Study Sheds Light on Menstruation Around the World

The large-scale Apple Women's Health study helps dispel the stigma associated with menstruation.

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On November 14, 2020, the Apple Women's Health Study celebrated its first anniversary. Conducted in partnership with the Harvard T.H. Chan School of Public Health and the National Institute of Environmental Health Sciences (NIEHS), the study aims to identify the demographic and lifestyle factors that influence reproductive health in women of all ages and races.

The methodology used is simple. By downloading the Apple Research app onto a personal iPhone or Apple Watch, women ages 18 and older can enroll at any time. Participation involves reporting menstrual timing, flow and symptoms via brief monthly surveys. (The only physiological prerequisite is that a woman has experienced at least one period in her lifetime.)

Historically, menstruation has been neglected as a measure of feminine health, according to an Apple press release. What's more, it is stigmatized in many countries.

The study's digital format confers a major advantage: It allows the principal investigators to broaden the scope and scale of research into women's periods.

"Our study will help to achieve a more gender-equal future, in which all people with menstrual cycles have access to the health services and menstrual products needed to feel safe and empowered," said Michelle Williams, the dean of faculty at Harvard T.H. Chan and one of the study's principal investigators. "By building a robust, generalizable knowledge base, the Apple Women's Health Study is helping us understand factors that make menstruation difficult and isolating for some people, in addition to elevating awareness of a monthly experience shared by women around the world."

In keeping with anecdotal evidence, preliminary data show that women experience diverse symptoms during their monthly cycle. More than 60% of the study's 6,141 respondents reported fatigue, bloating and abdominal cramping during menstruation. In addition, more than 50% reported acne and headaches, 37% reported diarrhea and sleep disturbances, 32% reported nausea and constipation and around 20% reported hot flashes and ovulation pain.

The data also reveal that symptoms do not vary by race or ethnicity. Black, Hispanic and white women all cited fatigue, bloating and abdominal cramping as some of their most common menstrual issues.

“The preliminary data we are sharing today suggests women across the country have a shared experience of a wide range of menstrual symptoms and that this natural monthly occurrence is something we should be having more discussions about,” said Shruthi Mahalingaiah, MD, an assistant professor of environmental, reproductive and women’s health at Harvard T.H. Chan, another principal investigator. “We look forward to continuing our work to create a long-term, foundational data set over time, which can inspire more research going forward.” (In an FAQ section about the study on the Harvard T.H. Chan website, the researchers state that the study is expected to span decades.)

The study is slated to be submitted for peer review and, ultimately, publication. The researchers hope the results will lift the veil on the development and progression of common reproductive diseases and disorders, including infertility and polycystic ovarian syndrome (PCOS). Estimated to affect as many as 5 million women in the United States, according to the Centers for Disease Control and Prevention, PCOS can cause obesity, hirsutism (excessive hairiness) and menstrual irregularity and increase women’s risk for type 2 diabetes.

To learn more about the politicization of menstruation, read “Menstruation Now an Economic and Empowerment Issue.” And to learn about how menstrual irregularity can affect your health, read “Women With Erratic Menstrual Cycles Face Higher Mortality Rates.”

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