



Does the menstrual cycle impact dietary habits and appetite in physically active women?

01. Introduction

Understanding female specific nutrition is underrepresented within scientific literature however the awareness of needing female specific research is increasing (Cowley et al, 2021). This lack of research could be hindering the progression in better understanding of female nutritional requirements (Wohlgemuth, K.J. et al, 2021). Having a better understanding of how the menstrual cycle phases impact dietary behaviour and habits could be beneficial to physically active women to enable more efficient weight management strategies and energy balance to participate in regular exercise (Corella et al, 2018). Understanding how to manage cravings and adequate caloric intake for appetite could lead to better weight management. Understanding why and how women have cravings could lead to less stigmas associated with menstrual cravings.

02. Aim

The aim of this study was to identify if the menstrual cycle impacts eating behaviours and appetite across the different phases. It aimed at exploring the different cravings such as eating more sweet or salty foods and to see if there was a pattern across participants during the phases. The study wanted to explore women's awareness of the cycle phases and its changes.

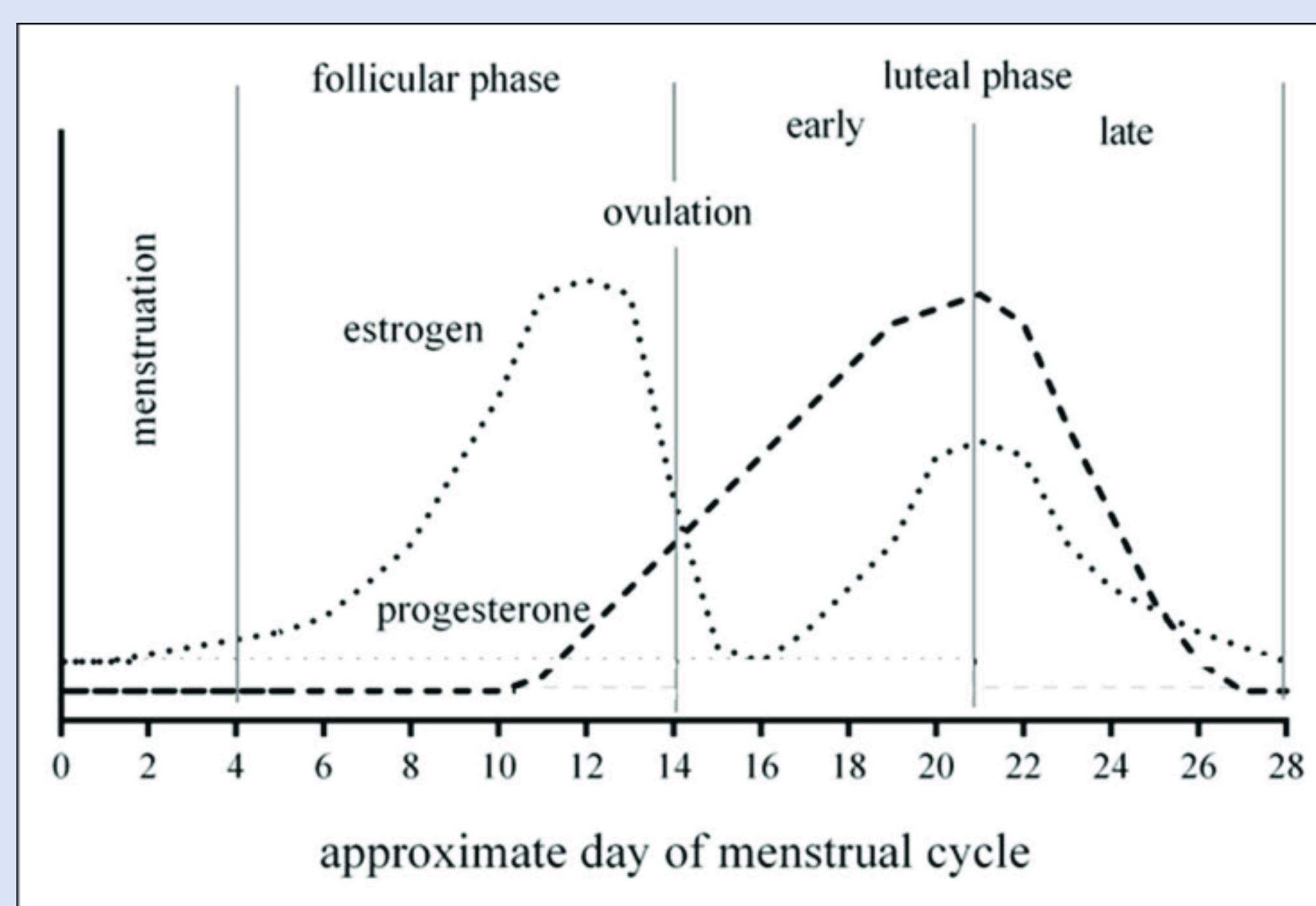


Figure 1: Menstrual cycle chart used in questionnaire 1.

03. Methodology

This study adopted a mixed method questionnaire methodology of using multiple choice, Likert scale, open ended and dichotomous questions. Participants were asked to complete a questionnaire at the start of the research study. Then were asked to complete a short form once a week for four weeks.

Participants:

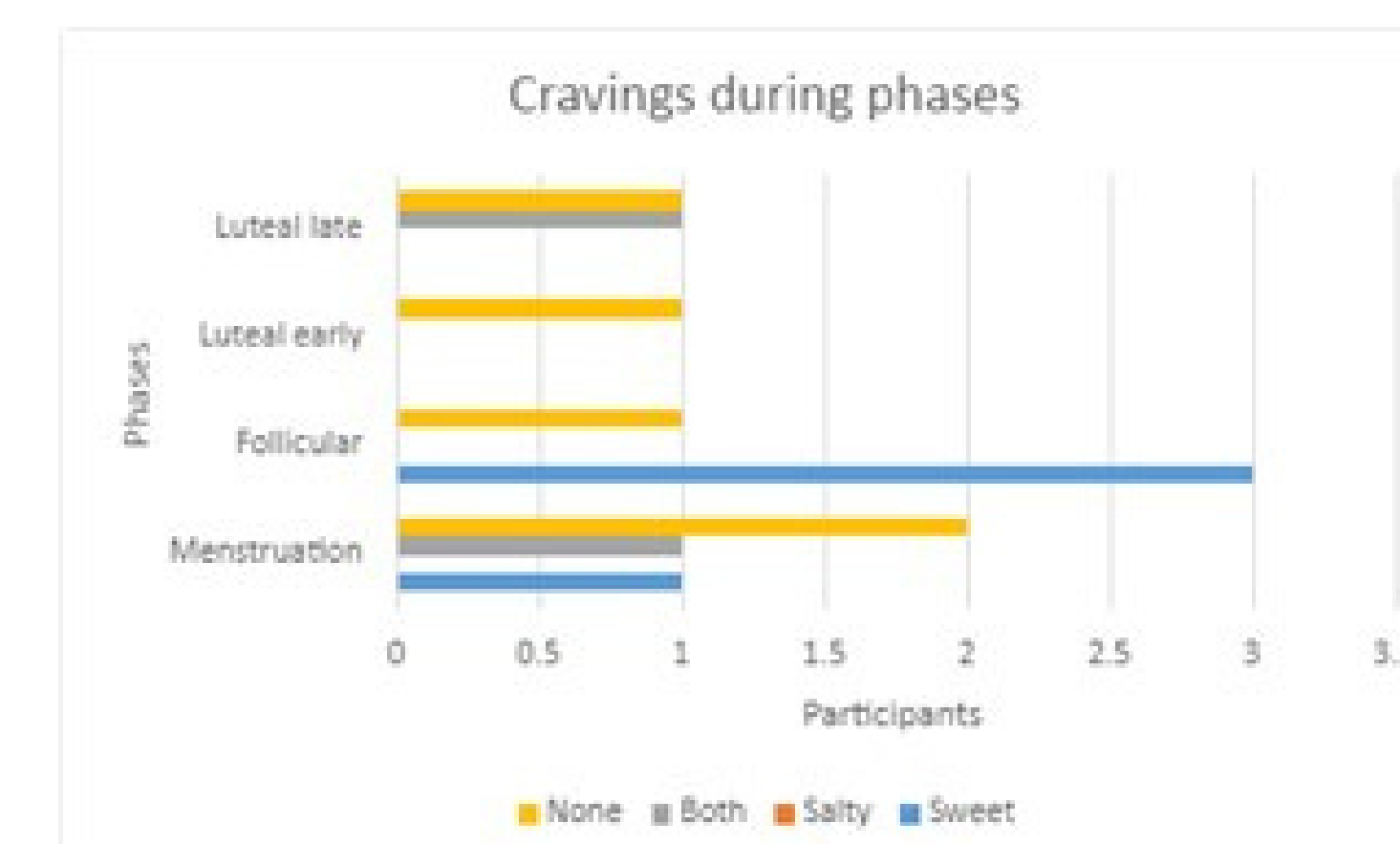
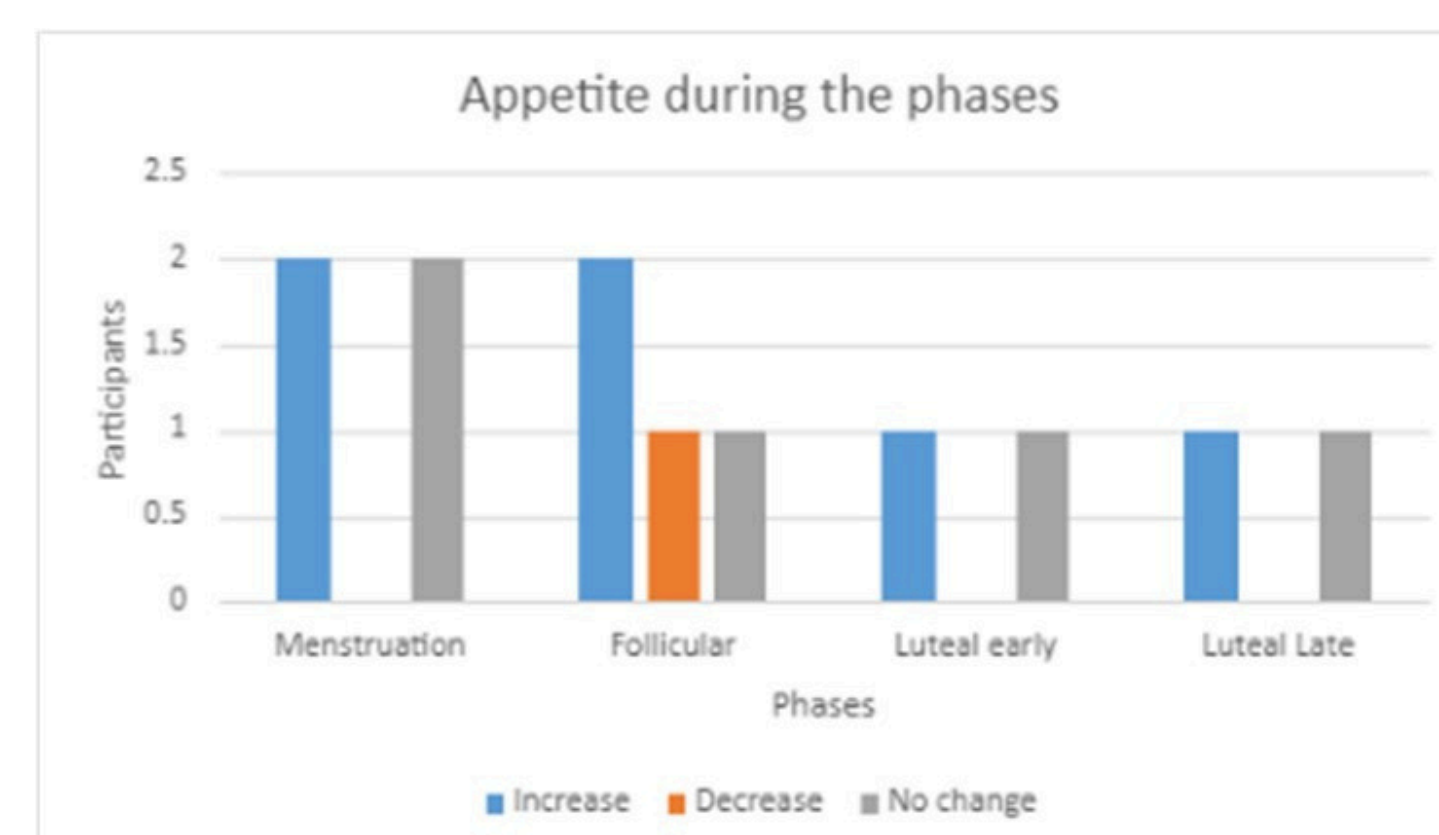
- Women aged 18 - 45
- Physically active
- Not on any contraception or medication
- Members of a local gym

04. Results/Findings

The results from the research questionnaire identified that out of the participants 80% said yes to tracking their menstrual cycle. However 80% of the participants do not track their food intake. It was identified that the average score for the participants awareness of menstrual cycle and the phases was 2.3/5. The results also identified that 60% of the participants crave sweet foods during the menstruation phase. In the weekly questionnaires it was identified that the participants had an increase in appetite in the follicular phase compared to the luteal phase. However it should be noted that the questionnaires were not all completed by all participants for the 4 weeks.

It was identified in the weekly questionnaire that the different phases impacted cravings, particularly for sweet foods during the follicular phase and increased appetite in both the menstrual and follicular phase. It was also identified that energy levels decreased in the menstrual phase and increased in the follicular phase.

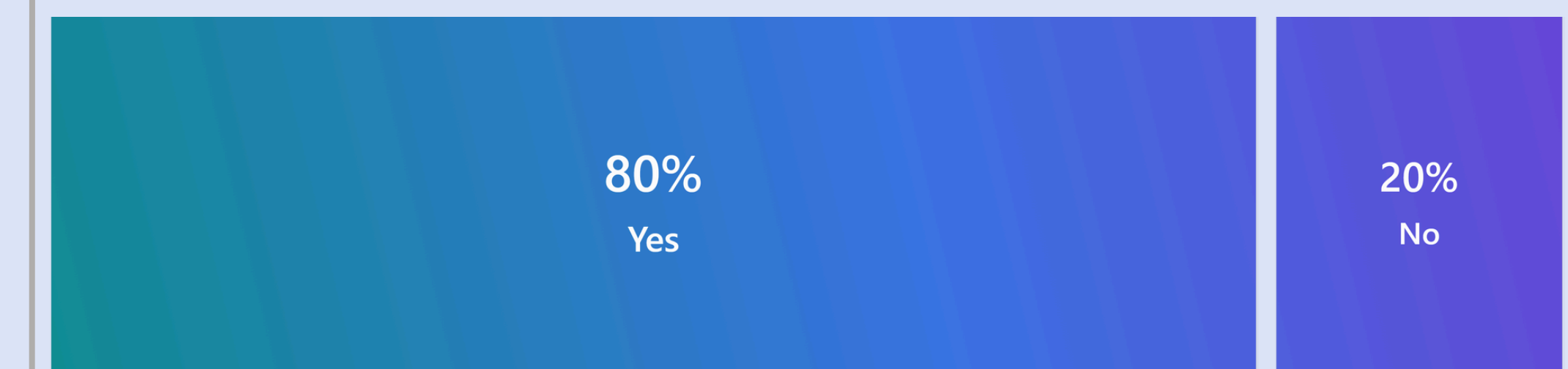
For one participant who completed all questionnaires, it was identified that weight fluctuated during the menstruation and luteal phase despite calorie intake being the same. Statistical analysis was not able to be completed accurately or effectively due to some participants not completing all of the weekly questionnaires thus creating incomplete data.



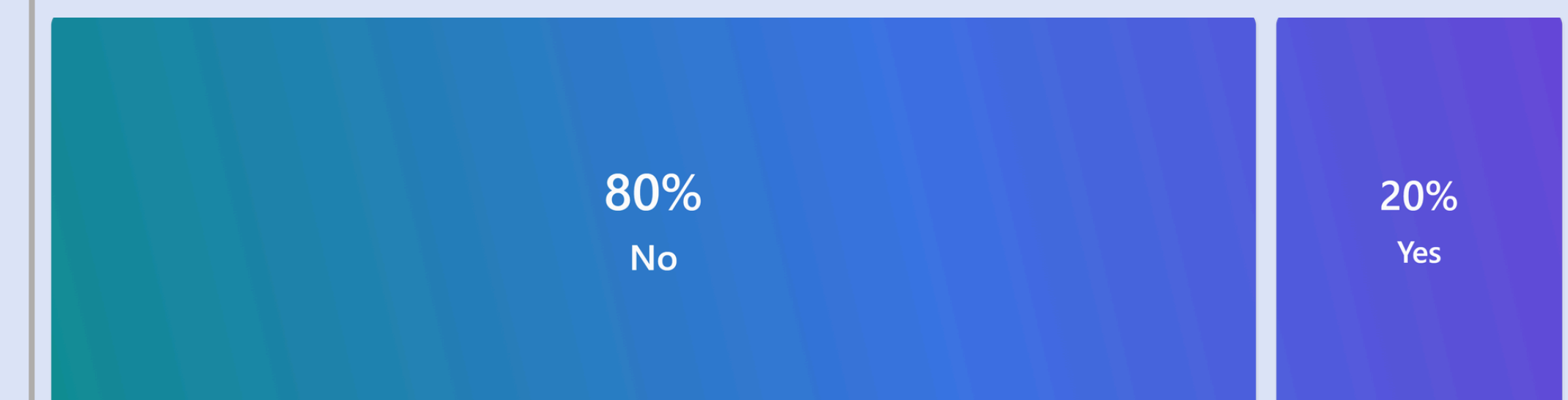
Phase	Energy	Cravings	Appetite	Calories	Weight
Menstruation	None	None	None	1900	224lbs
Follicular	Decrease	Sweet	Decrease	1900	220lbs
Luteal early	None	None	None	2200	218lbs
Luteal late	Decrease	None	None	1900	220lbs

Table 1: Participant 4's data across the phases.

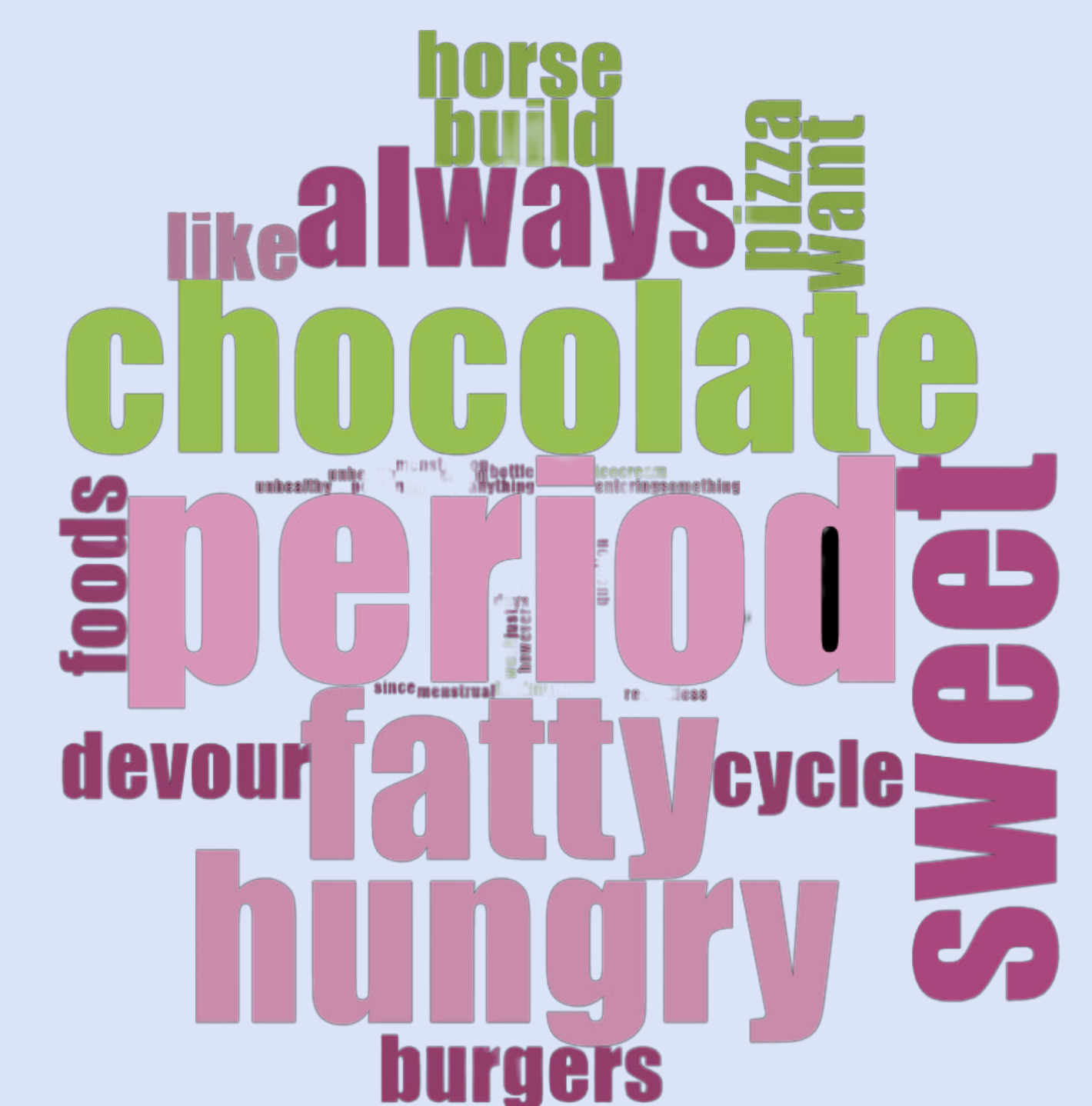
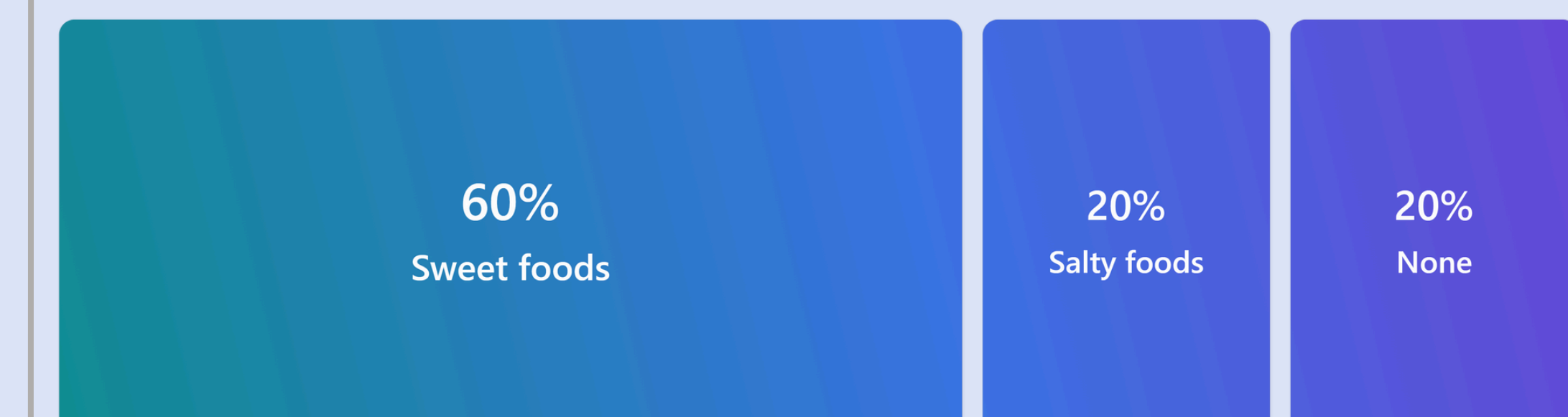
Percentage of participants that track their menstrual cycle:



Percentage of participants that track their food intake:



Types of cravings during the menstruation phase:



NVIVO Word frequency: Do you notice any particular eating habits during your monthly cycle?

05. Conclusion

In conclusion, it was identified in this research study that the menstrual cycle does in fact impact eating habits in the form of cravings and appetite in physically active women. Some of the participants however, did not experience any appetite or habit changes during menstruation. Further accurate and consistent research studies are needed to investigate why these happen for some women and then develop accurate nutrition guidance for physically active women that can tailor it around their cycle.