Women’s Appearance and Body Shape across the Menstrual Cycle: Heightened Attractiveness at Ovulation?
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Introduction
Among normally cycling women (those not on hormonal contraceptives), fertility status is tied to sexual desire and attitudes. Researchers have documented that during the high fertile phase relative to the low fertile phase, women:
- Report stronger feelings of attractiveness
- Have a heightened desire to flirt and "meet men"
- Prefer the scent of symmetrical and masculine men
- Report more fantasy about sex outside their current union
Fertility status is also tied to differential perceptions of women's attractiveness:
- Among women going to a disco, those in the high fertile phase show more skin.
- Lap dancers made significantly more tips during the high fertile phase than during the low fertile phase.
- Men rate high fertile phase women's odor (as indicated by cotton swabs in the armpits or the shirt) as more attractive than low fertile phase women's odor.
- Judges select pictures of women in their high fertile phase over their low fertile phase as "trying to look more attractive."
- Judges select facial shots of women in their high fertile phase (over their low fertile phase) as more attractive.
- These effects are among women on hormonal contraceptives (control group).

If women behave differently, feel different, and smell different at ovulation, it is also possible that they actually look different physically. The finding that judges select facial shots of women in their high fertile phase as more attractive is suggestive, but Roberts et al. (2004) did not control for time of day and the study has not yet been replicated and extended. We designed the current study to assess women's body measurements and facial appearance first thing in the morning, at high and low fertile phases of the cycle.

Method
A total of 79 women participated; 47 were not on a hormonal contraceptive and 32 were. Their ages ranged from 17 to 23, with a mean age of 19. Participants were pregnant, using tobacco, or using a prescription sleep aid.

Participants were recruited in two dorms at the University of Wisconsin-Eau Claire. At an initial meeting, participants reported on their typical cycle length and contraceptive use. Participants also reported their usual wake-up time and contact information for scheduling their two consecutive visits. Researchers allowed researchers to control for possible extraneous variables as possible to investigate mood ratings.

For each session, participants went to a designated room in the basement of their dorm before waking or going to sleep in a manner that reflected the timing and location of their daily activities. Measurements were taken after participants slept at least 5 days without prior study participation. Participants were then given a breakfast muffin and were offered extra credit upon completion of the two sessions.

High fertile phase visits occurred between days 8-14, with a mean of day 11, with only one on day 14. Low fertile phase visits occurred between days 17 to 25, with one woman coming on day 17, and one on day 25. The mean day was 21. Five of the women reported tanning, with three of the five tanning prior to both visits. The remaining two women who had their period. Participants were then given a one-page questionnaire regarding their typical cycle length and contraceptive use. Researchers scheduled their two consecutive visits. Researchers allowed researchers to control for possible extraneous variables.

Results
We designed this study to assess whether changes in sexual desire and attitudes across the menstrual cycle coincide with actual and measurable physical changes in women's bodies and faces. In order to detect possible physical changes disconnected from women's attention to their body and face (washing, makeup, etc.), we measured waist, hips, and bust circumference and photographed participants first thing in the morning. In conducting this research we controlled for lighting, camera distance, location, time of day, and participant clothing. To control for other extraneous variables such as hours of sleep, eating and substance use, we asked participants to agree to guidelines for the night before each of their two sessions.

Contrary to expectation, we failed to find smaller waist and wider hips during the high relative to low fertile phases. There was a significant increase in bust size for the low fertile phase is consistent with previous findings on changes in women's breast size over the menstrual cycle. Specifically, medical researchers have previously shown that breast content in the bust noticeably increases from the high fertile phase to the low fertile phase. Our results for self-reported mood (e.g., levels of felt ugliness) coincide with previous findings on women's feelings of heightened attractiveness during the high fertile phase.

Overall, we attempted to rule out as many extraneous variables as possible to investigate whether women actually look different physically over the menstrual cycle. Though body measurements did not confirm this hypothesis, photo ratings are still pending. Based on previous research, we expect that participants' faces will be rated as more attractive when in the high fertile phase.

Discussion

References

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