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Understanding Menstrual Cycle Misconceptions: Insights from 386,811 UK based Women

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Background

The average menstrual cycle typically lasts 21-35 days, beginning and ending with the first day of menstruation, and is divided by ovulation into the follicular and luteal phases (1).

Understanding of the menstrual cycle, ovulation day and the fertile period is imperative for women and healthcare professionals to better understand reproductive health and fertility (2), and also has significant implications in general health and wellbeing (3).

Here, we aimed to explore common misconceptions about cycle length, regularity, and period length among women across various life stages, using large-scale data from an online health assessment.

Methods

- Retrospective, cross-sectional study using self-reported data from an online health assessment (OHA).
- 386,811 UK-based women aged 18–58 between September 2020 and January 2025 completed an OHA covering demographics, menstrual and medical history, and lifestyle behaviours.
- Participants described their cycles as "regular," "irregular," "never had a period," "no longer get periods," or "no periods due to contraception/HRT." Cycle and period lengths were entered numerically or marked as "I don’t know."
- Data analysis was performed using R.

Variables:

- Menstrual cycle length
 - Length in days or ‘I don’t know’
 - Described as ‘regular’, ‘irregular’ or ‘never had a period’, ‘no longer get periods’ or ‘no periods due to contraception/HRT’

Stratified sampling:

- Age

Results

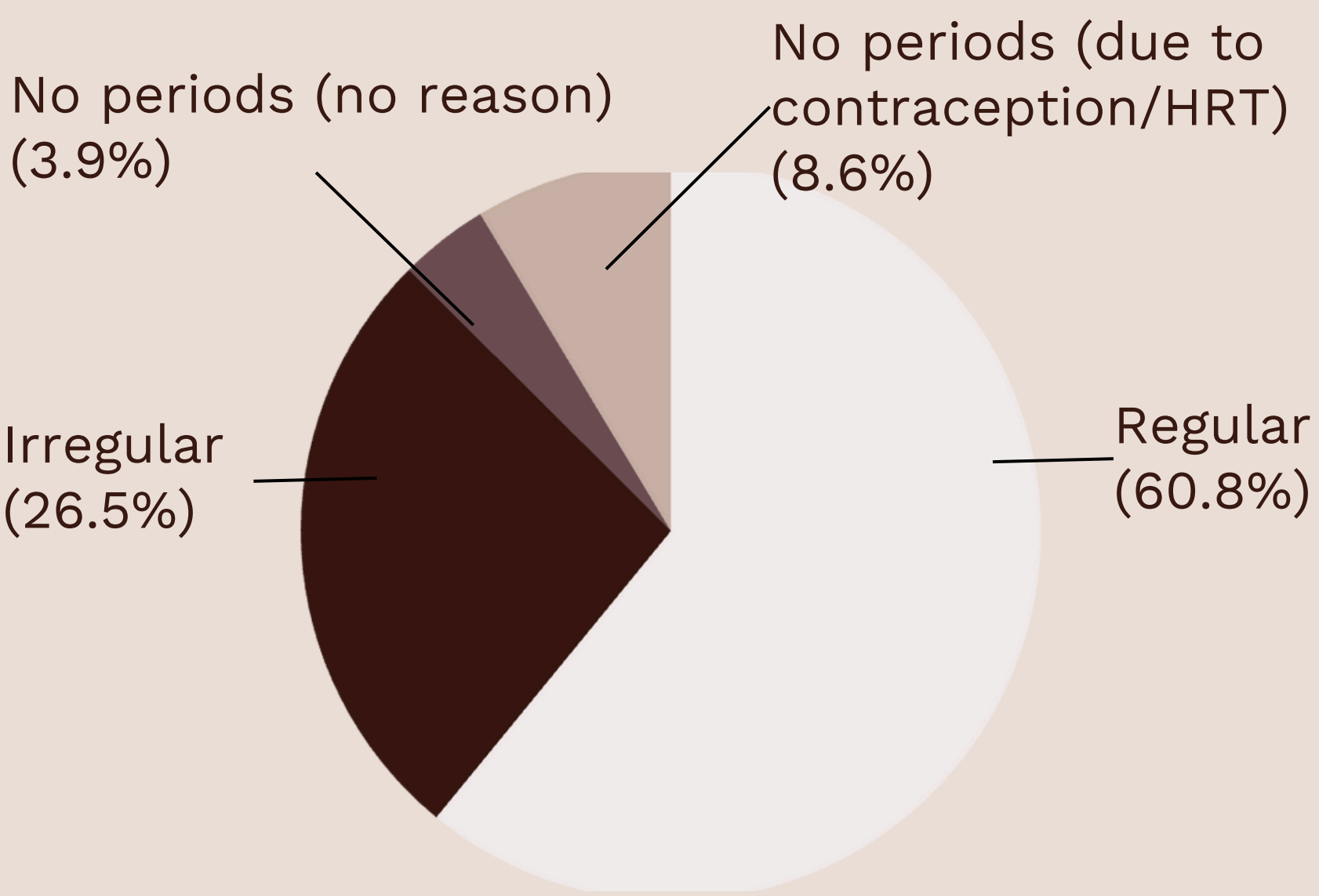


Figure 1. Reported menstrual cycle type

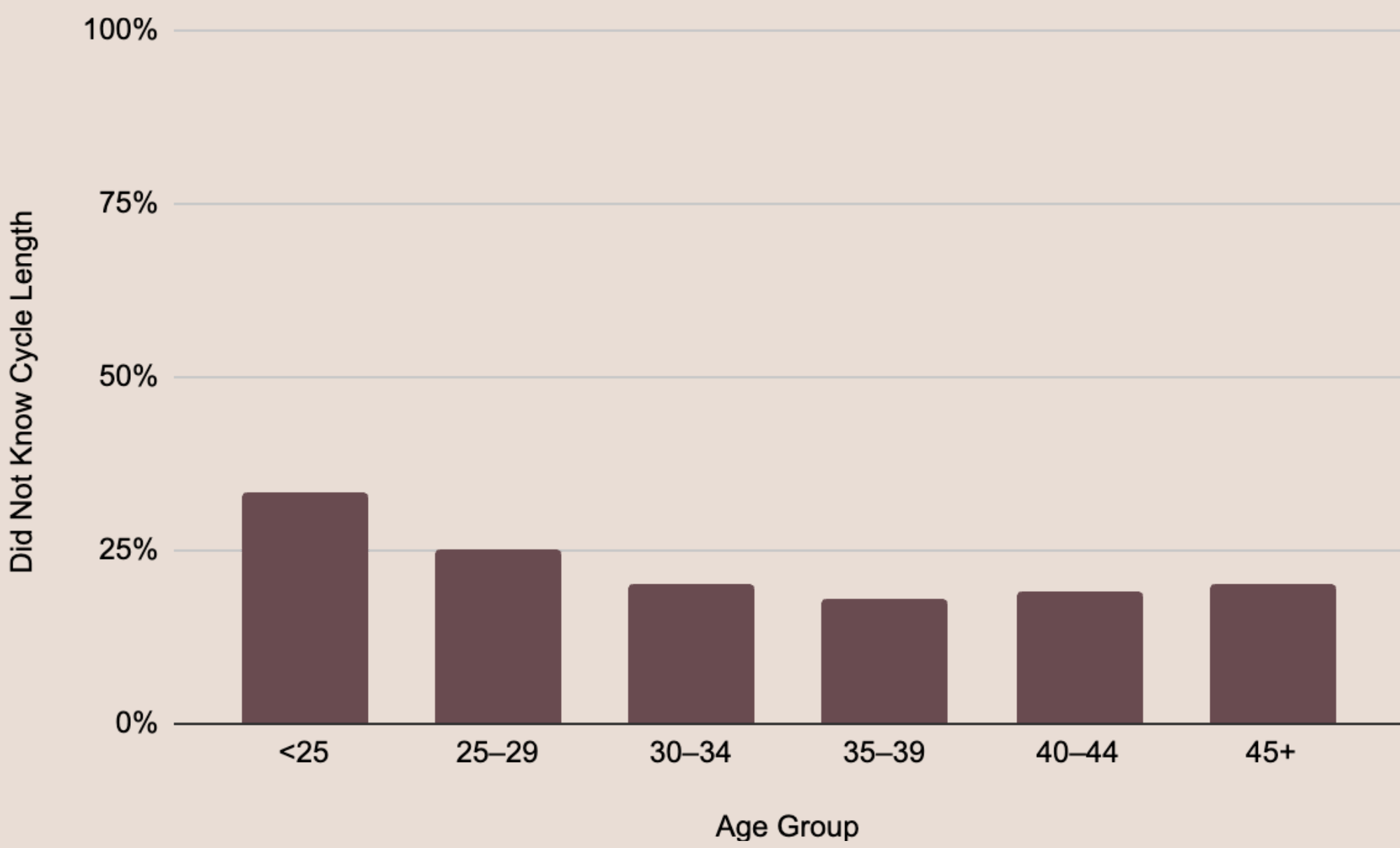


Figure 2. Cycle length awareness by age

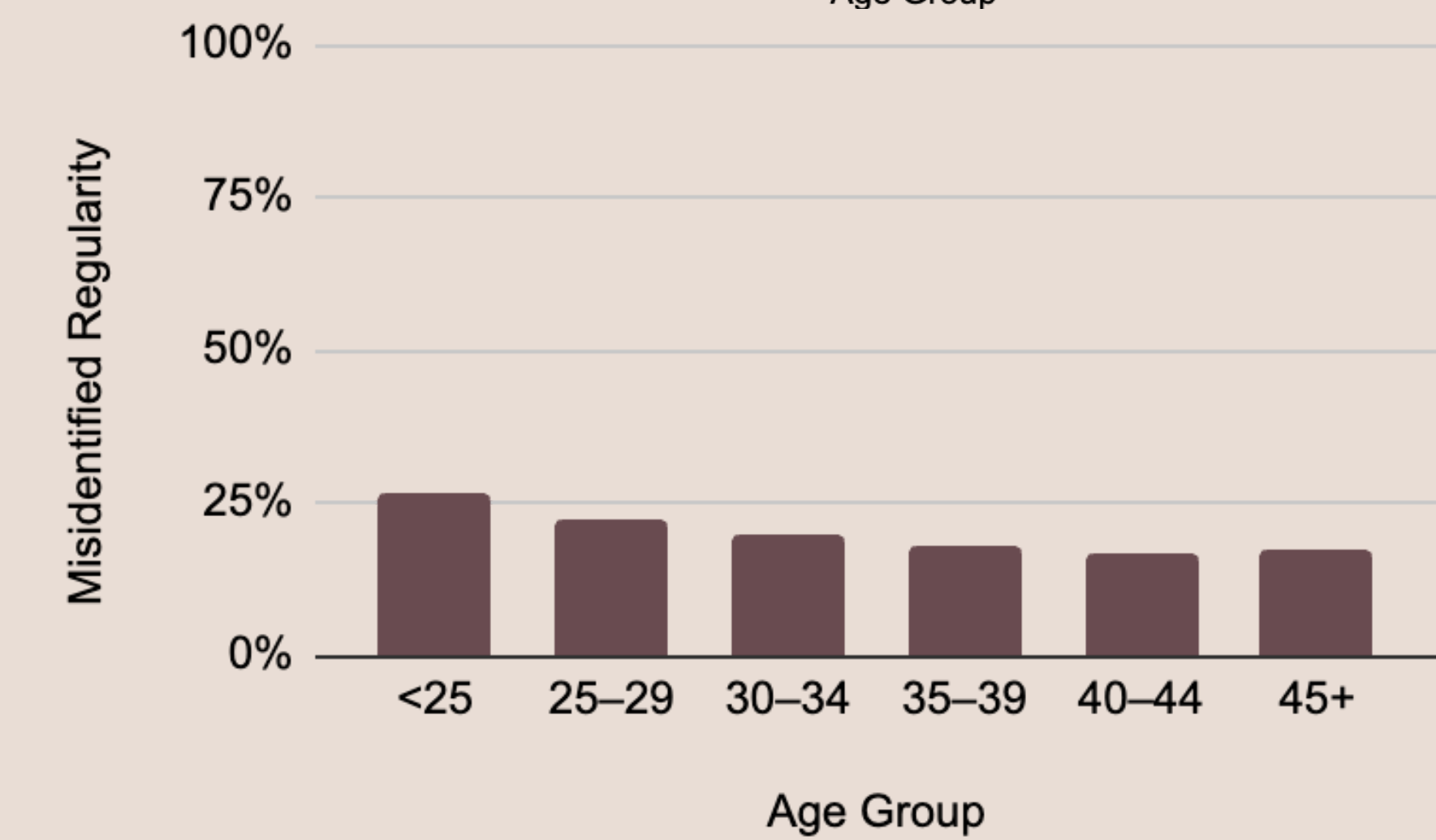


Figure 3. Misidentified cycle regularity by age amongst those reporting regular cycles

- Cycle regularity among 386,811 respondents (Figure 1):
 - 60.8% reported regular cycles
 - 26.5% irregular
 - 12.5% no periods (8.6% due to contraception or HRT)
- Cycle length awareness:
 - 22.2% (74,000) did not know their cycle length
 - Uncertainty highest in women under 25 (33.4%), declining with age until 40, then slightly rising (Figure 2)
- Irregular cycle group:
 - 41.5% didn’t know their cycle length
 - 33.9% reported a clinically regular length (21–35 days)
- Regular cycle group (233,379 women):
 - 18% had cycle lengths outside the regular range
 - 3.4% <21 days, 0.8% >35 days
 - Misidentification most common in under-25s (26.7%), decreasing with age, slight rise after 40 (Figure 3)
- Other findings:
 - 31,932 didn’t know their period length
 - 4,479 confused period length with cycle length

Conclusion

This study highlights significant gaps in menstrual health literacy, particularly among younger and perimenopausal women. Given the increasing reliance on self-reported menstrual data for health and fertility tracking, limited understanding of cycle characteristics could impact reproductive health and fertility outcomes.

Enhanced education around menstrual health could empower individuals to better understand their cycles, support timely identification of potential health issues, and ultimately improve reproductive health and fertility outcomes.