Menstrual Symptoms, Satisfaction, Adherence, Health-Related Quality of Life, and Depression During Monthly-Cycle Oral Contraception Among Women in the EU and US

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INTRODUCTION

- Extended-cycle oral contraception (OC) regimens include <28 days of active pills and reduce the number of scheduled bleeding episodes compared with monthly-cycle OC.
- Extended-cycle OC may improve menstrual cycle-associated symptoms and inconvenience or interference with daily activities, potentially resulting in improved health-related quality of life (HRQOL) vs. monthly-cycle OC.
- Extended-cycle OC recently became available to women in the European Union (EU).
- Available data are limited and it is not well-known whether EU women will show improved outcomes with extended-cycle OC.
- Women in the United States (US) showed improved OC satisfaction, OC regimen adherence, and menstrual symptoms with extended-cycle vs. monthly-cycle OC in the 2013 National Health and Wellness Survey (NHWS)1.

Examination of OC-related outcomes in EU and US women using monthly-cycle OC could help inform whether EU women may show similar improved outcomes with extended-cycle OC.

OBJECTIVE

- To examine menstrual symptoms, OC satisfaction and adherence, HRQOL, and depression among EU and US women using monthly-cycle OC to help understand whether EU women may also benefit from extended-cycle OC.

METHODS

Study Design and Patient Population

- Study data were drawn from the 2013 NHWS, which is a large-scale, self-reported general population survey that provides data on disease- and condition-specific population segments.
- Data are collected annually in Europe, the US, Japan, China, Brazil, and Russia.
- Respondents are recruited from an internet panel using a random stratified sampling framework to ensure the demographic composition (i.e., age, gender, and in the US, ethnicity also) is representative of the adult population.
- Our study included data from the US (n=75,000) and 5 EU countries (EU5; n=62,000).
- The EU5 countries included France, Germany, Italy, Spain, and the United Kingdom.
- Eligible women were 18-50 years old, premenopausal and without a race/ethnicity was not collected for women from the EU5.

Measures

- Assessment of menstrual cycle symptoms included presence (yes vs no) of menstrual cycle pain in the past month, heavy menstrual bleeding, or dysmenorrhea.
- Satisfaction with monthly-cycle OC was rated on a scale from 1 (“extremely dissatisfied”) to 7 (“extremely satisfied”).
- Adherence with monthly-cycle OC was examined using the 8-item Morisky Medication Adherence Scale (MMAS).
- MMAS scores were categorized as low/medium adherence or high adherence4.
- HRQOL was assessed using the Medical Outcomes Study 36-Item Short Form Survey (SF-36v2) scores for physical component summary (PCS), mental component summary (MCS), and health utilities (SF-6D index).
- SF-36v2, mean±SD EU5 Women US Women
  - Physical Component Summary
    - EU5 Women: 54.2±13, US Women: 54.2±13
  - Mental Component Summary
    - EU5 Women: 44.2±10.5, US Women: 46.7±10.2
- Depression was examined using the 9-item Patient Health Questionnaire (PHQ-9).
- PHQ-9 scores in the majority of EU5 and US women suggest no depression to minimal depression (score <4) or mild depression (score 5-9)5.
- OC adherence was examined using the 8-item Morisky Medication Adherence Scale (MMAS).
- MMAS scores were categorized as low/medium adherence or high adherence4.
- OC satisfaction was rated on a scale from 1 “extremely dissatisfied” to 7 “extremely satisfied”.
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RESULTS

Table 1. Demographic Characteristics of Women from EUS Countries Using Monthly-Cycle OC

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>EU5 Women (n=5905)</th>
<th>US Women (n=3616)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, years (mean±SD)</td>
<td>30.4±7.5</td>
<td>30.3±7.6</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
<td></td>
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<tr>
<td>Non-Hispanic White</td>
<td>2720 (58.4)</td>
<td>2420 (67.0)</td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>303 (6.6)</td>
<td>206 (5.7)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>296 (6.2)</td>
<td>238 (6.6)</td>
</tr>
<tr>
<td>Other ethnicity</td>
<td>209 (4.5)</td>
<td>109 (3.0)</td>
</tr>
<tr>
<td>Education, n (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤&lt;4-year college or university</td>
<td>3084 (52.2)</td>
<td>1589 (43.8)</td>
</tr>
<tr>
<td>4-year college or university degree or higher</td>
<td>2821 (47.8)</td>
<td>2033 (56.2)</td>
</tr>
<tr>
<td>Marital status, n (%)</td>
<td></td>
<td></td>
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<tr>
<td>Single/divorced/separated/widowed</td>
<td>2730 (46.2)</td>
<td>1737 (48.0)</td>
</tr>
<tr>
<td>Married/living with partner</td>
<td>3175 (53.8)</td>
<td>2150 (52.0)</td>
</tr>
<tr>
<td>BMI category, n (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underweight</td>
<td>390 (8.7)</td>
<td>150 (4.1)</td>
</tr>
<tr>
<td>Normal weight</td>
<td>3550 (69.2)</td>
<td>1822 (52.6)</td>
</tr>
<tr>
<td>Overweight</td>
<td>1168 (19.8)</td>
<td>838 (23.2)</td>
</tr>
<tr>
<td>Obese</td>
<td>623 (10.6)</td>
<td>723 (20.0)</td>
</tr>
<tr>
<td>Unknown</td>
<td>166 (2.8)</td>
<td>83 (2.3)</td>
</tr>
<tr>
<td>Current smoker, n (%) yes</td>
<td>1476 (25.0)</td>
<td>362 (10.0)</td>
</tr>
<tr>
<td>Exercise ≥20 min for ≥1 time in past month, n (%) yes</td>
<td>4030 (68.2)</td>
<td>2827 (78.2)</td>
</tr>
<tr>
<td>Alcohol consumption, n (%) yes</td>
<td>40% (62)</td>
<td>2827 (78.2)</td>
</tr>
</tbody>
</table>

- Total sample was of EU5 (n=5905) and US (n=3616) women currently using monthly-cycle OC.
- Duration of monthly-cycle OC use was somewhat longer in EU5 vs US women (8.2±6.4 vs. 5.8±6.2 months).

- Menstrual cycle pain in the past month was reported by 36.1% of EU5 women and 47.7% of US women.
- Menstrual bleeding was rated by 11.2% of EU women and 14.3% of US women.
- Dysmenorrhea was reported by 23.7% of EU women and 15.0% of US women.

- The mean±SD OC satisfaction rating was 5.5±1.5 in EU5 women and 5.8±1.2 in US women.
- OC satisfaction ratings indicate moderate to high satisfaction with monthly-cycle OC in both EU5 and US women.

- US women had slightly better health status (US mean 0.8; EU5 mean 0.7).

- Approximately one-third of women reported high adherence whereas two-thirds reported low to medium adherence.

CONCLUSIONS

- Menstrual symptoms, satisfaction with OC, adherence, physical and mental well-being, and depression did not appear to differ greatly among EU and US women using monthly-cycle OC.
- Because US women have previously shown better outcomes with extended-cycle OC vs. monthly-cycle OC, the similarities between EU and US women using monthly-cycle OC suggest women in the EU may also benefit from extended-cycle OC.
- With increasing availability of extended-regimen OC in the EU, research examining satisfaction, adherence, menstrual symptoms, and HRQOL compared with monthly-cycle OC in EU women is warranted.

REFERENCES


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