



Faculty/Presenter Disclosure

- **Faculty:** Jasper Crockford
- **Relationships with commercial interests:** None

Disclosure of Commercial Support

- This program has received no financial support.
- This program has received no in-kind support.
- Potential for conflict(s) of interest: None

Mitigating Potential Bias

- There are no potential sources of bias for the results of the present study.

Menopausal symptom burden as a predictor of mid- to late-life cognitive function and mild behavioral impairment symptoms

A cross-sectional CAN-PROTECT study

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Cognitive decline and mild behavioral impairment (MBI) are risk factors for dementia

Creese et al., 2019; Silverberg et al., 2011

Menopausal symptoms may be associated with poorer cognitive function (Conde et al., 2021)



Gap in research as to whether menopausal symptoms are associated with MBI symptoms

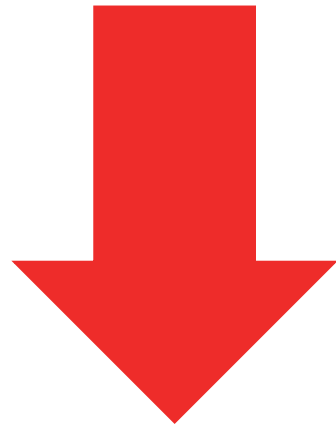
Could the experience of menopausal symptoms predict risk for cognitive and behavioural decline?

Question 1. Are individuals who had greater menopausal symptom burden more likely to experience poorer cognitive function and higher MBI symptom burden than individuals who had less menopausal symptom burden?



Hypothesis

Menopausal participants who experienced greater menopausal symptom burden will experience :



Cognitive Function



MBI Symptoms

CAN-PROTECT and Participants

CAN-PROTECT

- Canada-wide study of brain aging
- Recruiting participants ≥ 18 years of age
- Seeks to assess the roles of demographic, environmental, and lifestyle factors on the health of Canadian adults

www.CAN-PROTECT.ca



896 Menopausal participants



666 Participants who had menopausal symptoms

1. Menopausal Symptom Burden

Composed of 11 symptoms including: irregular periods, hot flashes, chills, vaginal dryness, weight gain, slowed metabolism, night sweats, sleep problems, mood symptoms, inattention/forgetfulness, and other symptoms.

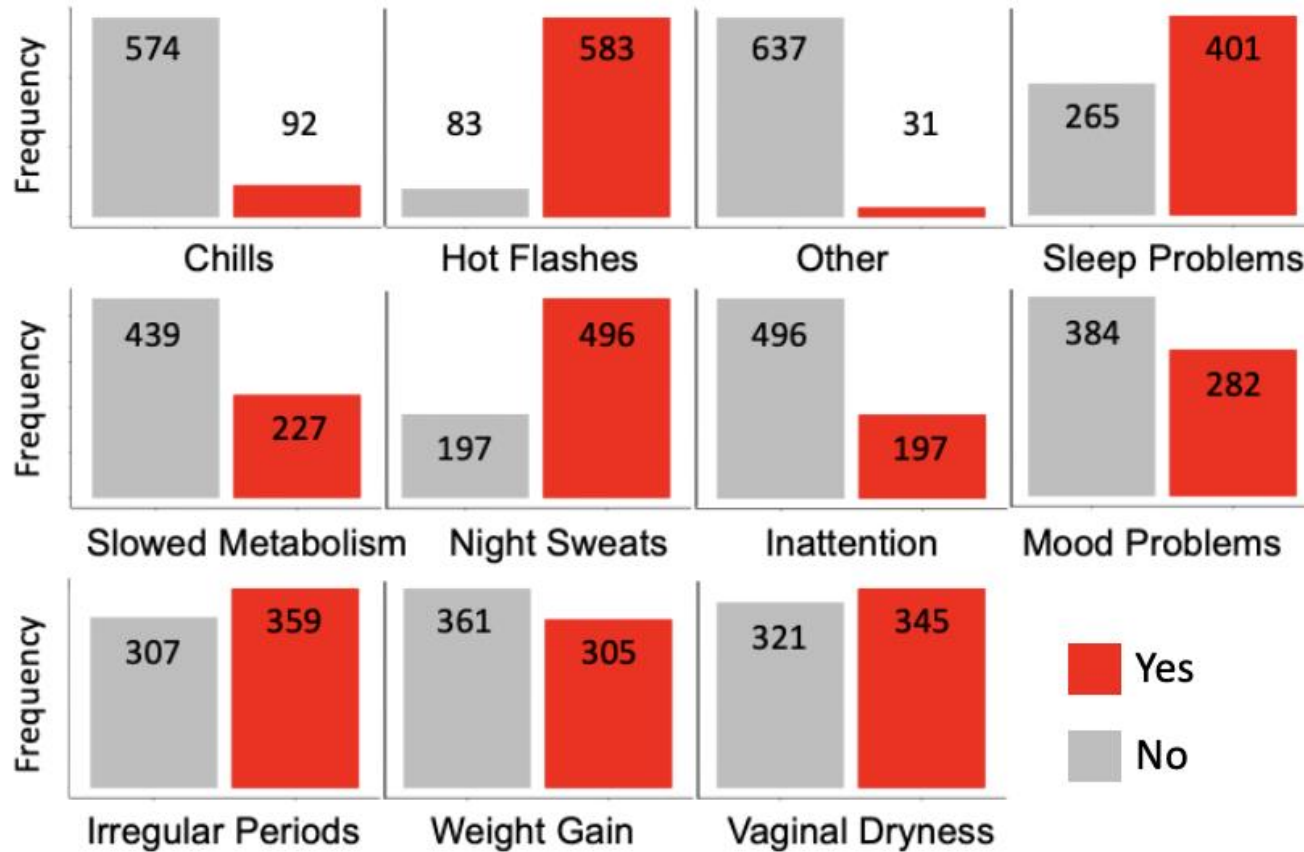
2. Revised Everyday Cognition Scale (ECog-II Scale)

Farias et al. (2021)

3. Mild Behavioral Impairment Checklist (MBI-C)

Ismail et al. (2017)

Menopausal Symptom Burden



Participants who experienced menopausal symptoms:

- Reported a range of **0-10 symptoms**
- Menopausal symptom burden of **4.9±2.8**.

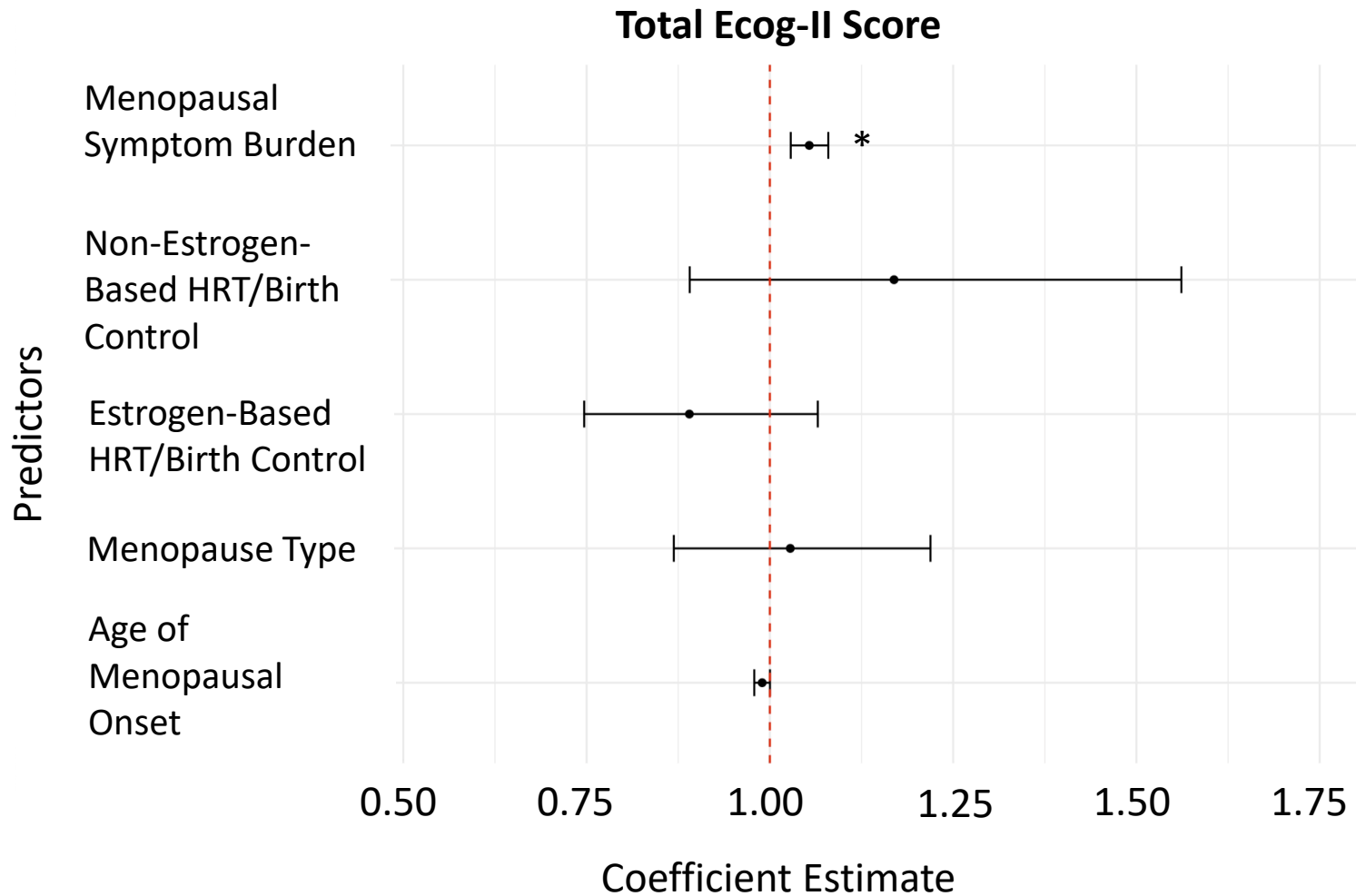
Most endorsed symptoms:

- **Hot flashes** (n = 583, 88%)
- **Night sweats** (n = 496, 70%)

Least endorsed symptoms:

- **Chills** (n= 92, 14%)
- **Other symptoms not listed** (n = 31, 5%)

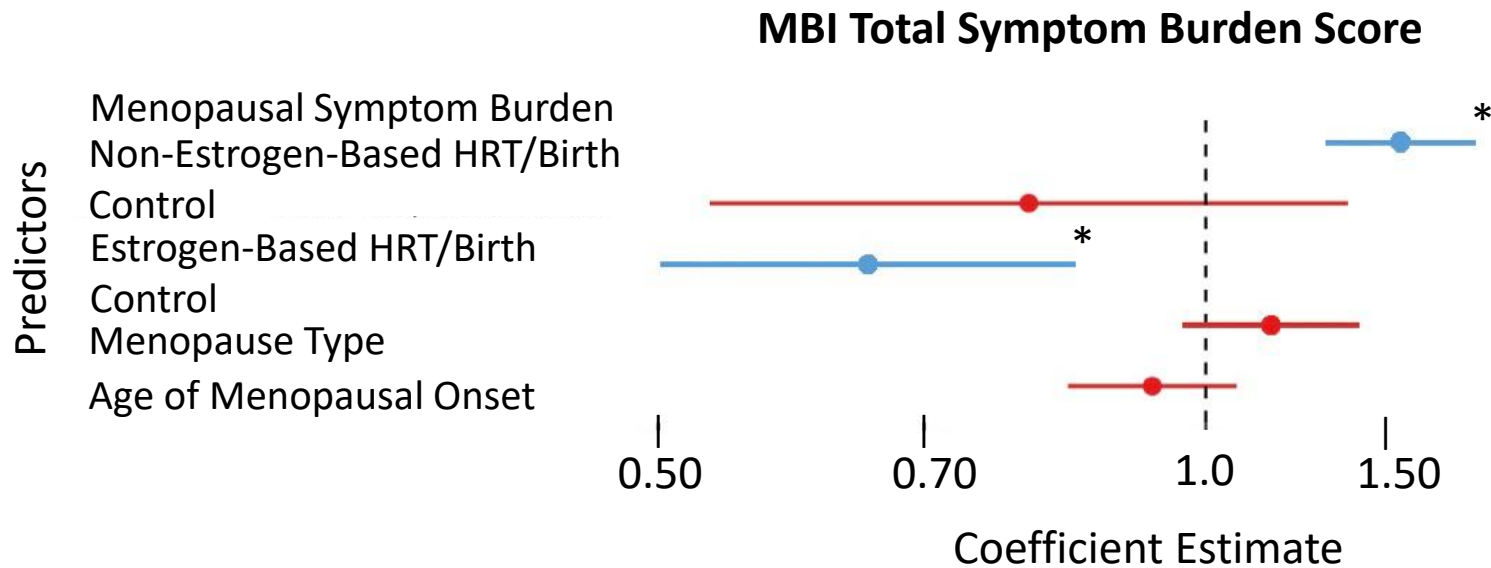
Cognitive Function



Every additional menopause symptom was associated with **5.4% higher ECog-II total score**, i.e., more cognitive symptoms (95%CI[2.8, 8.0], $p < .001$).

Neither Hormone replacement therapy (HRT)/birth control nor age of menopausal onset had significant main or interaction effects.

MBI Symptoms



Every additional menopause symptom was associated with a **6.1% higher MBI total symptom burden score** (95%CI[2.5, 9.8], $p < .001$).

Use of estrogen-based HRT/birth control was associated with a **26.8% lower MBI total symptom burden** (95%CI[-43.3, -5.7], $p = 0.02$).

Neither HRT/birth control nor age of menopausal onset had significant interaction effects.

Discussion

1.

Menopausal participants who experience more menopausal symptoms in mid-life tend to report poorer cognitive function and higher MBI symptom burden in mid- to late-life.

2.

HRT/birth control may mitigate relationship between menopausal symptoms and MBI symptom burden.

3.

Menopausal symptom burden may act as a marker for susceptibility to cognitive and behavioural decline.

Future Directions and Conclusion



Longitudinal Studies



HRT/Birth Control



Biomarker Data

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