Exploring New Design Directions for Menstrual Tracking Technology

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Abstract
Our CHI 2017 paper includes design recommendations to make menstrual tracking apps more useful, discreet, and inclusive. This workshop supports our plans to explore how these ideas can manifest in designs, providing a timely environment for exploration and feedback from researchers in women's health and HCI.

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Menstrual tracking; cycle; personal informatics.

ACM Classification Keywords
H.5.m. Information Interfaces and Presentation.
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Introduction
Personal tracking for self-knowledge is common, particularly around health, with nearly 70% of US adults tracking a health factor [3]. Women[1] often track where they are in their menstrual cycle, with many using apps or other digital tools for their tracking.

Our CHI 2017 paper describes how women track their menstrual cycles with particular attention to how tools are and are not supporting women's tracking needs and goals [2]. We make recommendations for how designs

[1] We use "women" to refer to anyone who has a menstrual cycle. Not all people who have a menstrual cycle identify as women.

Figure 1. The iconography in Clue suggests a male sexual partner. Some participants felt design choices like these excluded their needs and preferences.

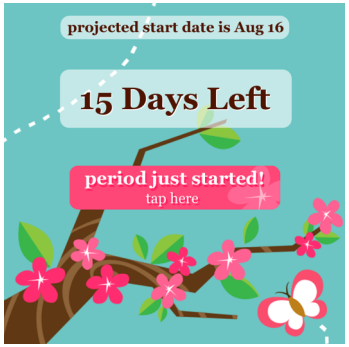

Figure 2. Most period tracking apps use feminine, flowery, pink aesthetics, including P. Tracker Lite. Participants often found this design insulting. Others wished apps used a more discreet aesthetic.

could be improved to be more useful, discreet, and inclusive. As follow-up work, we are exploring how those recommendations could manifest in designs.

The Hacking Women's Health workshop provides a timely opportunity to explore these ideas. We are especially interested in discussing our ideas and collaborating with researchers and practitioners who are experts in women-centered and feminist design. Our team's expertise is in personal informatics, and we approached this project through that lens. Designs could be further improved through engagement with scholars focused on re-envisioning women's health technology and designing to overcome taboos around the female body.

Potential Design Directions

This section briefly describes directions we would be interested in exploring in the workshop. Our CHI 2017 paper has more detail on these directions [2]. We do not anticipate having time to explore all of these ideas.

Modeling and Communicating Accuracy
Menstrual tracking apps fail to account for instances where predictions fall out of line with reality (e.g., due to stress, exercise, some types of emergency contraception). Designs could present predictions around periods and ovulations as probabilities rather than absolutes. Further, prediction algorithm designers would benefit from understanding what constitutes "acceptable" accuracy in menstrual tracking [4].

Designing for Inclusivity
Designs often assume the gender or sexual orientation of the person using the app through their language and iconography (Figure 1). We could explore how designs can be inclusive, yet avoid too many selection options.

Overcoming Taboo in Designs
Menstrual tracking apps tend to employ flowery and pink aesthetics (Figure 2). As a result, the app's functionality becomes obvious if a woman uses the app around others. The female body is often viewed as taboo [1], and many women find it uncomfortable to use such an obvious interface in public. Designs could be more discreet in their aesthetics. Alternatively, designs could help overcome the taboo.

Supporting Varied and Changing Needs
Women often use the same apps for different goals, including fertility, pregnancy avoidance, general health checks, or awareness. Many women express that apps focus too much on fertility and pregnancy, particularly those who track for awareness. Designs could provide ways to show or hide such information as desired. An interesting question is how designs could support changes in a woman's tracking goals over time.

Author Biography

Daniel Epstein is the primary author of this work and will attend the workshop. He is a Ph.D. student at the University of Washington, co-advised by James Fogarty and Sean Munson. He explores how personal informatics and self-tracking tools can better integrate into people's everyday lives. He uses varied methods to explore design opportunities, including surveys and interviews, prototyping, and web and app development.

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