Pilot: Observational Study On Collegiate Women Wrestlers' Menstrual Health

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Introduction

How is your menstrual cycle affected by diet and exercise? This question is extremely important due to the highly complex physiological regulations females face during their menstrual cycle. It has been shown that a combination of high levels of physical activity and poor nutrition can dysregulate homeostatic balance in menstruation and lead to long-term effects [1,2]. In this study, we are looking at collegiate women wrestlers who cut weight, comparing in-season and out-of-season diet, training regimes, and notable differences in their menstrual cycle.

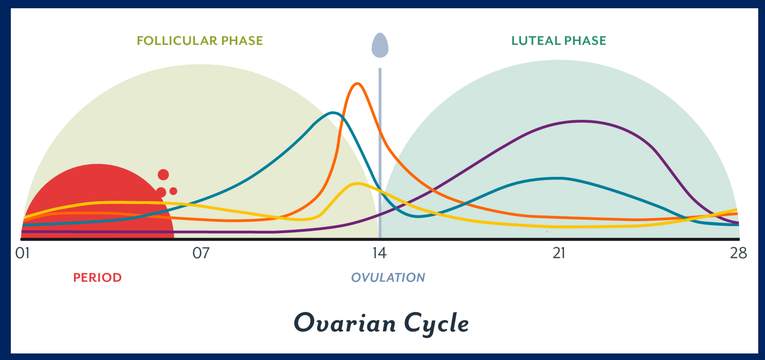
Methodology

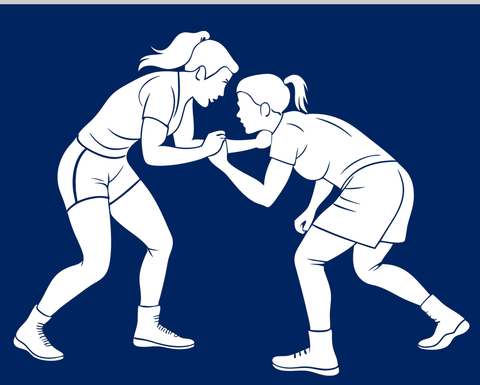
- This is a qualitative observational case series conducted with 4 athletes.
- All participants are women wrestlers at Texas Wesleyan University.
- Each athlete completed a survey with 5 detailed questions covering body weight during on and off season, diet, the regularity and description of their menstrual cycles, and their volume and intensity of training load.
- The resulting data were analyzed to determine if there is any consistent pattern in menstrual cycles of female wrestlers.

References

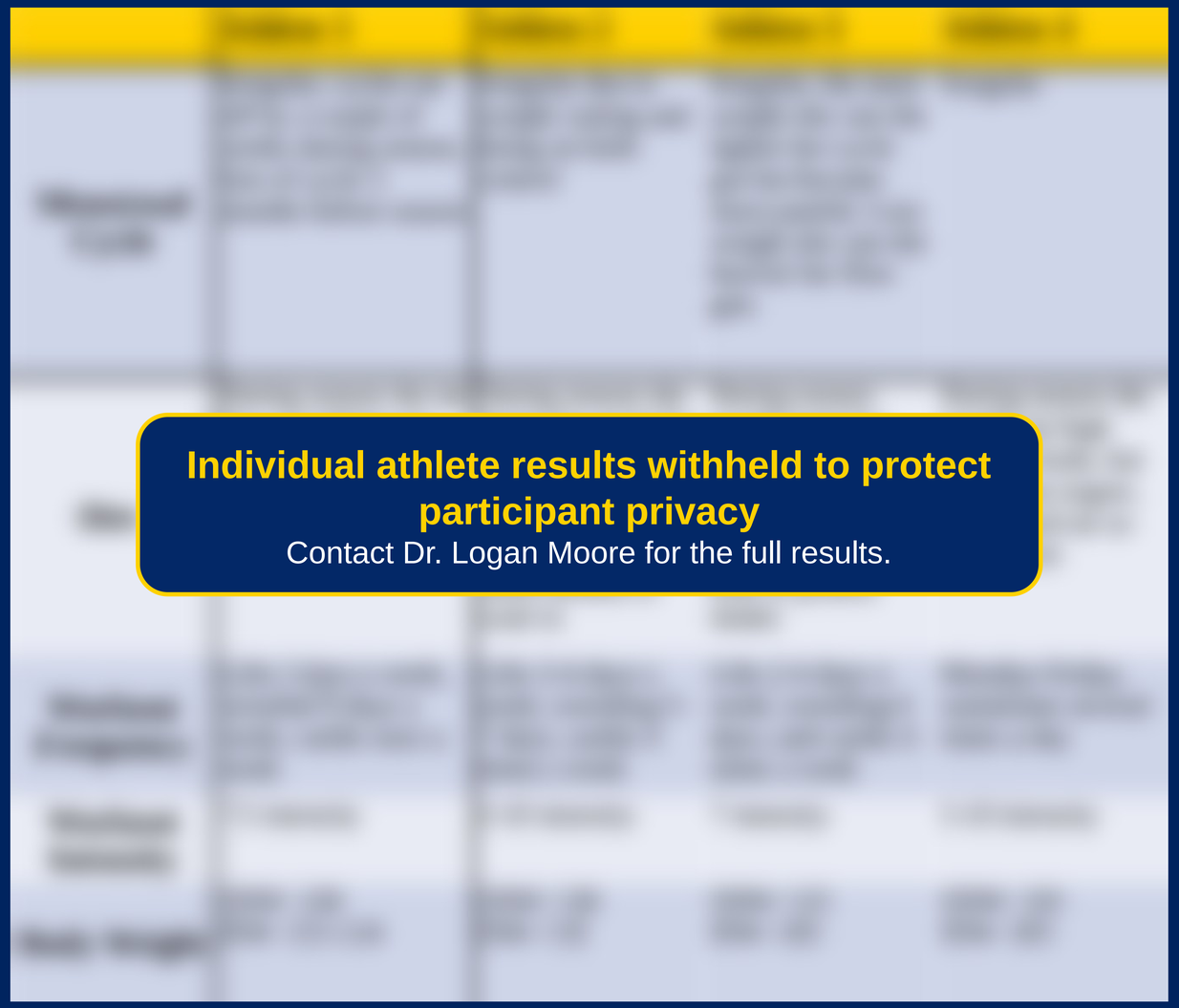
[1] Lapp, Madison, et al. U.S. National Library of Medicine, 2025 https://pmc.ncbi.nlm.nih.gov/articles/PMC12413752
[2] Ciolek, A., et al., (2023). Nutrients, 16(1), 69. https://doi.org/10.3390/nu16010069

Results





- All four athletes reported irregular or nonexistent menstrual cycles and painful symptoms.
- Several athletes reported lighter or missed cycles with greater weight loss, and increased discomfort or pain during heavier cuts.
- Nutrition habits differed by season, with more structured eating during competition, typically with higher protein intake.
- Training volume and intensity were high across all athletes,
- involving frequent wrestling, lifting multiple days per week, and regular cardio, with perceived intensities ranging from moderate to very high (5–10/10).
- All athletes showed notable in-season weight reductions. Diet quality did not appear to change cycle regularity, since the athletes' cycles were already irregular while cutting weight.



Individual athlete results withheld to protect participant privacy
Contact Dr. Logan Moore for the full results.

Conclusion

Training load plays a major role in menstrual health. High-intensity training combined with calorie restriction raises physiological stress, which can interfere with menstrual cycles and hormonal balance. Future studies should control nutrition and monitor training load in these athletes.