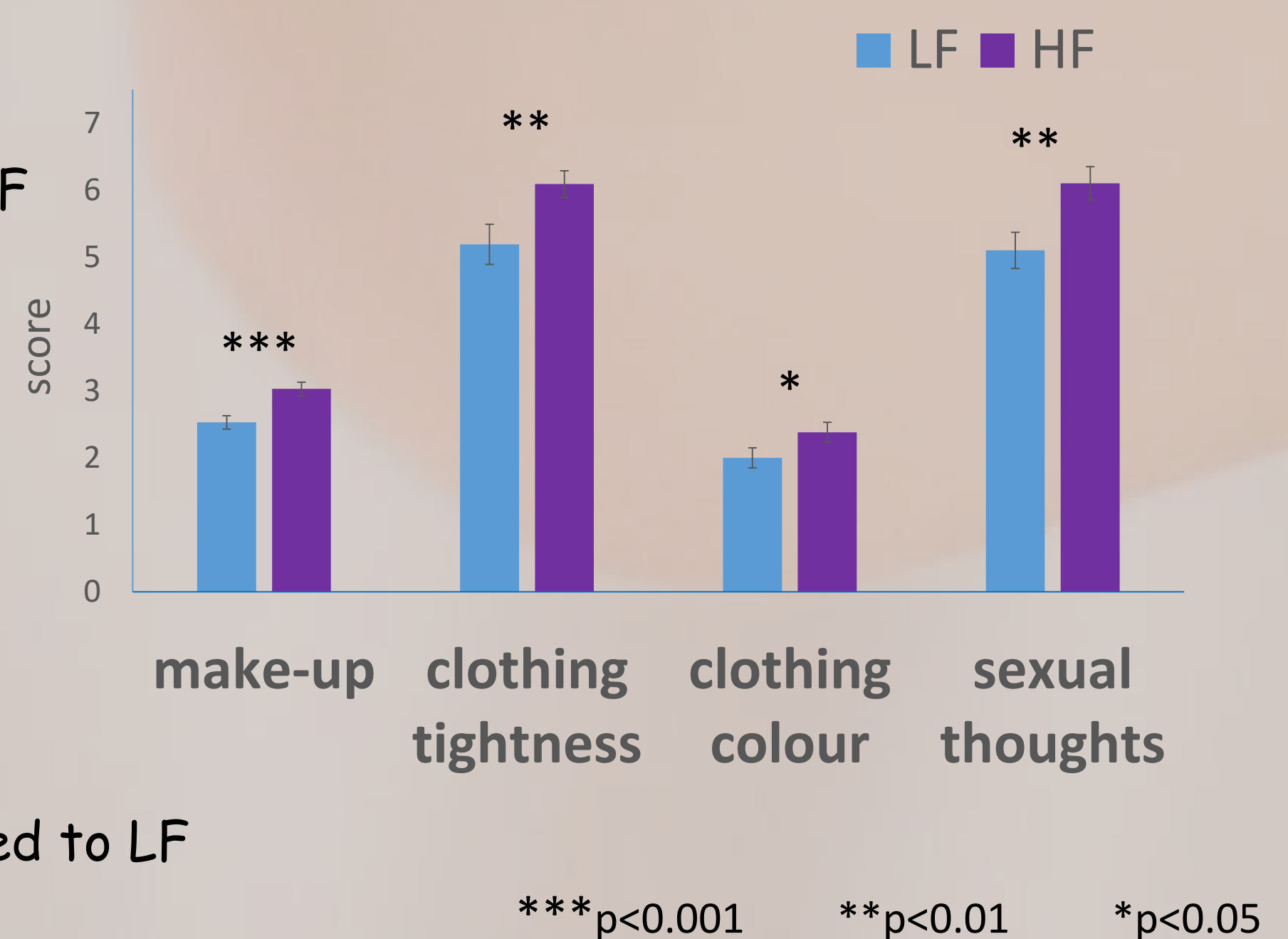
There were no effects of clothing cover, sheerness or use of jewellery.

### Q2. DESIRE



**Attraction:** No effect of fertility phase or relationship status

**Sexual thoughts:** Increase in sexual thoughts at HF compared to LF  
( $F_{1,29}=10.38$ ,  $p=.003$ ,  $\eta^2=.26$ , 95% C.I. 0.38 -1.68)



No effects for any variable of relationship status (single/partnered)

## Discussion

- Women increase daytime sexual advertisement during high risk of conception, when they also experience an increase in sexual desire.
- Our findings support the hypothesis of *self ornamentation*<sup>5</sup> through personal grooming (use of make-up) and clothing choice (tightness and colour).
- There was no effect of relationship status - both single and partnered women experienced a shift in appearance and desire across the cycle. However, sample sizes are relatively small and replication is needed.

## References

1. Gildersleeve, K., Haselton, M. G., & Fales, M. R. (2014). Do women's mate preferences change across the ovulatory cycle? A meta-analytic review. *Psychological Bulletin*, 140(5), 1205.
2. Grammer, K., Renninger, L., & Fischer, B. (2004). Disco Clothing, Female Sexual Motivation, and Relationship Status: Is She Dressed to Impress?. *The Journal of Sex Research*, (1), 66.
3. Durante, K., Li, N., & Haselton, M. (2008). Changes in Women's Choice of Dress Across the Ovulatory Cycle: Naturalistic and Laboratory Task-Based Evidence. *Personality And Social Psychology Bulletin*, 34(11), 1451-1460.
4. Pillsworth, E. G., & Haselton, M. G. (2006). Original article: Male sexual attractiveness predicts differential ovulatory shifts in female extra-pair attraction and male mate retention. *Evolution And Human Behavior*, 27247-258.
5. Haselton, M. G., Mortezaie, M., Pillsworth, E. G., Bleske-Rechek, A., & Frederick, D.A. (2007). Ovulatory shifts in human female ornamentation: Near ovulation, women dress to impress. *Hormones And Behavior*, 5140-45.