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RESEARCH QUESTIONS

- Affects menstrual cycle phase the perceived trustworthiness of women's voices?
- Are changes in perceived trustworthiness and attractiveness of female voices context-dependent?

INTRODUCTION

- Many studies suggest that women's voices are affected by menstrual cycle^{1,2,3}
- However, these studies focused on vocal attractiveness only

METHOD

- The voice of 18 female speakers ($M = 22.7$ years, $SD = 3.4$) was recorded around ovulation and in the luteal phase
- Ovulation was determined by means of ovulation tests and the cycle phases will be confirmed by means of hormone assays⁴



- From each speaker, voice recordings of both cycle phases were paired
- Three sentences were of neutral content and three sentences suggested a mating context
- 27 independent participants (22 women, $M = 22.8$ years, $SD = 3.0$) were asked to pick the voice sample of each pair that sounded more trustworthy (Block 1) or more attractive (Block 2) in a two-alternative forced choice paradigm

DISCUSSION

- Women's voices around ovulation are not only perceived as more attractive but also as more trustworthy than in the luteal phase (limitation: mostly female raters)
- Interestingly, the ovulatory voice was only preferred in sentences with mating context, illustrating the importance of speech content
- Women accentuate more around ovulation and seem to speak with increased loudness in the luteal phase

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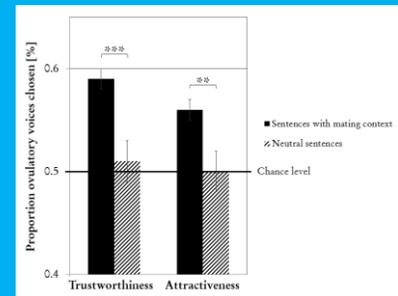
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CONCLUSION

- Women's voices seem to sound more trustworthy and more attractive in a mating context when fertile

RESULTS

- Voice samples recorded around ovulation were perceived as sounding more trustworthy ($M = .59$, $SD = .05$, $t(26) = 9.159$, $p < .001$) and more attractive ($M = .56$, $SD = .10$, $t(26) = 3.071$, $p < .01$) than those recorded in the luteal phase, but only in sentences with mating context
- In neutral sentences, there was no preference (trustworthiness: $M = .51$, $SD = .06$, $t(26) = .841$, $p = .41$; attractiveness: $M = .50$, $SD = .11$, $t(26) = .194$, $p = .85$)



- Stimulus voice samples were analyzed for 17 phonetic parameters using Praat software⁵
- ANOVAs with menstrual cycle phase (ovulation/luteal phase) and sentence content (mating/neutral) as factors revealed:
 - Significantly higher variability in fundamental frequency around ovulation compared to the luteal phase ($F(1,17) = 7.502$, $p = .014$, $\eta_p^2 = .306$)
 - Significantly higher mean loudness in the luteal phase compared to around ovulation ($F(1,17) = 4.794$, $p = .043$, $\eta_p^2 = .22$)