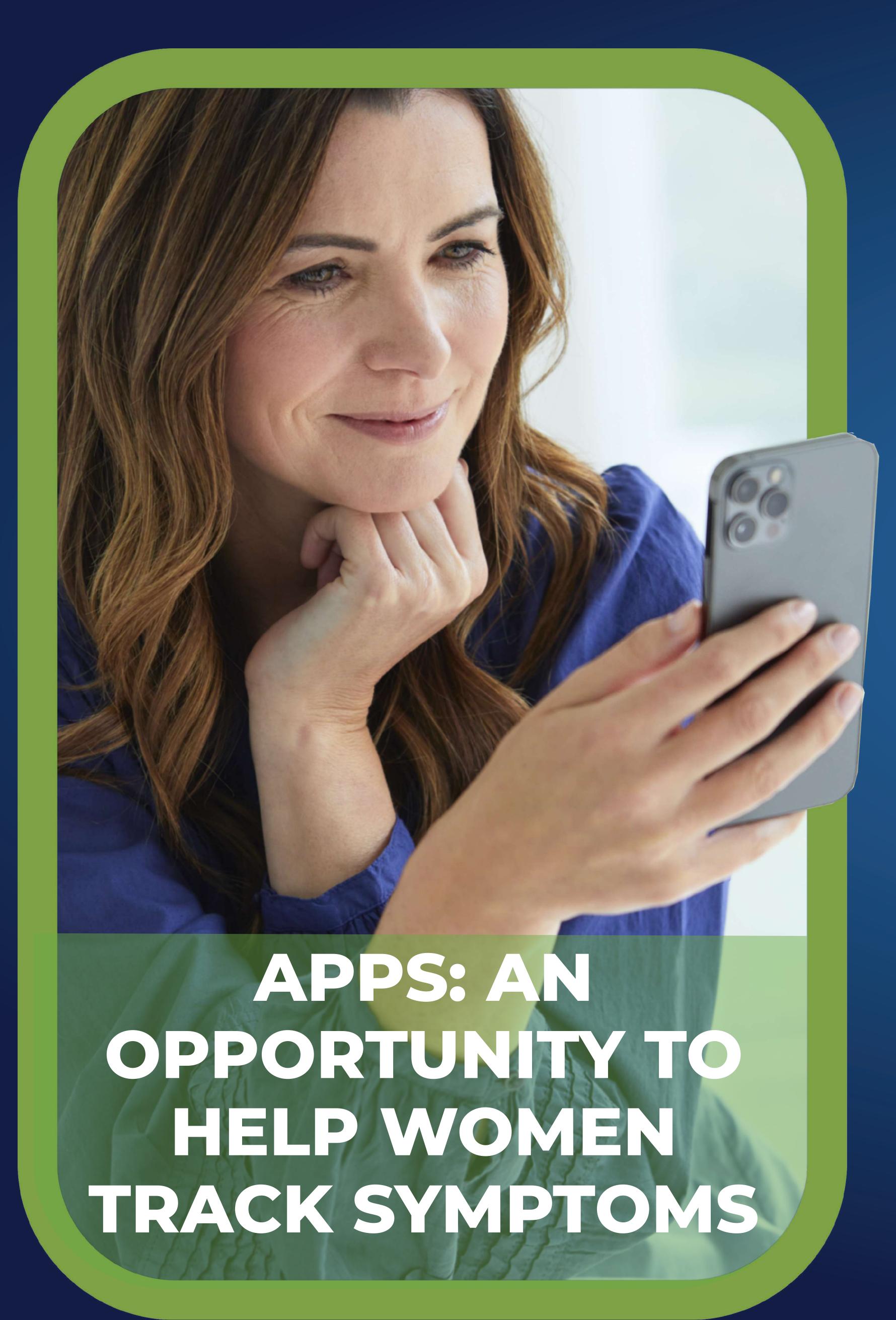
Perimenopause symptom prevalence and tracking: importance for the patient and clinician

Sarah Berga¹, Suruchi Thakore², Lucy Broadbent³, Fiona Clancy³, Joanna Pike⁴

1 Professor and Chair, Department of Obstetrics and Gynecology, Jacobs School of Medicine and Biomedical Sciences, University of Cincinnati, OH, USA. 3 SPD Development Company Limited, Priory Business Park, Bedford, MK44 3UP, University of Cincinnati, OH, USA. 3 SPD Development Company Limited, Priory Business Park, Bedford, MK44 3UP, University of Cincinnati, OH, USA. 3 SPD Development Company Limited, Priory Business Park, Bedford, MK44 3UP, University of Cincinnati, OH, USA. 3 SPD Development Company Limited, Priory Business Park, Bedford, MK44 3UP, University of Cincinnati, OH, USA. 3 SPD Development Company Limited, Priory Business Park, Bedford, MK44 3UP, University of Cincinnati, OH, USA. 3 SPD Development Company Limited Kingdom, 4 SPD Swiss Precision Director for the Uc Center for Reproductive Endocrinology and Infertility, University of Cincinnati, OH, USA. 3 SPD Development Company Limited, Priory Business Park, Bedford, MK44 3UP, University of Cincinnati, OH, USA. 3 SPD Development Company Limited, Priory Business Park, Bedford, MK44 3UP, University of Cincinnati, OH, USA. 3 SPD Development Company Limited, Priory Business Park, Bedford, MK44 3UP, University of Cincinnati, OH, USA. 3 SPD Development Company Limited, Priory Business Park, Bedford, MK44 3UP, University OH, USA. 3 SPD Development Company Limited, Priory Business Park, Bedford, MK44 3UP, University OH, USA. 3 SPD Development Company Limited Representation Com



Background

The menopause transition is an important reproductive milestone. Tens of millions of women are approaching menopause (1). Women commonly identify this transition from cycle irregularities and the wide range of associated menopausal symptoms (2). However, symptoms often start years before their final menstrual period. Both healthcare professionals and patients alike often confuse menopause and the menopausal transition (or perimenopause). Lack of recognition of perimenopause often results in failure to diagnose and intervene (3).

Home testing has the potential to help empower women to understand their own reproductive physiology. Most women's health apps focus on menstrual cycle tracking, however menopause apps also belong to this broader landscape. Perimenopausal symptom tracking could help women better understand the menopause transition and may facilitate interactions with their healthcare professionals.

Objective

Identify the prevalence of menopause-related symptoms in women aged 35-60 years and their use of methods to track them.

Methods

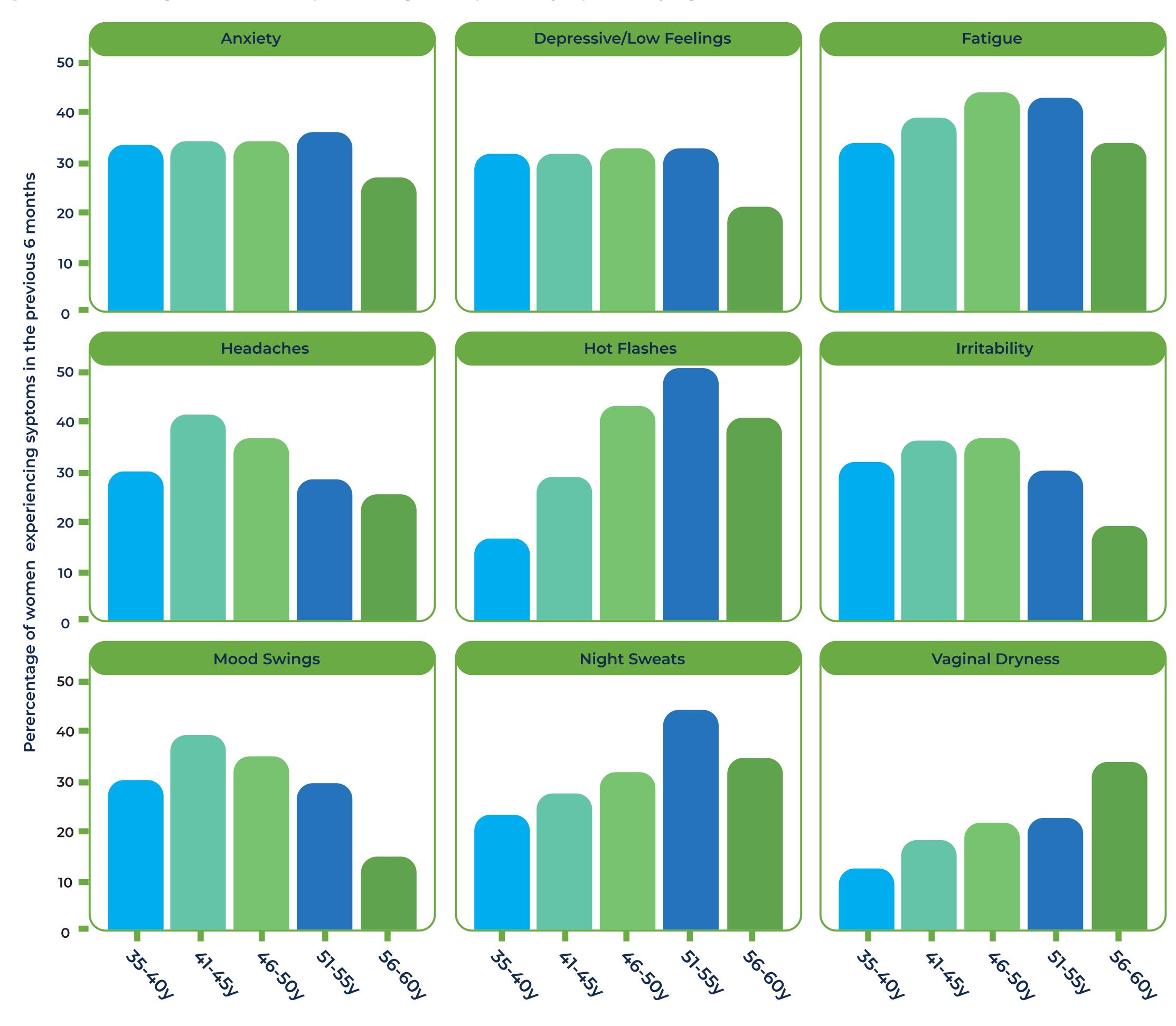
Women were surveyed about 22 menopause-related symptoms they may have experienced in the previous 6 months (conducted by Hotspex, February 2022) and their symptoms ranked according to frequency (by SPD Development Company Ltd). 1022 US women between the ages of 35 and 60 participated. The use of methods to track menopause symptoms, perceptions of, and attitudes toward menopause were also surveyed.

The statistical analysis utilized dummy coding to categorize the presence or absence of symptoms in our study population, where 0 indicated no symptom and 1 presence of a symptom. The analysis of perceptions and attitudes toward menopause was determined by calculating the percentage of women given a value between one to five according to how much they agreed or disagreed with the statements given. A limitation of the study is how well women recalled and perceived their symptoms.

Results

Fatigue was consistently listed in the top 5 symptoms for all age groups (prevalence ranging from 33- 44%). Younger women (35-55 years old) were more likely to experience mood symptoms, including irritability (30-37%) and mood swings (29-39%). Vaginal dryness became more troublesome with age, peaking in the 56-60 years old cohort (33%). Vasomotor symptoms including hot flashes (16-51%) and night sweats (23-44%) increased with age, even though these symptoms declined in the oldest cohort group (41% and 34%) (**Figure 1**).

Figure 1: Percentage of women experiencing menopausal symptoms by age



Reported perceptions and attitudes related to menopause included: 30% of women felt like they were losing their identity, 33% felt it was the end of their femininity, 36% felt overwhelmed, 32% felt alone in the process, and between 20 - 26% felt ashamed or embarrassed. Reassuringly, however, 79% felt they could talk to their doctor about menopause.

Finally, apps used to track symptoms were divided into two categories: general period / cycle tracking apps and menopause tracking apps. Women 45 years old or younger (16%) used mostly cycle tracking apps. Fewer than 6% of women of any age used menopause tracking apps and women between 56-60 years old reported not using either (**Table 1**).

Table 1. Percentage of women using apps to help track menopausal syptoms.

App type	35-40y	41-45y	46-50y	51-55y	56-60y
A general period/cycle tracking app	6.6	9.5	8.0	3.4	0.0
A menopause symptom tracking app	2.6	0.3	2.0	0.4	0.0

Conclusion

Women's perceptions of menopause vary. However, loneliness, embarrassment, and a feeling of being overwhelmed are all common during the menopause transition. Tracking perimenopausal symptoms along with menstrual cycles may be beneficial to facilitate conversation between patient and healthcare professionals and could allow for personalized management planning.

- 1. Population figures from 2019 US Census Data (https://www2.census.gov/programs-surveys/popest/tables/2010-2019/national/asrh/nc-est2019-syasexn.xlsx)
- 2. Backonja U, Taylor-Swanson L, Miller AD, Jung SH, Haldar S, Woods NF. "There's a problem, now what's the solution?": suggestions for technologies to support the menopausal transition from individuals experiencing menopause and healthcare practitioners. J Am Med Inform Assoc. 2021 Feb 15;28(2):209-221. doi: 10.1093/jamia/ocaa178. PMID: 33582820; PMCID: PMC7883989.
- 3. Berga SL, Garovic VD. Barriers to the Care of Menopausal Women. Mayo Clin Proc. 2019 Feb;94(2):191-193. doi: 10.1016/j.mayocp.2018.12.016. PMID: 30711116; PMCID: PMC6597249.

Declaration of interest:
This study was funded by SPD Swiss Precision Diagnostics GmbH, manufacturer of Clearblue® Pregnancy Tests, Clearblue® Ovulation Tests & Clearblue® Menopause Stage Indicator.