

# Examining Menstrual Tracking to Inform the Design of Personal Informatics Tools

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## ABSTRACT

We consider why and how women track their menstrual cycles, examining their experiences to uncover design opportunities and extend the field's understanding of personal informatics tools. To understand menstrual cycle tracking practices, we collected and analyzed data from three sources: 2,000 reviews of popular menstrual tracking apps, a survey of 687 people, and follow-up interviews with 12 survey respondents. We find that women track their menstrual cycle for varied reasons that include remembering and predicting their period as well as informing conversations with healthcare providers. Participants described six methods of tracking their menstrual cycles, including use of technology, awareness of their premenstrual physiological states, and simply remembering. Although women find apps and calendars helpful, these methods are ineffective when predictions of future menstrual cycles are inaccurate. Designs can create feelings of exclusion for gender and sexual minorities. Existing apps also generally fail to consider life stages that women experience, including young adulthood, pregnancy, and menopause. Our findings encourage expanding the field's conceptions of personal informatics.

## Author Keywords

Menstrual tracking; menstrual cycle; period; personal informatics; lived informatics; women's health; inclusivity.

## ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI).

## INTRODUCTION

Personal tracking for self-knowledge is commonplace, from recording finances for accountability to tracking location for pure curiosity. Health tracking has perhaps captured the most attention, with nearly 70% of US adults tracking a health indicator [14]. However, relatively little attention has been paid to tracking factors specific to women's health<sup>1</sup>, including where a woman is in her menstrual cycle. When Apple

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CHI 2017, May 06 - 11, 2017, Denver, CO, USA

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ACM 978-1-4503-4655-9/17/05...\$15.00

DOI: <http://dx.doi.org/10.1145/3025453.3025635>

HealthKit launched in 2014 without support for menstrual data, the public was outraged over the exclusion of such an essential aspect of health tracking [11]. Apple later added this feature, but its exclusion sparked a conversation about inclusivity in design of personal tracking tools [33].

We consider menstrual tracking through the lens of personal informatics, with two goals. We first contribute to an ongoing conversation on women's health in HCI (e.g., [1]) by examining the practice of menstrual cycle tracking. We offer an understanding of why and how women track their menstrual cycles, focusing on how they use technology to do so. Second, we identify design challenges and concerns in digital tools for menstrual cycle tracking, drawing upon such insights to offer guidance and challenge current broader assumptions in the design of personal informatics tools.

Although not about tracking a behavior, menstrual cycle tracking fits Li et al.'s definition of personal informatics as tracking to obtain self-knowledge [25]. The practice of menstrual cycle tracking challenges many assumptions of personal informatics. For example, women often track their menstrual cycles without an explicit goal of action, but instead for awareness of their place in their menstrual cycle. Understanding the differences and commonalities between menstrual cycle tracking and other domains of personal informatics extends how we as a field consider personal informatics and design our personal informatics tools.

Toward these goals, we collected and analyzed data from three sources. We first collected and coded 2,000 reviews of popular menstrual tracking apps on the iPhone App Store and Android Market. We then surveyed 687 people to understand their practices around tracking menstrual cycles. We finally conducted follow-up interviews with 12 survey respondents to gather in-depth perspectives of those practices.

In this paper we contribute:

- An empirical description of *why* women track their menstrual cycles. Women track to better understand their bodies and mental states, to have materials prepared for

<sup>1</sup> We use the gendered term "women" in this paper to refer to anyone who has, or has previously had, a menstrual cycle. This follows the general use of the term "women's health" in the HCI community to discuss health issues around pregnancy, menstruation, menopause, and breast cancer. We acknowledge not all people who have a menstrual cycle identify as women, and not all people who identify as women have a menstrual cycle.