
MENTAL HEALTH DURING THE MENOPAUSE TRANSITION: FINDINGS FROM THE STUDY OF WOMEN'S HEALTH ACROSS THE NATION

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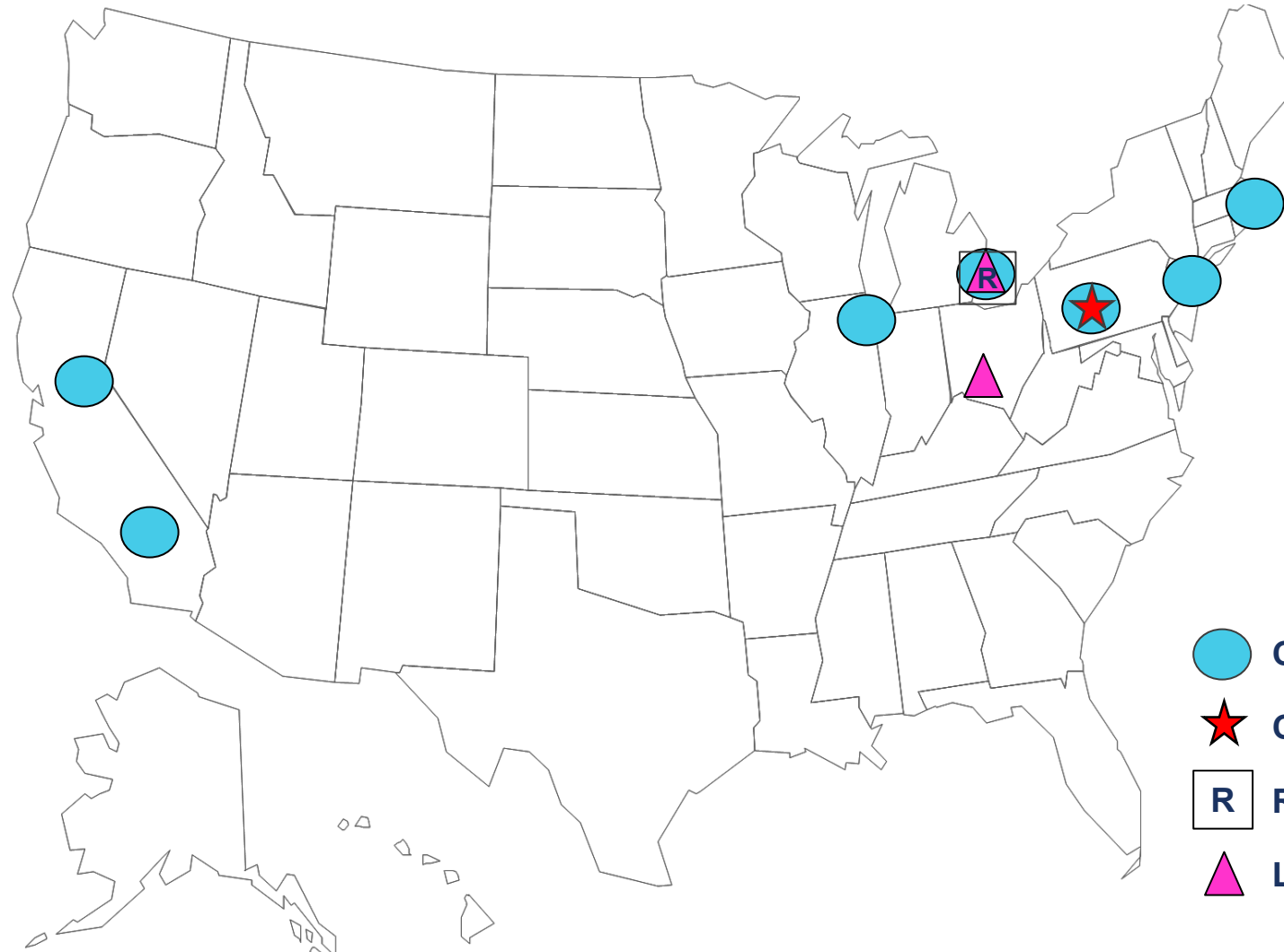
*NASEM ESSENTIAL HEALTH CARE SERVICES RELATED TO ANXIETY AND MOOD DISORDERS IN WOMEN: A
WORKSHOP, APRIL 29-30, 2024*

FUNDING AND DISCLOSURES

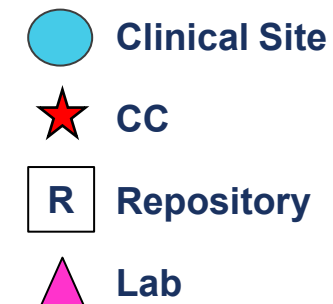
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Disclosures: Bayer, Astellas, Hello Therapeutics

STUDY OF WOMEN'S HEALTH ACROSS THE NATION (SWAN)



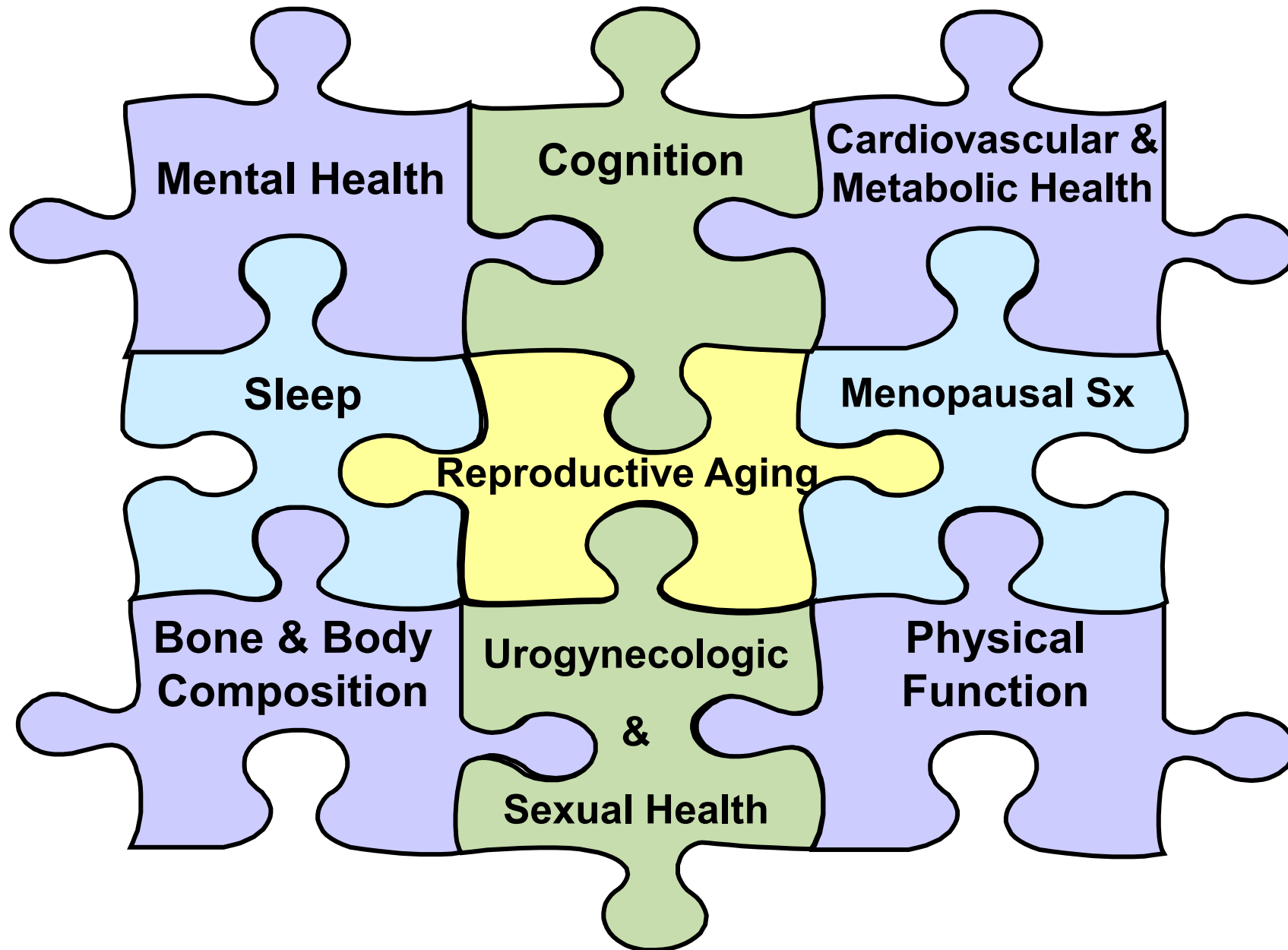
- N=3302
- Age 42-52
- 1996-present
- 18 visits

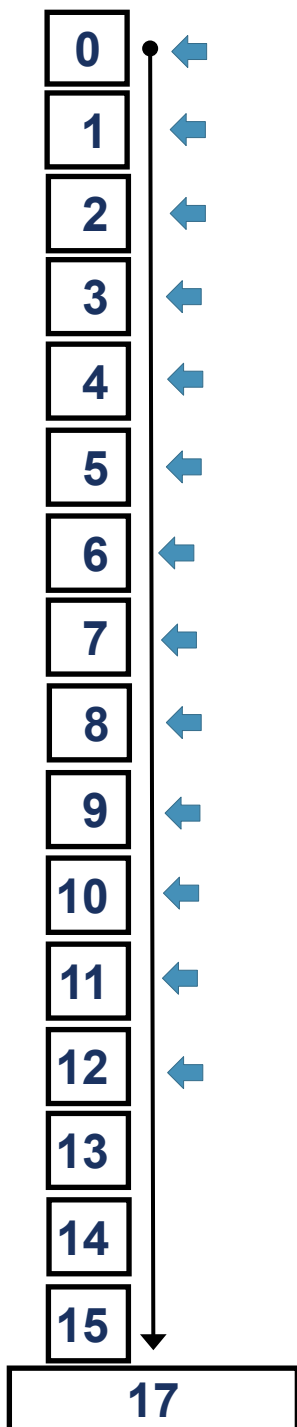


SWAN AIMS

- Characterize the natural history of the menopause transition
- Test antecedents and health consequences of the menopause transition
 - Chronologic versus reproductive aging
- Compare experiences of women across racial / ethnic groups







Core SWAN

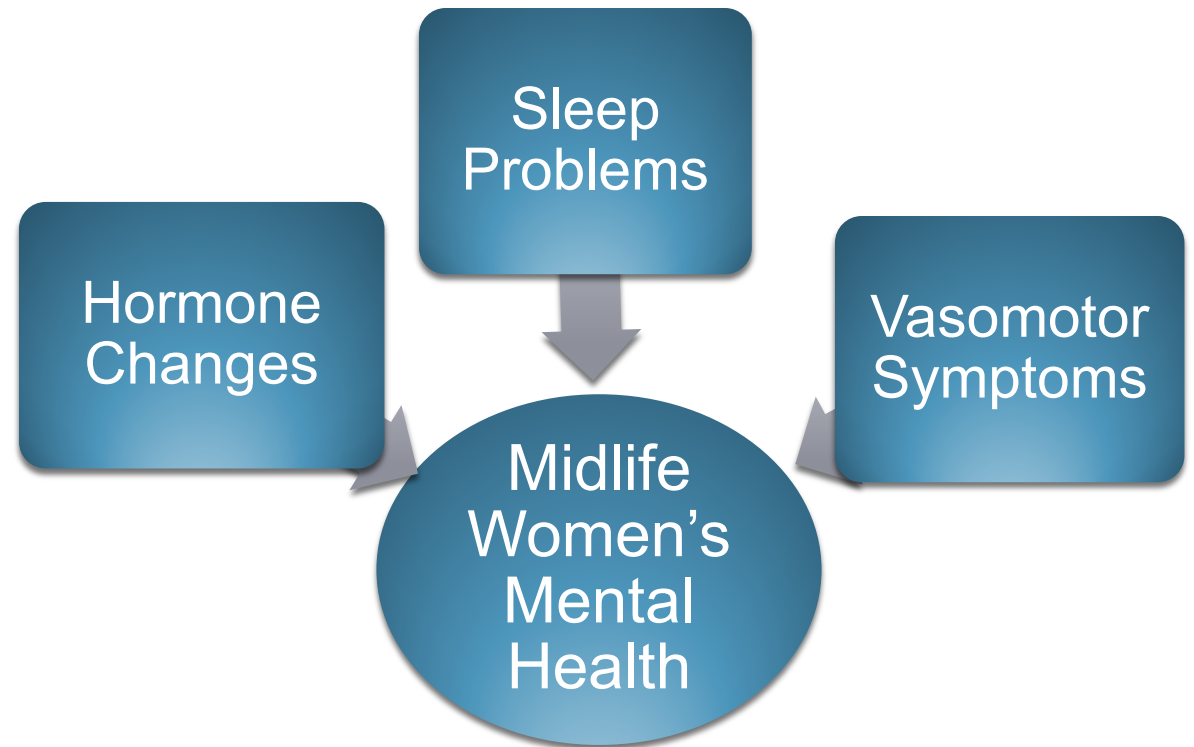
- Depression, anxiety symptoms
- Vasomotor symptoms
- Sleep
- Phlebotomy
- Height, weight, blood pressure
- Cognition
- Physical function
- Uro-gyn health and symptoms
- Adiposity, bone density
- Vascular ultrasound

SWAN Mental Health Study

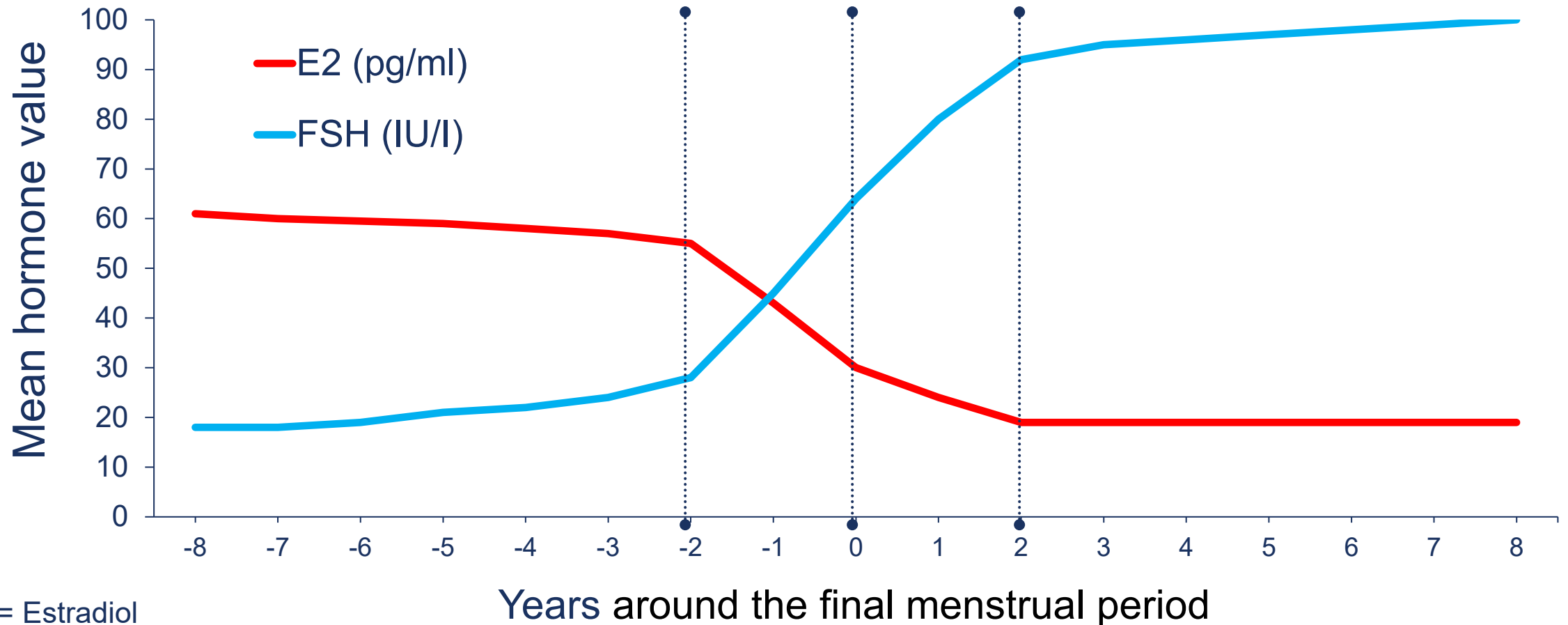
- Depressive Disorder Diagnoses (Major & minor)
- 3 sites V0, Pitt V0-12

THE MENOPAUSE TRANSITION

- Universal transition: **All women**
- Spans over a decade
- Menstrual changes
- Hormonal fluctuations
- Vasomotor symptoms, sleep problems
- Mood changes



HORMONE CHANGES OVER THE MENOPAUSE TRANSITION



E2 = Estradiol

FSH = Follicle Stimulating Hormone

(Randolph et al, 2010, *JCEM*)

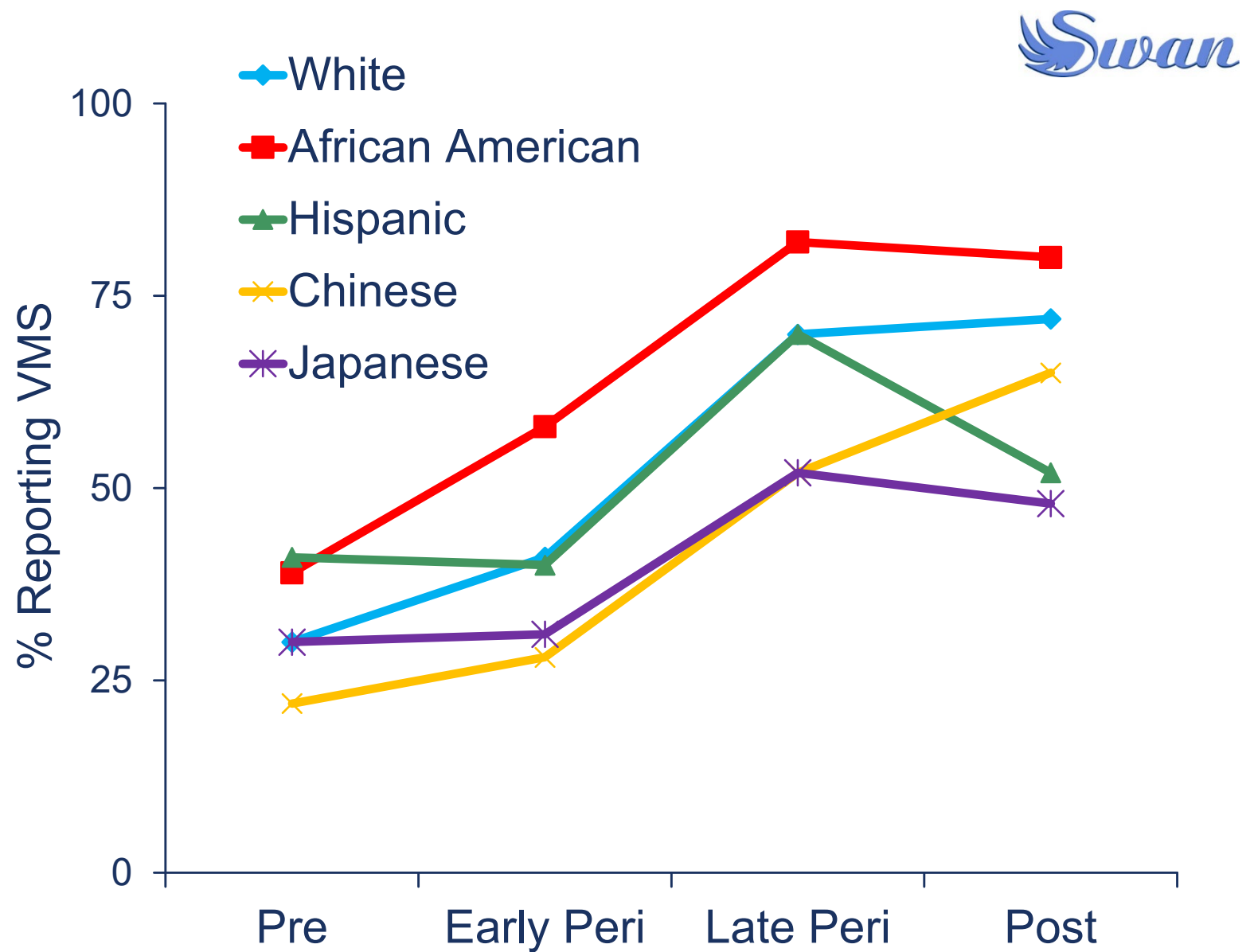
VASOMOTOR SYMPTOMS (VMS)



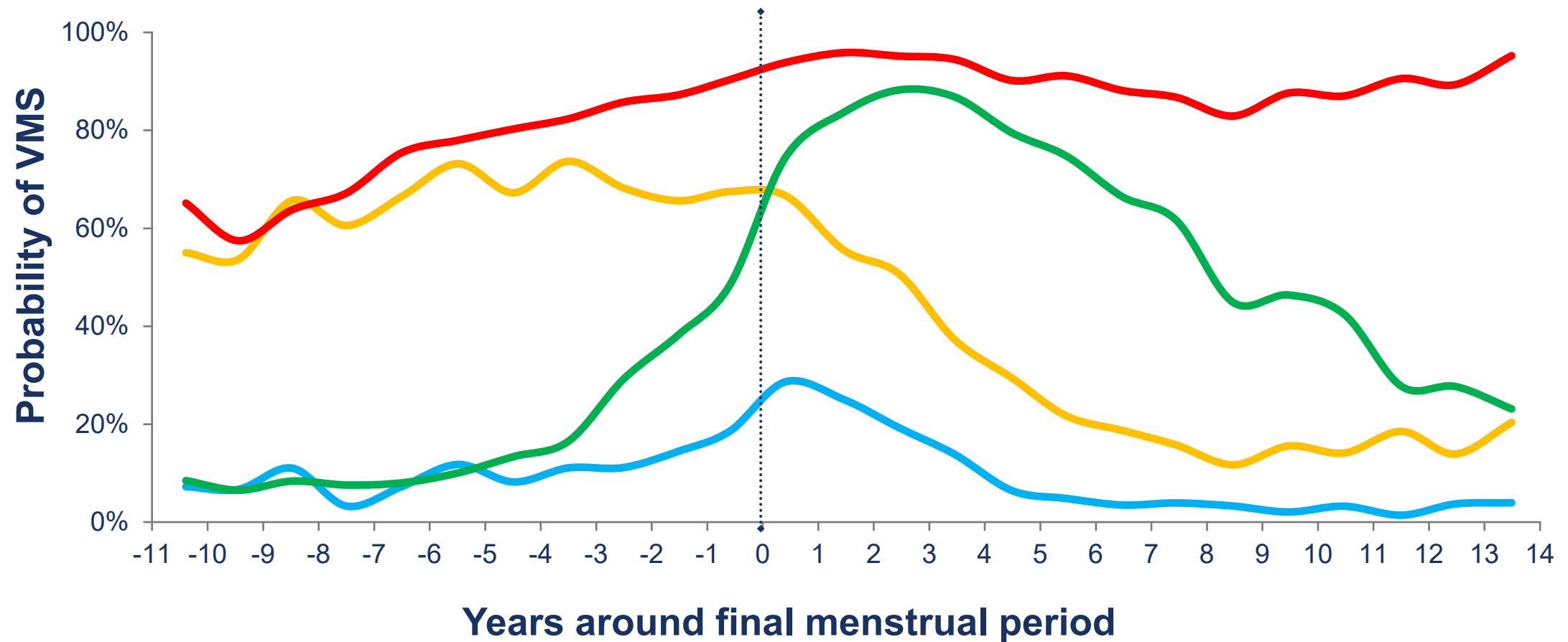
- VMS: Hot flashes / night sweats
- >70% of women experience during menopause transition
 - 30% frequent or severe
- Frequent VMS persist for 7-10 years
(Avis...Thurston, *JAMA Intern Med*, 2015)

SWAN: VMS OVER THE MENOPAUSE TRANSITION

(Gold et al., 2006, *AJPH*)



TRAJECTORIES OF VMS



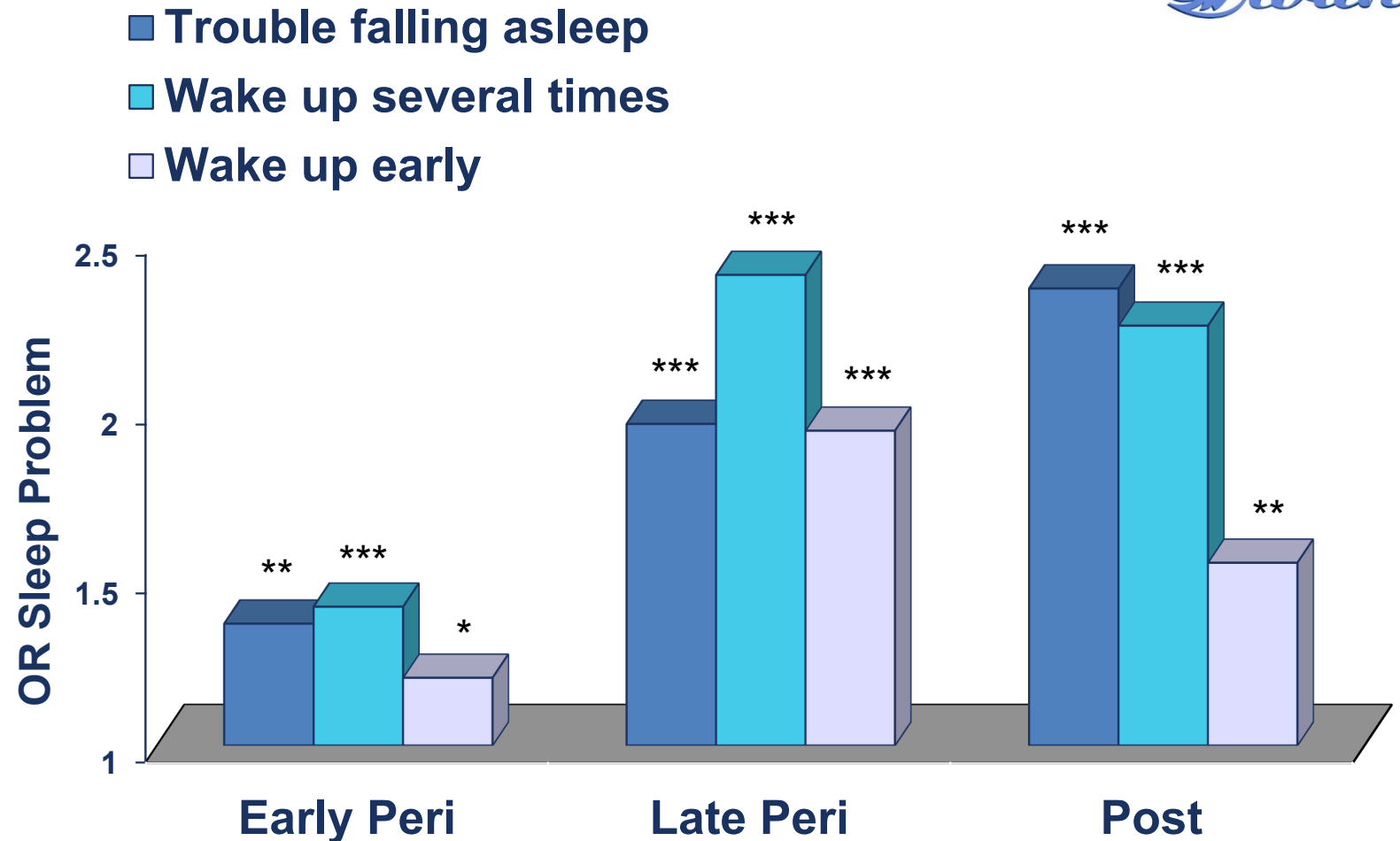
— Low, 27.0% — Early onset, 18.4% — Late onset, 29.0% — High, 25.6%

N=1455

(Tepper ...Thurston, Menopause, 2016)

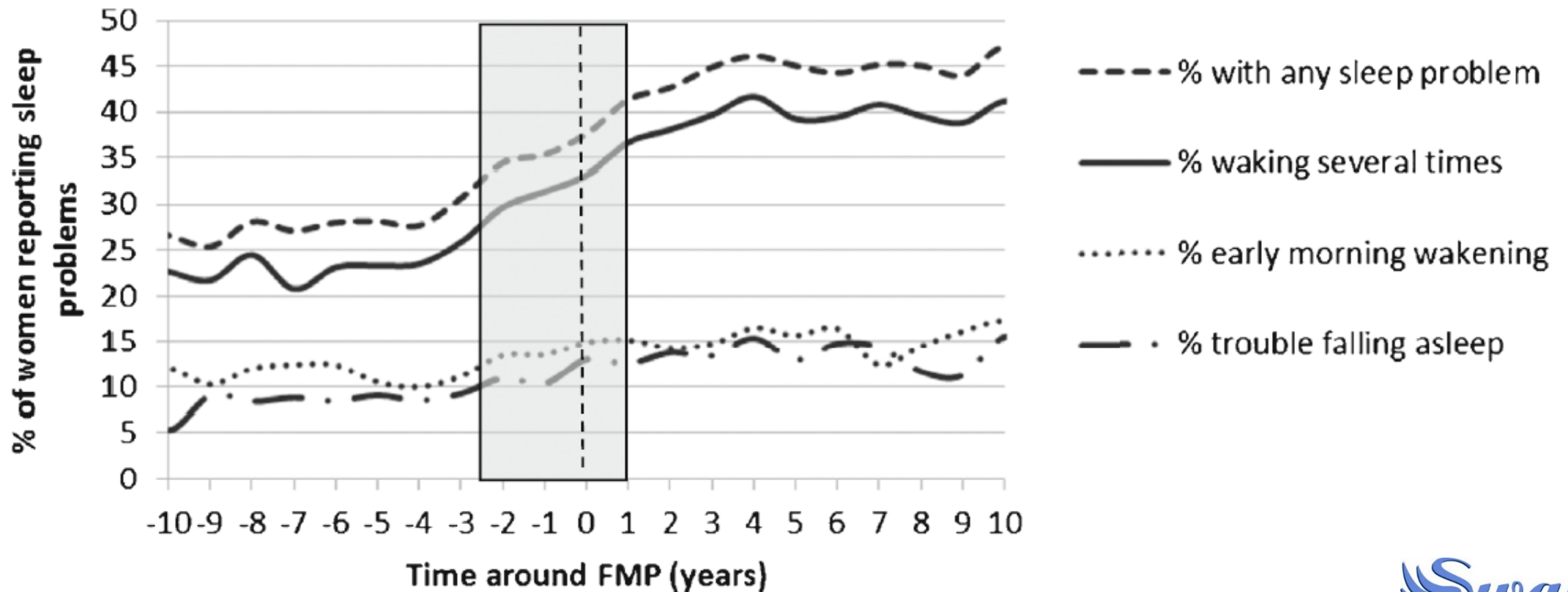
SWAN: SLEEP PROBLEMS OVER MENOPAUSE TRANSITION

(Kravitz et al, 2008, *Sleep*)



* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ vs. premenopausal
Adjusted for age, race, site, vasomotor sx, E2, FSH, N=3045

WAKING DURING THE NIGHT A PARTICULAR PROBLEM

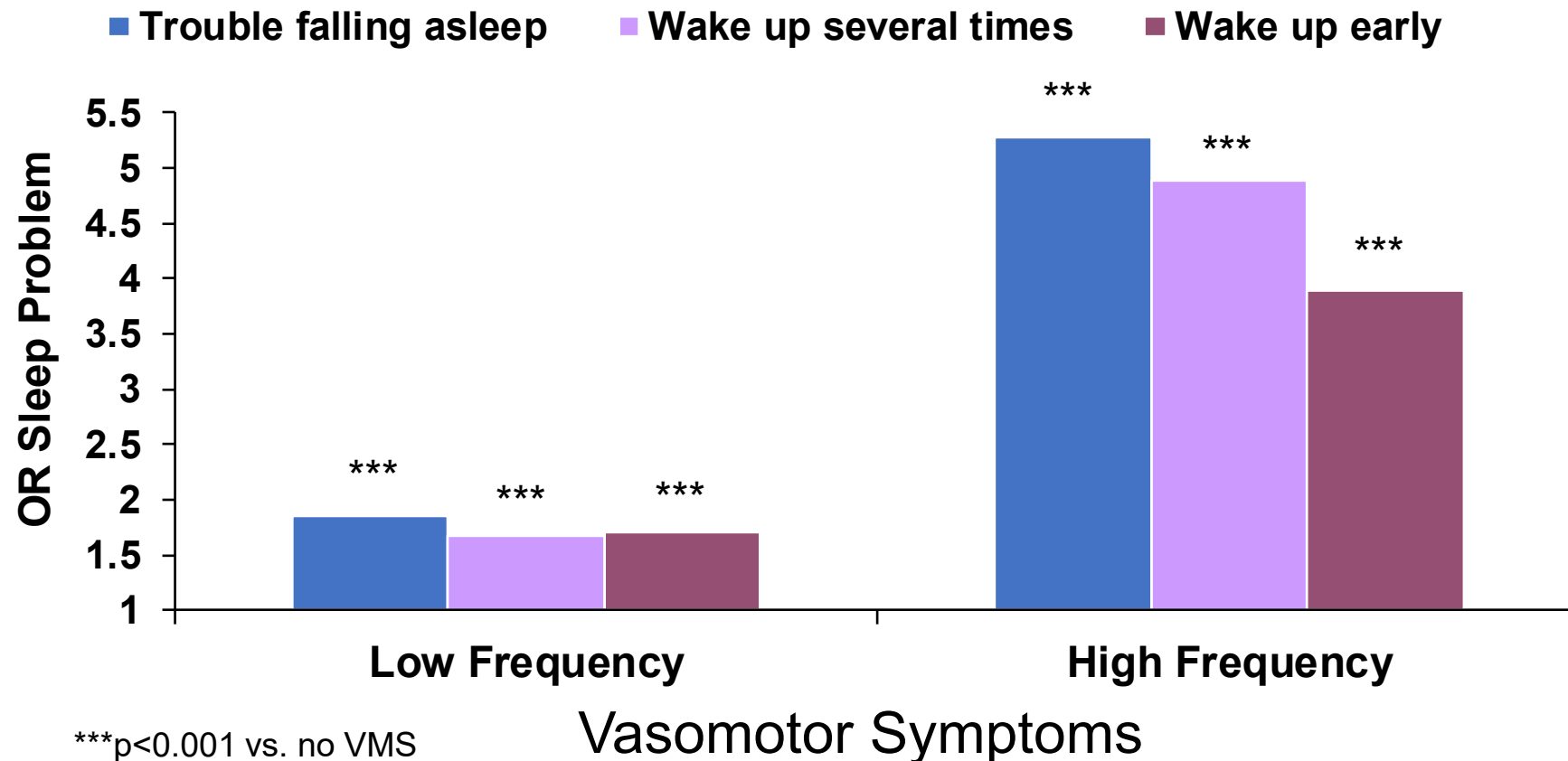


N = 1,285



(Kravitz et al. *Curr Sleep Rep*, 2017)

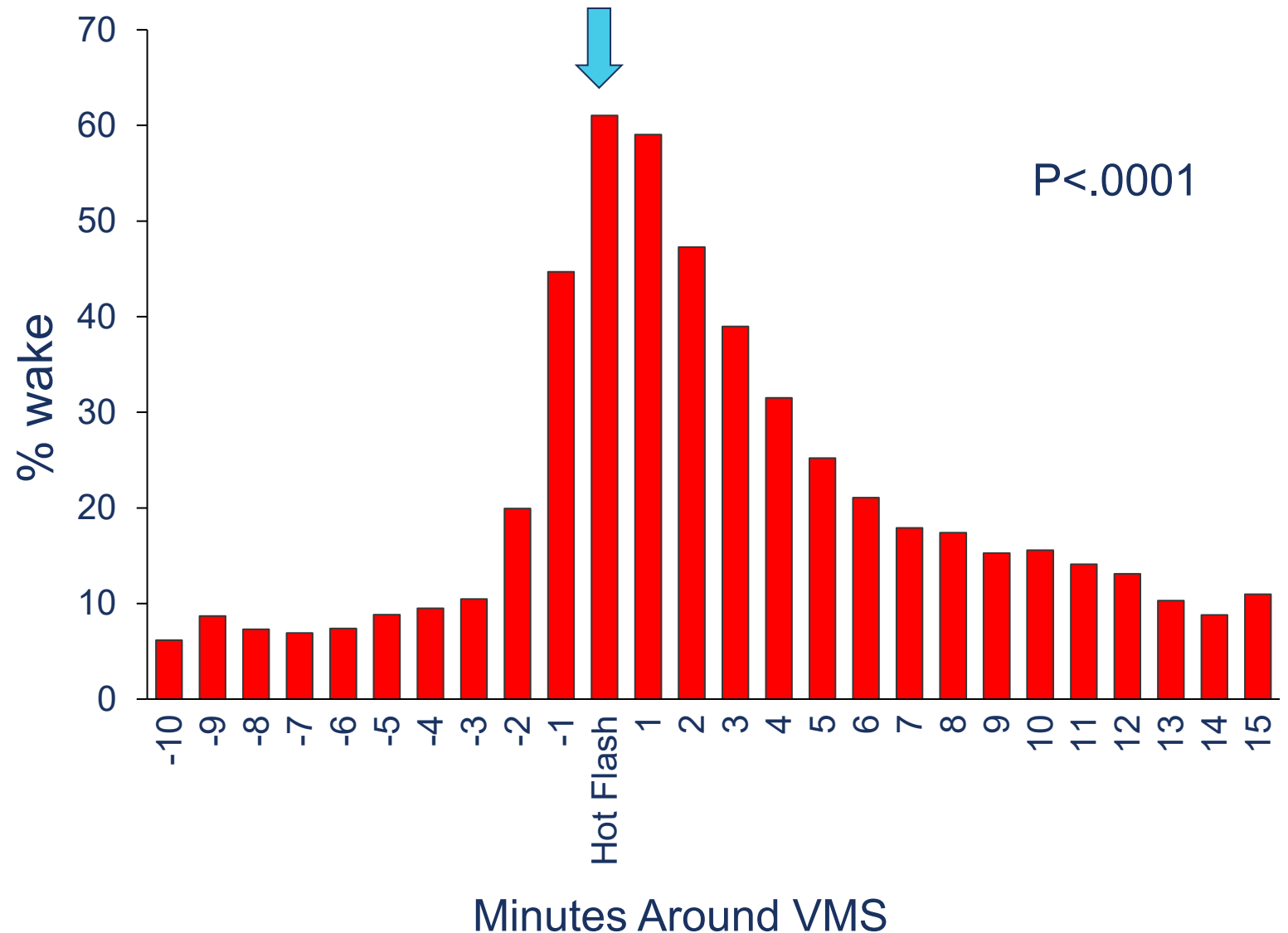
WOMEN WITH VASOMOTOR SYMPTOMS REPORT THE POOREST SLEEP



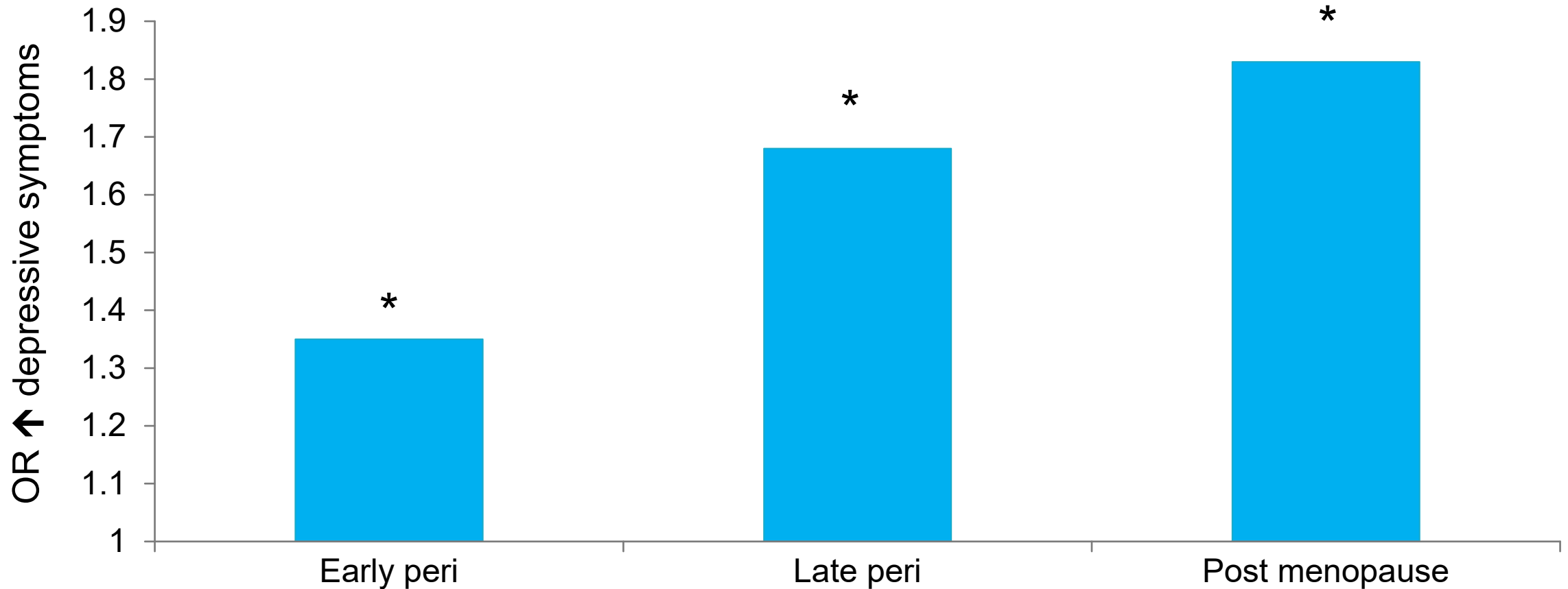
MEASURING SLEEP AND VMS OBJECTIVELY, VMS ARE ASSOCIATED WITH ACUTE AWAKENINGS



(Thurston et al, *Sleep*, 2019)



DEPRESSIVE SYMPTOMS INCREASE OVER MENOPAUSE

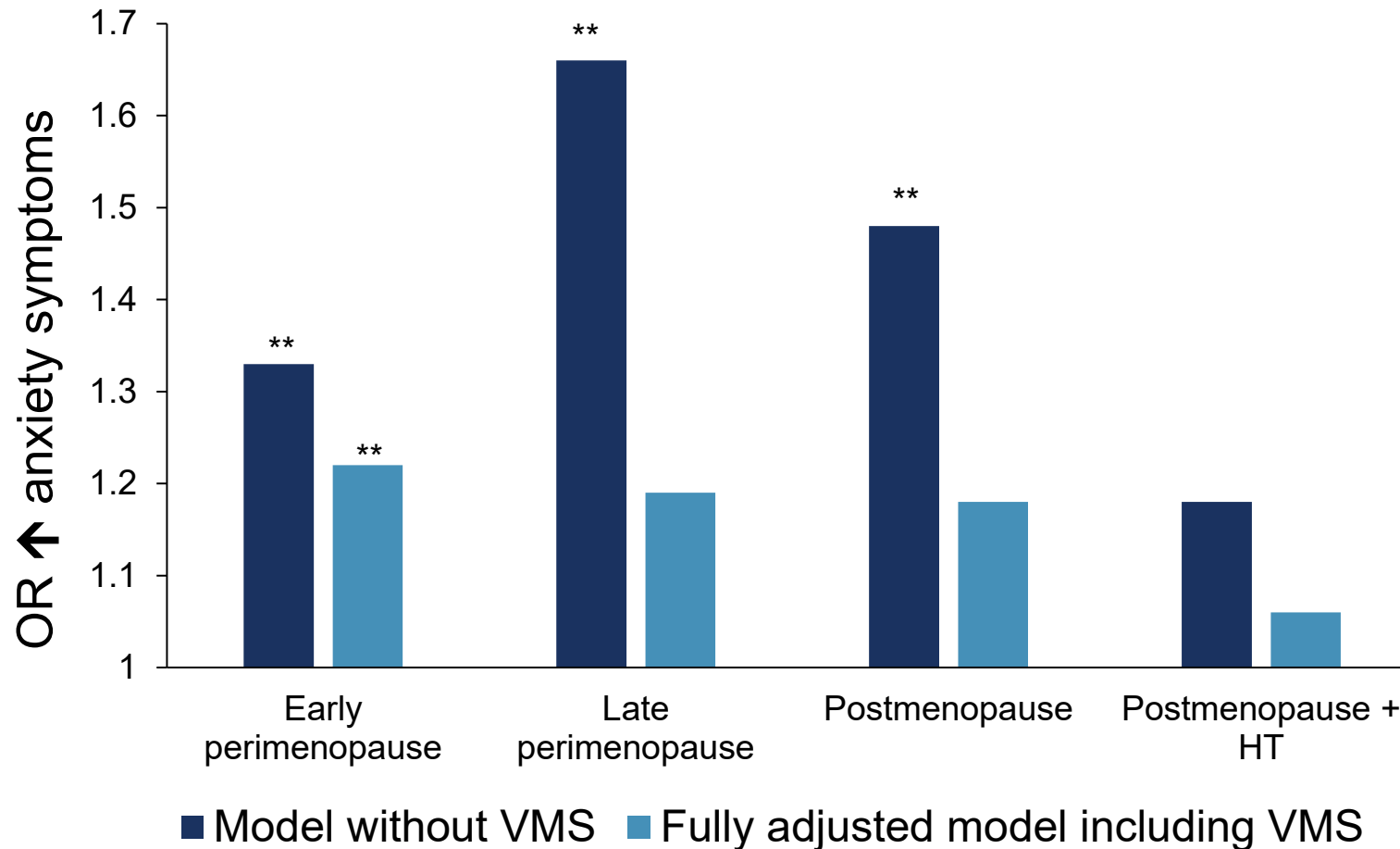


Relative to premenopause; *95% Confidence Intervals do not include 1



(Bromberger et al. *Psych Med* 2011)

ANXIETY AND THE MENOPAUSE TRANSITION



- Peri- and post menopause associated with elevated anxiety
- VMS particularly important

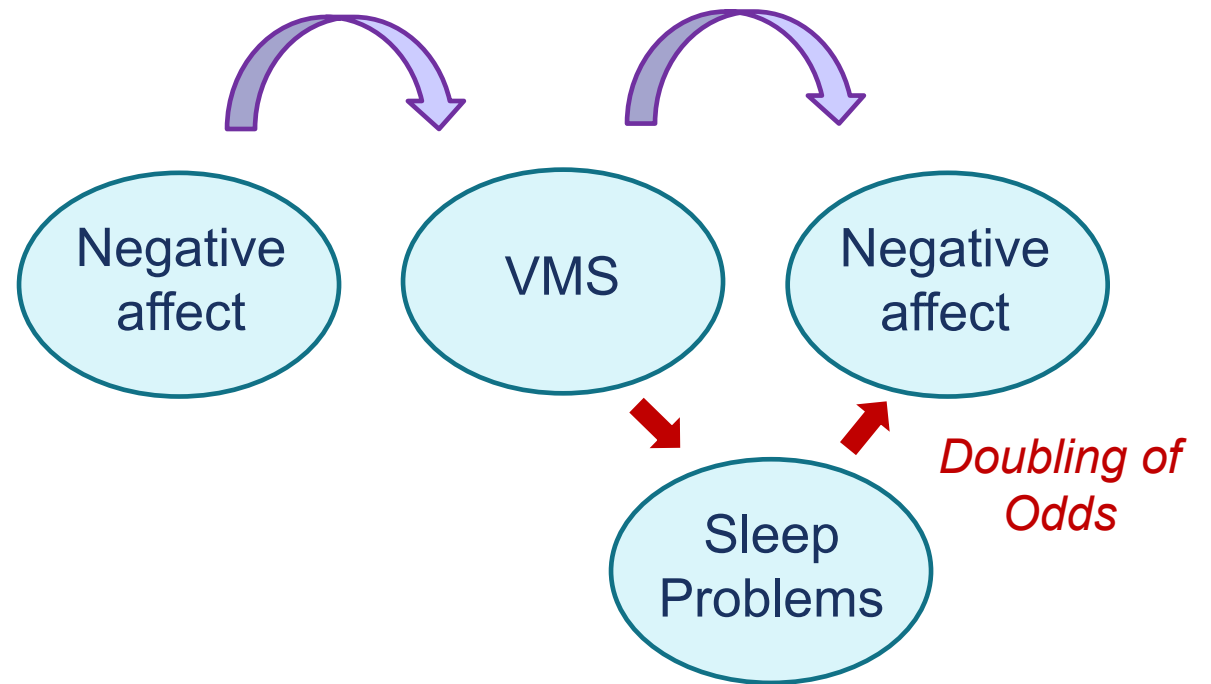


**p<.01, relative to premenopause

(Bromberger et al. *Menopause*, 2013)

SWAN DAILY HORMONE STUDY: TEMPORAL RELATIONSHIPS BETWEEN VMS AND NEGATIVE AFFECT

- SWAN DHS
- N=625, V3
- Diaries completed daily for a month
 - Negative affect (e.g., feeling blue, irritable, anxious, easily hurt, mood swings)
 - VMS
 - Sleep



(Gibson, Thurston et al., *Menopause*, 2011)

WHAT PREDICTS VMS BOTHER?

Over and Above the Frequency of VMS

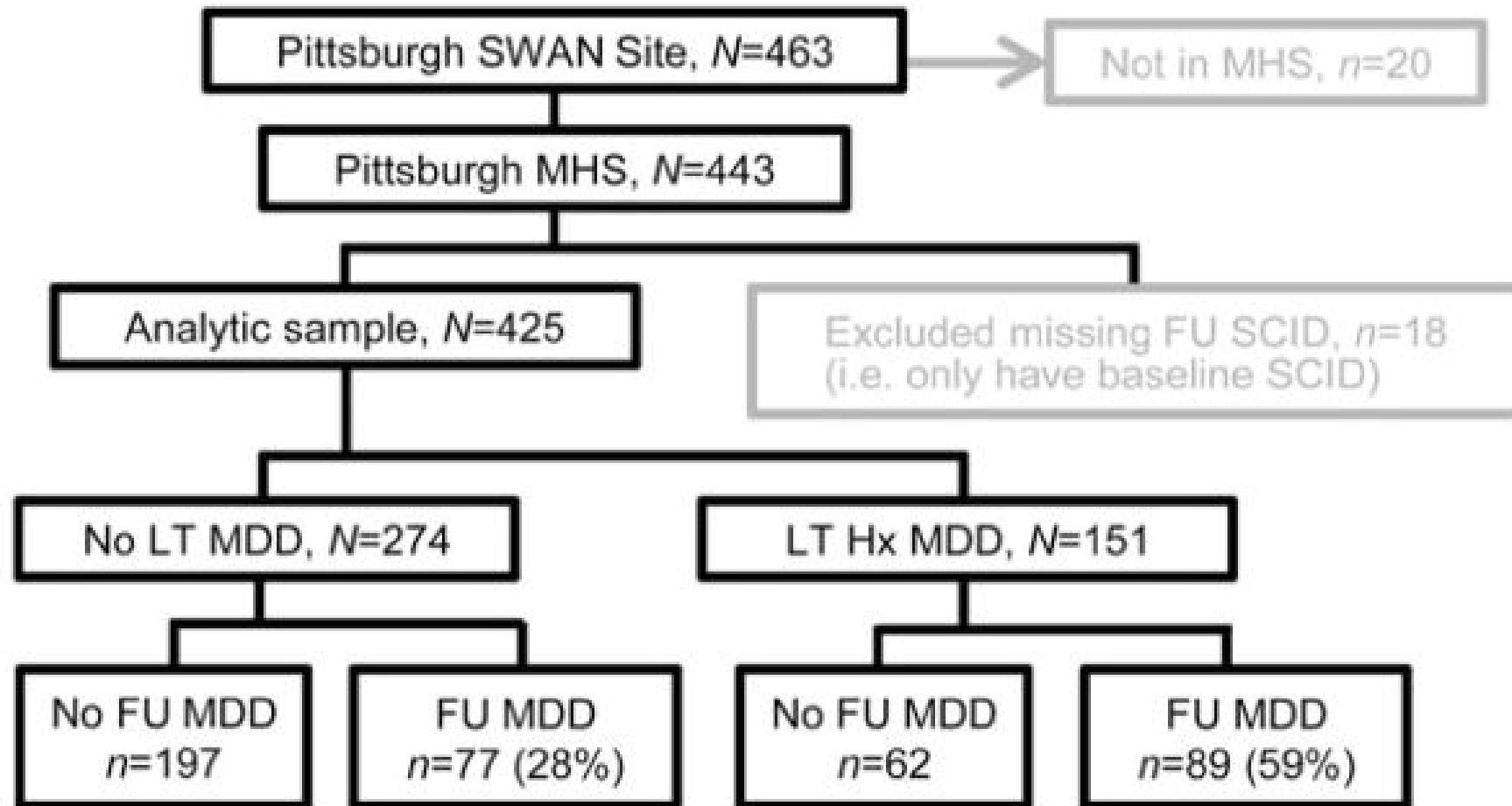
	Hot flash bother	Night sweat bother
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Negative affect	*	
Symptom sensitivity	*	
Race / ethnicity (African American)	*	
↑ Duration of symptoms	**	*
Sleep problems	†	*

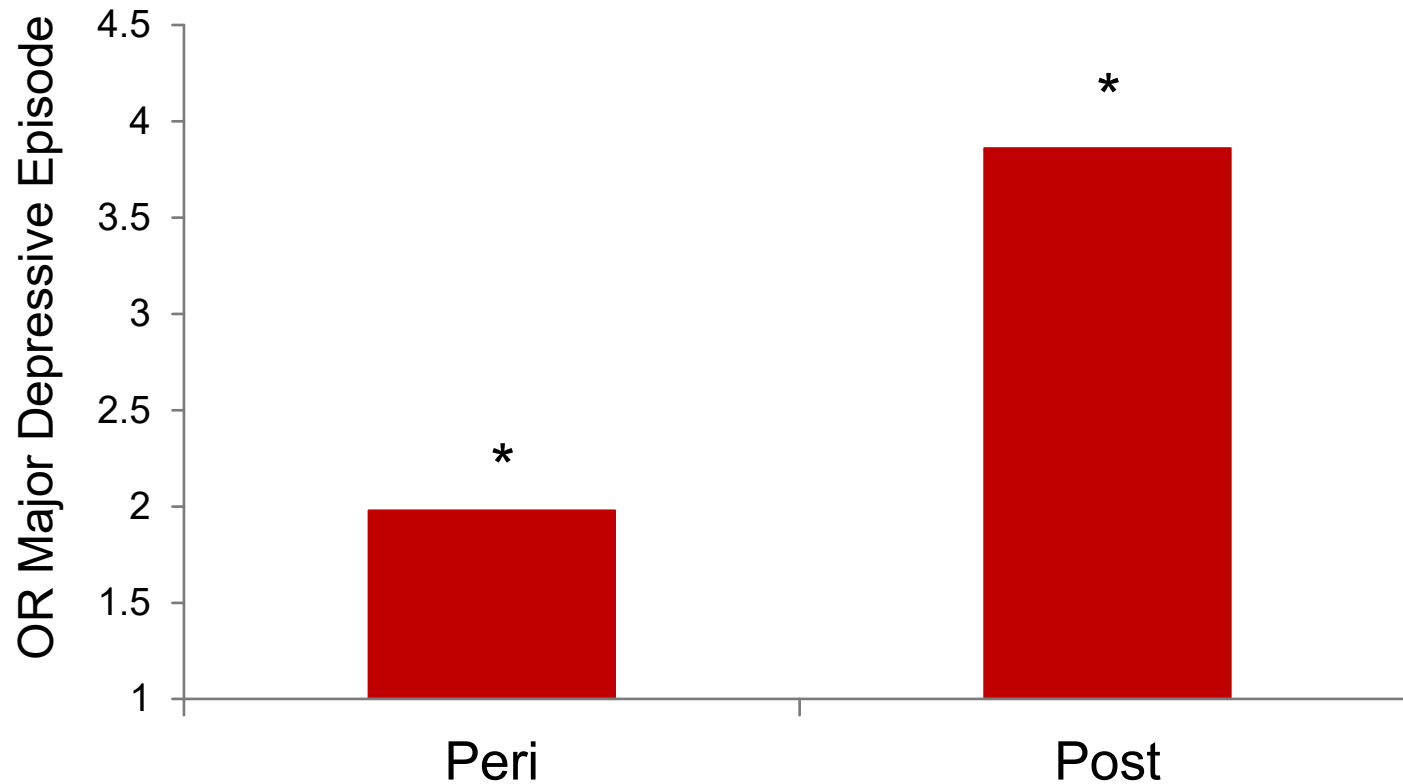
†p<0.10, *p<0.05, **p<0.01

(Thurston et al., *Menopause*, 2008)

SWAN MENTAL HEALTH STUDY



ODDS OF MAJOR DEPRESSIVE EPISODE INCREASES OVER MENOPAUSE



- Menopause a time of vulnerability to depressive episode
- 52% of women had at least one depressive episode (major or minor) over 13 years of follow up



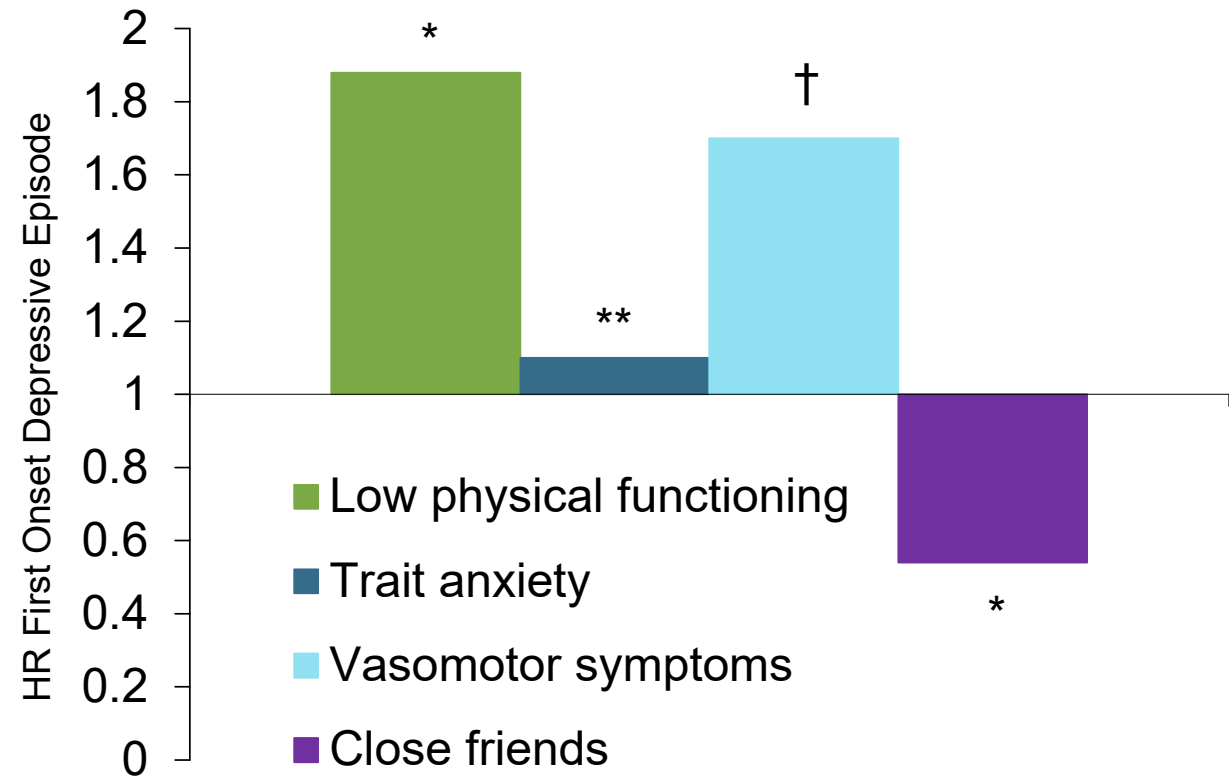
* $p < 0.05$, compared to premenopause

Adjusted for age, race/ethnicity, hx of depression, medication use, life events, BMI, and additionally VMS

(Bromberger et al. *Psych Med*, 2011)

WOMEN WITH DEPRESSION HISTORY ARE MOST AT RISK, BUT SOME HAVE FIRST EPISODE AT MIDLIFE

- 59% of women with a depression history had an episode in midlife
- 28% of women without a history of depression had an episode during midlife!



†p<.10, *p<.05 **p<.01

(Bromberger et al, *Psych Med*, 2015)

DEPRESSION IS OFTEN RECURRENT OVER MIDLIFE, EVEN FOR WOMEN WITHOUT AN EARLIER HISTORY

- 77% of women who had a depressive episode at midlife followed a recurrent course
- Even for women whose first episode was during midlife, most (56%) went on to follow a recurrent course

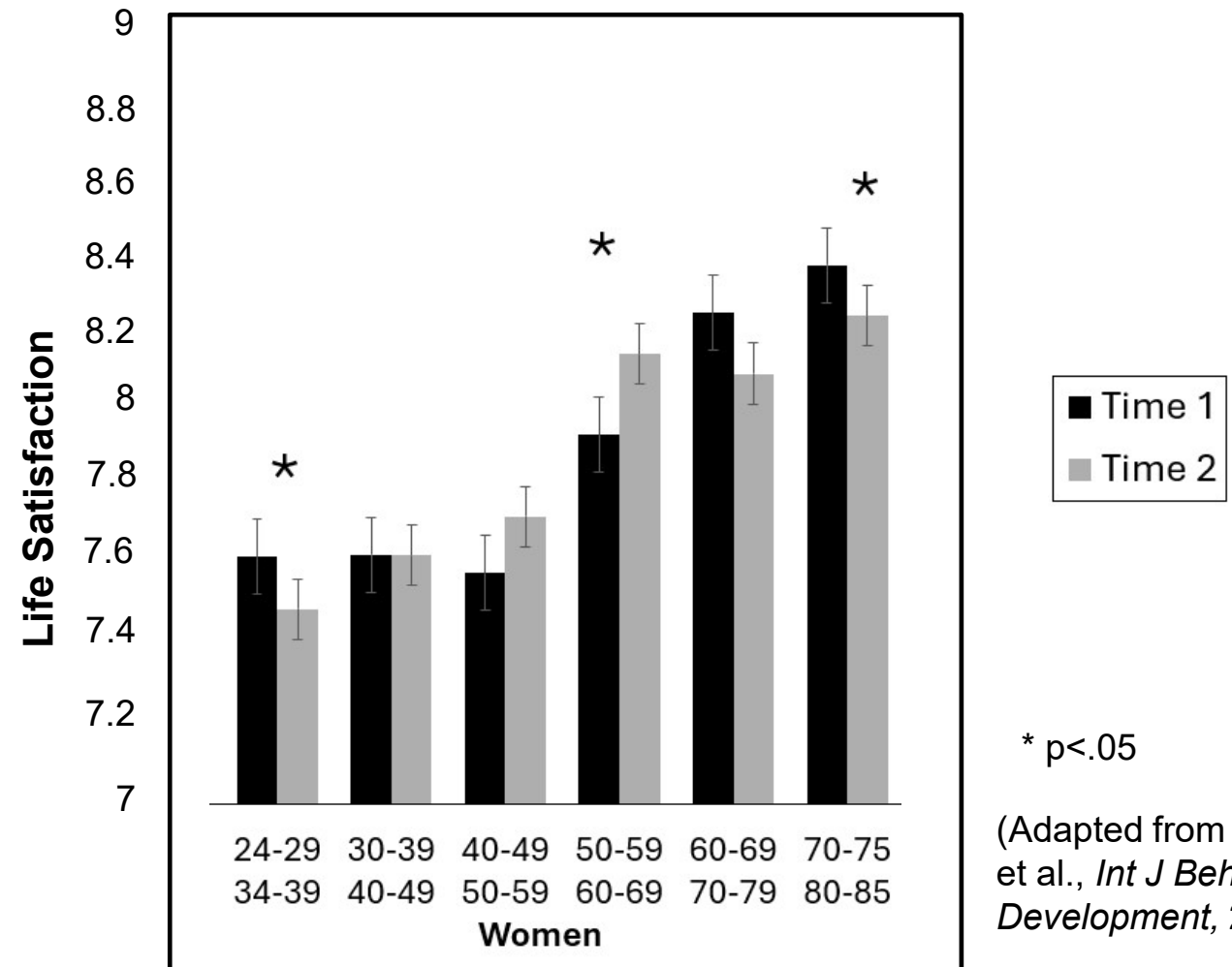
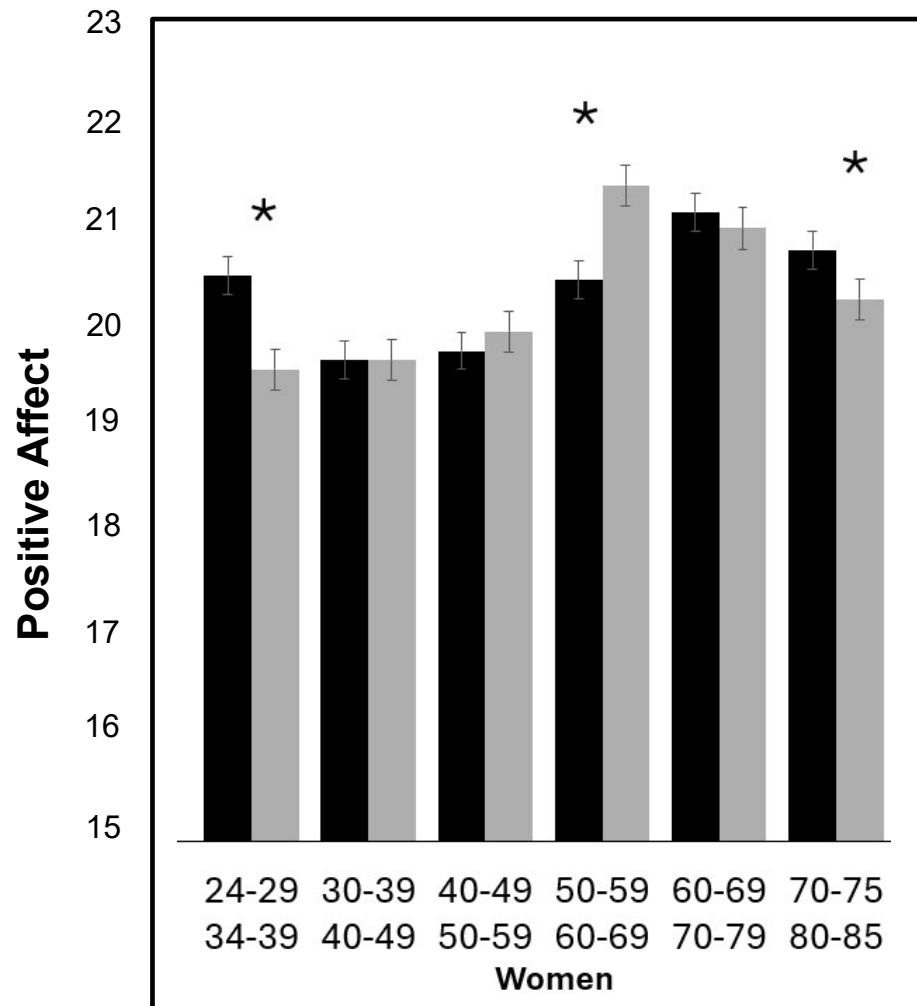
ENDOGENOUS HORMONES NOT STRONGLY ASSOCIATED WITH DEPRESSION IN SWAN

- Hormonal levels or changes were not associated with occurrence of major depressive episodes
- Neither E2 nor FSH associated with depressive symptoms
- Some relationship between higher testosterone and higher depressive symptoms, but associations subtle

RISK FACTORS OF POOR MENTAL HEALTH DURING THE MENOPAUSE TRANSITION

- Prior history of depression / anxiety
- VMS
- Poor sleep
- Stressful life events
- Poor health / medical conditions
- Financial strain
- **Buffer:** Close friends

IT IS NOT ALL BAD: MIDLIFE CAN BE A TIME OF POSITIVE PSYCHOLOGICAL GROWTH FOR WOMEN



* p < .05

(Adapted from Lachman et al., *Int J Behav Development*, 2015)

BEHAVIORAL INTERVENTIONS IMPORTANT FOR MENOPAUSE CARE

- Behavioral interventions useful for managing menopausal symptoms and midlife mood / anxiety concerns
 - **VMS**: Cognitive behavioral therapy (CBT) for VMS
 - **Sleep**: CBT-I (for insomnia), BBTI (brief behavioral therapy for insomnia)
 - **Mood/anxiety**: CBT, Interpersonal therapy, Mindfulness-based therapies
- Harness bidirectionality between menopausal sx and mood
- Implement alone or with medical / pharmacologic approaches

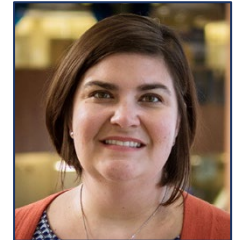
CARE FOR MENTAL HEALTH CONCERNS DURING MENOPAUSE: COLLABORATIVE CARE

- Menopause is a biopsychosocial transition
- Collaborative care with both mental and physical health practitioners optimally suited to menopause
- University of Pittsburgh Medical Center Magee Women's Midlife Health Center: Mental health and gynecology care
- **Clinical health psychologists** ideal for this role: Specialized training in women's health

SUMMARY

- Menopause: A biopsychosocial transition
- Time of vulnerability to depression and anxiety
 - Particularly for women with past history
 - For some women, new onset at midlife
- Menopausal symptoms are risk factors, as are life stressors; close friends are a buffer
- Menopausal sx and mood / affect: Bidirectional
- Midlife a period of growth: Harness clinically
- Optimal management: Medical and behavioral interventions, Collaborative care approaches

IT TAKES A VILLAGE



*STUDY
PARTICIPANTS*





THANK YOU!