

The Influence of the Menstrual Cycle on Subjective Stress Perception

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Abstract

To capture the concept of stress from a feminist perspective, our study examines whether subjective stress perception fluctuates across the menstrual cycle. Using a longitudinal mixed design, the project follows $n = 60$ healthy women aged 18 to 40 over 30 days. Participants are divided in a naturally cycling, experimental group ($n = 40$), and a hormonally contracepting control group ($n = 20$).

Menstrual cycle phases are tracked via continuous core body temperature measurements using the device OvulaRing. Subjective stress is assessed daily using standardized self-report instruments, including the Perceived Stress Questionnaire (PSQ), visual analogue scales (VAS), and stressors, administered through the smartphone-based survey tool GESIS.

By doing so, the study addresses several methodological limitations in previous research, such as simplified two-phase cycle divisions, small sample sizes, and a lack of longitudinal data. Therefore, by combining continuous cycle with daily stress assessments, the project aims to capture within-person fluctuations more precisely. It is hypothesized that naturally cycling participants will show systematic, potentially non-linear variation in stress across the cycle, with higher stress levels expected in phases associated with lower endogenous estrogen, whereas no comparable pattern is expected among hormonal contraceptive users.

Data collection is still ongoing and scheduled for completion in August 2026. The findings are intended to improve methodological standards for menstrual-cycle research but also a feminist perspective in stress, and, more broadly, psychological research.

Keywords: menstrual cycle; subjective stress; female health; cognitive psychology; psychology