

SHIFTING MENSTRUAL PATTERNS AND RISING PREMENSTRUAL SYMPTOMS OVER THE PAST DECADES (1998–2025) AMONG YOUNG LITHUANIAN WOMEN

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Research increasingly suggests that menstrual cycle characteristics are associated with long-term physical (cardiovascular disease, metabolic disorders, breast cancer) and mental health. Early or late menarche, irregular cycles, changes in cycle length, menstrual bleeding may be associated with reproductive lifespan and biological aging. Recent studies also raise the question of whether the increasing incidence of PMS reflects a true increase or improved detection. There is a lack of research examining the characteristics of the menstrual cycle, its trends, and biopsychosocial factors.

The aim of this study was to analyse changes in timing of menstruation, cycle length, bleeding length and premenstrual (PMS) symptoms over the past 20–30 years in young Lithuanian women.

For this purpose, the menstrual cycle characteristics of young (16–25 years old) Lithuanian women were analysed using studies from 1998–2002 (N=1405), 2010–2014 (N=1447), and 2021–2025 (N=1385).

The mean age at menarche decreased from 13.22 years (1998–2002) to 12.38 years (2021–2025). The duration of the menstrual cycle increased (from 27.8 to 28.4 days, $p<0.05$), as did the frequency of menstrual bleeding (from 4.0 to 4.78 days, $p<0.01$) and the prevalence of irregular cycles (from 24% to 35%, $p<0.05$). As for the different PMS symptoms, their prevalence increased several-fold (on average from 24% to 89%). In 2025, almost all women (99%) experienced at least one PMS symptom in the premenstrual week or during the menstrual phase (97%), but as many as 88% of women also experienced a PMS attributed symptom in the middle of the cycle. The most common symptoms were fatigue, stress, and breast tenderness. More common premenstrual symptoms were associated with longer menstrual cycles and bleeding, sexual activity, increased use of social media, and dissatisfaction with one's body image.

Keywords: Menstrual cycle; Premenstrual syndrome; Changes and trends; Biopsychosocial factors.